S. Hrg. 113–422

ABUSE OF STRUCTURED FINANCIAL PRODUCTS: MISUSING BASKET OPTIONS TO AVOID TAXES AND LEVERAGE LIMITS

HEARING

BEFORE THE

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

OF THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

ONE HUNDRED THIRTEENTH CONGRESS

SECOND SESSION

JULY 22, 2014

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ABUSE OF STRUCTURED FINANCIAL PRODUCTS: MISUSING BASKET OPTIONS TO AVOID TAXES AND LEVERAGE LIMITS

TUESDAY, JULY 22, 2014

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 9:35 a.m., in room SD–342, Dirksen Senate Office Building, Hon. Carl Levin, Chairman of the Subcommittee, presiding.

Present: Senators Levin, McCain, and Johnson.

Staff present: Elise J. Bean, Staff Director and Chief Counsel; Mary D. Robertson, Chief Clerk; Robert L. Roach, Counsel and Chief Investigator; David H. Katz, Counsel; Ahmad Sarsour, Detailee (FDIC); Henry J. Kerner, Staff Director and Chief Counsel to the Minority; Michael Lueptow, Counsel to the Minority; Brad M. Patout, Senior Advisor to the Minority; Patrick Hartobey, Law Clerk to the Minority; Amy Dreisiger, Law Clerk; Michael Avi-Yonah, Intern; Adam Henderson, Professional Staff Member; Angela Messenger, Detailee (GAO); Joel Churches, Detailee (IRS); Mohammad Aslami, Law Clerk; Owen Dunn, Law Clerk; and Ritika Rodrigues (Sen. Johnson).

OPENING TESTIMONY OF SENATOR LEVIN

Senator LEVIN. Good morning, everybody.

In recent years, this Subcommittee has devoted significant time and effort to exposing complex financial arrangements that profitable corporations and wealthy individuals employ to avoid their obligations to pay all their U.S. taxes. We also have examined reckless behavior that has put the stability of the financial system—and by extension, the U.S. economy—at risk. Today's hearing brings those two themes together.

Our focus today is on how two banks and a handful of hedge funds developed a complex financial structure to engage in highly profitable trades while claiming an unjustified lower tax rate and avoiding limits on trading with borrowed money. This structure worked well for the banks, which earned hundreds of millions of dollars in fees. It worked well for the hedge funds, which made billions of dollars in profits. But it did not work for average taxpayers, who had to shoulder the tax burden these hedge funds shrugged off with the aid of the banks. And it did not work for the financial system, which is still recovering from a devastating crisis brought on by excess risk and remains ill-equipped to withstand another shock from over leveraged financial institutions.

In essence, today's hearing is about a series of fictions, one piled on top of another, fictions that major banks and their hedge fund clients used to avoid taxes and Federal leverage limits.

The key financial product involved in these fictions is called a "basket option." The basket options examined by the Subcommittee were developed and sold by two banks—Deutsche Bank AG and Barclays Bank PLC—to more than a dozen hedge funds. Together, the banks sold 199 basket options to hedge funds that used them to make over $100 billion in trades. Two of the largest basket option users were Renaissance Technologies, known as RenTec, and George Weiss Associates.

Although there were minor differences in specifics, the basket option basics worked like this: The bank sold its hedge fund client a structured financial product, called an "option," whose payoff equaled the profits generated by a "basket" of securities held in a designated account at the bank. The basket here is key. It was an open account with ever-changing contents. Technically, the account and the securities it contained were held in the name of the banks in its own trading account. The hedge fund put up 10 percent of the cash needed to buy the securities, and the bank lent the other 90 percent.

This arrangement included a number of fictions which defied reality, but resulted in big profits for the hedge funds and the banks.

First, though the structure was designed to create the appearance that the bank owned the assets in the basket option account, the hedge fund made all the trading decisions for those accounts—and in fact, used the bank's computerized trading system to execute trades in the account. RenTec estimates that its trading through basket options accounts averaged more than 100,000 trades each day, or about 30 million trades a year. Also, the hedge fund reaped all of the trading profits, even though the financial structure created the illusion that the bank owned the assets. The beneficial owner, the real owner, was the hedge fund.

Now, second, the hedge fund's control of all the trading for the basket option account demolishes the fiction of a legitimate option. So the hedge funds set up new entities, which they controlled, to serve one function, and that was to act as the option holder. The hedge funds would then claim that their control of the option holder was totally independent of their role in making the trading decisions for the basket option account. Documents that we will explore today show the extraordinary lengths to which RenTec and the banks went to perpetuate the illusion that the option holder and trader were somehow independent, when in fact the hedge fund, RenTec, played both roles.

The fictional option was structured so that it could be exercised more than 1 year after it was created. Under that structure, the hedge funds claimed that trading profits from the account were long-term capital gains and thereby qualified for the reduced long-term capital gains tax rate.

The Tax Code gives long-term capital gains a reduced rate on the theory that it provides an incentive for investors to risk their capital on the kind of long-term investments that grow the economy and create jobs. The high-volume trading that, for example, RenTec conducted through its basket options does not meet that test. When securities are held for weeks or days or even seconds, it is surreal to characterize those trading profits as long-term capital gains.

But that is what the hedge funds did. The banks and hedge funds used the fictional option structure to collapse millions of individual trades into one transaction, the execution of an option. As if by magic, the option structure transforms what would be short-term capital gains from an ordinary trading account into long-term capital gains subject to lower taxes. Subcommittee staff estimates, based on basket option profits that RenTec reported from 2000 to 2013, that RenTec avoided paying more than $6 billion in taxes that way.

Now, that is a lot of money even by Washington standards. It would, for example, pay for almost two-thirds of the cost to replenish the Highway Trust Fund so that it does not run out of money next month and create havoc in road projects around the country.

This is not the first time options have been abused to try to convert short-term trading profits into long-term capital gains. And that is why, in 1999, Congress passed a law in part to stop that practice, and that is Section 1260 of the Tax Code. The basket options at issue here were written to skirt Section 1260's prohibitions. But in 2010, the IRS warned that the type of basket options used here could not claim the lower long-term capital gains tax rate. Despite that IRS warning, Barclays continued to sell basket options to RenTec for another 2 years, before finally revising its option product in 2013 so that the options expired in less than a year and could not be used to game the Tax Code. Deutsche Bank suspended its issuance of new basket options after the 2010 IRS warning, but continued to administer multiple basket option accounts already in existence. It also resumed offering them in 2012, although with a term of less than 1 year and a requirement that the option holder treat the profits as short-term capital gains.

Tax avoidance through financial engineering is not the only problematic element here. These banks and hedge funds also used basket option accounts to circumvent regulations designed to limit systemic risks to the banking system posed by excessive leverage—that is, excessive lending to finance stock trading.

The stock market crash of 1929 devastated the U.S. economy, not just by the collapse of thousands of stock speculators, but also by the failure of thousands of banks that had lent them money and could not collect on the loans. In the aftermath of the Great Depression, Congress enacted laws limiting the use of borrowed money to trade securities. Those limits are included in a set of "margin rules" that essentially prohibit U.S. broker-dealers from lending more than $1 to brokerage clients for each $1 of the client's own money in the account—in other words, for every $2 in a brokerage account, only $1 of that $2 can be borrowed from the broker.

Had the hedge funds involved in these transactions been using normal brokerage accounts, they would have been subject to the 2:1 leverage limit. But because the basket option accounts were opened in the name of the banks in their own proprietary trading accounts, it looked as though the money placed into those accounts was the banks' own proprietary money rather than money they were loaning to a customer. And this is another fiction. The banks and hedge funds pretended the bank funds were not loans, even though the hedge funds paid financing fees and posted collateral.

So instead of complying with the 2:1 leverage ratio, the banks offered their hedge fund clients leverage as high as 20:1. RenTec used the increased leverage to borrow billions of dollars for its trading strategies, which produced huge profits for RenTec, while the lending generated huge additional fees for the bank.

But as we have learned over and over—in the Depression, in the 1990's collapse of the hedge fund Long Term Capital Management, and in the financial crisis from which we are still recovering—excessive leverage does not always produce profits. Sometimes it produces losses. And when huge losses happen, they can bring down not just a reckless borrower, but the financial institution that lent it money, and that failure can ripple through the entire financial system. While it appears the two banks the Subcommittee has examined have stopped selling basket options as a way to claim long-term capital gains rates, they are still selling these products as a way to avoid leverage limits—meaning our financial system and economy still face unnecessary risk.

RenTec, through its Medallion Fund, used basket options to produce profits from 1999 to 2013 totaling more than $30 billion. The banks charged financing, trading, and other fees that, over the same period, produced revenues totaling about $570 million for Deutsche Bank and $655 million for Barclays. Basket options were clearly a lucrative line of business for the participants.

But this money maker was built on interlocking series of fictions. The key fiction is the option itself: the idea that this structure was really an option when, in fact, what it did was give hedge funds the profits from buying and selling assets in accounts that the hedge funds themselves controlled. It was fiction to treat the banks as the true owners of the basket option assets, when the hedge funds controlled and executed all of the millions of trades in the accounts, when the hedge funds paid the daily trading costs, and when the hedge funds reaped the profits. It was fiction to suggest that the borrowed money that financed the trades was considered proprietary funds of the banks rather than loans to the hedge funds. It was fiction to treat the profits from trades lasting days or even seconds as long-term capital gains deserving a reduced tax rate. And it was a fiction to pretend that hedge funds were not acting both as option holder and as trade decisionmaker. These were all fictions, but fictions with real-world consequences: they shifted billions of dollars in tax burden onto the backs of ordinary taxpayers, and they added billions of dollars in hidden risks to our financial system.

Congress and financial regulators can and should work together to stop these abuses.

The IRS should seek to collect taxes owed on billions of dollars in basket option profits unjustifiably claimed as long-term capital gains.

Federal financial regulators should make clear to banks that participating in abusive structures designed to avoid leverage limits and taxes is unacceptable and penalize the banks that do.

The Financial Stability Oversight Council, working with other agencies, should establish reporting and data collection requirements to detect and to stop abuse of structured financial products to circumvent leverage limits that safeguard our economy.

And, finally, Treasury, and the IRS should remove impediments to audits of large partnerships, like hedge funds, 99 percent of which today escape IRS audits—meaning that we are largely blind to how many other hedge funds may be using structures of this type to avoid risk limits and taxes.

These measures would help protect the interests of ordinary Americans who pay their taxes and who must pay the price for tax avoidance schemes. It is these same Americans who would bear the burden of economic devastation that unaddressed systemic risks can cause.

I want to thank Senator McCain and his staff for their hard work in making today's hearing and our bipartisan report possible. The staff of this Subcommittee, majority and minority, through the years have been able to work together as one team, and I am very proud of them.

Senator McCain.

OPENING TESTIMONY OF SENATOR McCAIN

Senator MCCAIN. Well, thank you, Mr. Chairman, and one of the aspects of my term and tour here in the U.S. Senate is the relationship that you and I have developed over many years, and the work we do together, I think the people of Michigan and Arizona and the country are better off for it. I thank you for today's hearing, and today's hearing sheds light on how Renaissance Technologies was able to avoid paying more than $6 billion in taxes by disguising its day-to-day stock trades as long-term investments.

To accomplish that, Renaissance set up a "basket option," which is an artificial structure, not available to ordinary consumers, that allowed Renaissance to legally classify its short-term trading profits as long-term capital gains, subjecting those gains to a substantially lower tax rate. Renaissance profited from this tax treatment by insisting on the fiction that it did not really own the stocks it traded, that the banks that Renaissance dealt with did.

But the fact is that Renaissance did all the trading, maintained full control over the account, bore all the real risk, and reaped all of its profits. This setup allowed Renaissance to claim that profits from its day-to-day trades were actually long-term investments, thereby avoiding payment of billions of dollars in taxes.

In reaction to Renaissance's use of this structure, the IRS opened an investigation and today is in the process of litigating the legal issues. It is not the Subcommittee's place to weigh in on those proceedings and determine whether the behavior in question was illegal. But this basket option practice, available to hedge funds but inaccessible to the average investor, needs to be fully examined and addressed. The biggest reason why it should be examined is the tremendous amount of taxes Renaissance was able to avoid paying by using this structure.

In the course of its investigation, the Subcommittee learned that between the years 2000 and 2014, Renaissance exercised 60 long-term basket options with Deutsche Bank and Barclays, earning in the neighborhood of $34 billion in pre-tax profits and potentially avoiding over $6 billion in taxes.

Mr. Chairman, those are very large amounts of money.

Meanwhile, Deutsche Bank and Barclays happily took part in the basket options because they made hundreds of millions of dollars in fees from these transactions while incurring no actual risk—that is, until the IRS started to investigate. To protect themselves, Deutsche Bank in 2010 and Barclays in 2012 decided to only offer Renaissance options lasting less than 1 year so that all the profits from the options would have to be considered short-term capital gains.

Large trading firms will always try to stay one step ahead of the game when it comes to pushing the envelope on the Tax Code to minimize paying taxes, and regulators will inevitably struggle to detect and stop new schemes as they arise. It is, therefore, critical that regulators use the resources they have in an efficient manner to target the most likely offenders.

So whatever practical impediments currently disable the IRS from auditing large partnerships that use these sort of tax structures should be eased or eliminated. Doing so would allow the IRS to audit companies based on a careful assessment of the likelihood that a given company is engaging in activities that warrant an audit. This would differ from the current practice which focuses on the corporate form selected by that company, which has led to corporations being disproportionately audited.

One thing is clear. Americans are tired of seeing Wall Street firms playing by a set of rules other than those that apply to ordinary citizens. Even as consumers worried about losing their savings in the 2008 financial crisis, Renaissance remained enormously profitable throughout by, among other things, utilizing the tax avoidance such detailed in today's hearing.

When ordinary citizens make short-term trades, they get taxed at the short-term rate. When financial firms like Renaissance make short-term trades, they should not be treated any differently.

The perception that Wall Street self-deals or plays by its own rules engenders a deep-seated distrust and cynicism among Americans that is neither desirable nor healthy for the Nation.

I want to thank the witnesses for appearing before the Subcommittee today, and I look forward to their testimony. Thank you, Mr. Chairman.

Senator LEVIN. Thank you very much, Senator McCain.

I would like to now call our first panel of witnesses for this morning's hearing: Steven Rosenthal, Senior Fellow at the Urban-Brookings Tax Policy Center; and James R. White, Director of Tax Issues at the U.S. Government Accountability Office (GAO).

I appreciate both of you being with us this morning. We look forward to your testimony.

Pursuant to our Rule 6, all witnesses who testify before the Subcommittee are required to be sworn, so I would ask both of you to please stand and raise your right hand. Do you swear that the testimony you are about to give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?,

Mr. ROSENTHAL. I do.

Mr. WHITE. I do.

Senator LEVIN. Our timing system today will work as follows: 1 minute before the red light comes on, you will see the lights change from green to yellow, giving you an opportunity to conclude your remarks. Your written testimony will be printed in the record in its entirety. We would appreciate your trying to limit your oral testimony to 7 minutes. And, Mr. Rosenthal, we will have you go first, followed by Mr. White, and then we will turn to questions.

Mr. Rosenthal.

TESTIMONY OF STEVEN M. ROSENTHAL,[1] SENIOR FELLOW, URBAN-BROOKINGS TAX POLICY CENTER, WASHINGTON, DC

Mr. ROSENTHAL. Thank you, Mr. Chairman, Ranking Member McCain, and the Subcommittee for the opportunity to testify on the abuse of structured financial products. My name is Steven Rosenthal. I am a Senior Fellow at the Urban-Brookings Tax Policy Center. I am presenting my own views and not those of the Urban Institute, the Brookings Institution, the Tax Policy Center, or any other person.

I have practiced tax law in Washington, DC, for over 25 years. In private practice, I have regularly advised hedge funds and other investors on the tax treatment of derivatives. In the 1990's, I was a legislation counsel with the Joint Committee on Taxation, where I helped draft tax rules for financial institutions, financial products, capital gains, and related areas.

Almost a century ago, Congress reduced the tax rates for long-term capital gains. Then "long term" meant holding assets for 2 years. Now it means holding assets for at least 1 year. But for a century, regular tax rates have applied to gains on the sale of assets that have been held for a short term.

I have been asked to evaluate the character of the gains of the Renaissance hedge funds based on my review of materials provided by the Subcommittee staff.

The Renaissance hedge funds traded often, more than 100,000 trades a day, more than 30 million trades a year, and they traded quickly, turning over their portfolio almost completely every 3 months.

Because the hedge funds adopted a short-term trading strategy, we would expect their gains to be short term. But the hedge funds, with the help of Barclays and Deutsche Bank, wrapped derivatives around their trading strategy in order to transform their short-term trading profits into long-term capital gains.

This tax alchemy purported to reduce the tax rate on the gains from 35 percent to 15 percent and reduced taxes paid to the Treasury by approximately $6.8 billion.

I believe the hedge funds stretched the derivatives beyond recognition for tax purposes and mischaracterized their profits as long-term gains.

[1] The prepared statement of Mr. Rosenthal appears in the Appendix on page 83.

Here is how it worked. The hedge funds did not buy, hold, and sell their stocks directly. Instead, the hedge funds arranged for the banks to buy, hold, and sell the stocks. There were two steps.

First, a bank granted the hedge funds' general partner, Renaissance, the exclusive authority to select stocks to buy and sell for an account, when to buy and sell, and how to size and route the orders.

Second, the bank agreed to pay the hedge fund the net profits from the trading of the stocks in the account at the bank. I will label this arrangement "the basket contract."

To fund an account, a hedge fund might deposit, say, $10 million. The bank also might contribute $90 million, which permitted up to $100 million to trade. The basket contract typically had a term of 2 or 3 years, but a hedge fund could demand the bank cash out a basket contract at any time. In fact, the hedge fund typically cashed out the basket contracts after more than a year in order to qualify their profits as long term.

To protect against losses in excess of $10 million, the original deposit, a bank contract would automatically be knocked out—that is, liquidated—if the value of the account fell from $100 million to $90 million. But the banks also put in place protections to prevent the account from falling that much. In practice, no basket contract was knocked out, none of the 60.

The tax law characterizes an arrangement based on its substance, not its form. In substance, Mr. Chairman, I believe the hedge funds possessed tax ownership of the stock in the accounts. The hedge funds, through their general partner, Renaissance, directed the buying and selling of the stocks, and the hedge funds profited completely from the trading.

To establish tax ownership, the party's label does not matter. For example, the IRS treated a deep-in-the-money option as ownership of the underlying stock. That was because the option was so likely to be exercised the taxpayer effectively assumed the benefits and burdens of owning the stock.

Similarly, I believe the benefits and burdens of the stock basket belong to the hedge funds.

First, the hedge funds enjoyed the opportunities of gain from trading the stocks and incurred the burden of losses, at least until the bank stopped the trading.

Second, the hedge funds earned the interest, dividends, and other income from the stocks, bonds, and cash in the account, and the hedge funds paid the financing, commissions, and other expenses from the trading.

Finally, the hedge funds, through their general partner, Renaissance, selected the stocks to buy and sell for the designated accounts, when to buy and sell them, and how to size and route the orders. As a result, the investment arrangement simply rewarded the hedge funds for their own trading efforts.

Moreover, even if the basket contracts were respected, the gains from the basket contracts must be recognized currently. The hedge funds changed the economics of the basket contracts when their agent, Renaissance, traded in the designated account. And modifying a contract materially is a taxable event. The deferral was inappropriate.

As a result, I believe the IRS can and should challenge these strategies. But the IRS has limited resources to challenge the wide variety of derivative-related strategies which often are complicated and abstruse. So, in my view, Congress should address the taxation of derivatives comprehensively to reflect the income of derivatives more clearly.

I believe the tax accounting for derivatives ought to follow financial accounting, which requires companies to mark to market the derivatives at year-end—that is, to report any income from derivatives as ordinary as if the derivatives were sold at the end of each year.

Last year, Chairman Camp of the House Ways and Means Committee proposed to mark to market derivatives for tax purposes. I believe this step is overdue. It would greatly reduce the amount of time and energy that taxpayers and the IRS devote to the taxation of derivatives, an enterprise that is demanding far too many efforts in the most recent tax years.

Thank you, and I am happy to take any questions.

Senator LEVIN. Thank you very much, Mr. Rosenthal.

Mr. White.

TESTIMONY OF JAMES R. WHITE,[1] DIRECTOR, TAX ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE, WASHINGTON, DC

Mr. WHITE. Chairman Levin and Ranking Member McCain, I am pleased to be here for the hearing on structured financial products. A number of the entities offering these products are large partnerships, which we define as those with over 100 direct and indirect partners and over $100 million in assets. I will describe them and the challenges IRS faces in auditing them.

First, some background. Partnerships are pass-through entities that do not pay taxes but instead pass income or losses through to their partners to include on their own tax returns. Partnerships can be partners in other partnerships; that is, partnerships can be tiered, making tracking income through the tiers complicated. The number of partnerships of all sizes is growing, with a big shift toward businesses organized as partnerships and away from corporations. Between 2002 and 2010, the number of all partnerships grew 45 percent to over 3 million while the number of corporations liable for corporate income tax decreased 14 percent to 1.5 million. Large partnerships grew even faster, tripling to over 10,000.

Now I will describe large partnerships. According to IRS, many of these are investment funds, such as hedge funds or private equity funds. These funds may have hundreds of thousands of investors who are legally partners. When investing, the funds may create other large partnerships. For example, if a fund with a million partners invests in a small operating partnership, say in oil and gas, then the oil and gas partnership would now be large. The original direct oil and gas partners would be joined by a million indirect partners.

Figure 2 on page 8 of my statement shows the sizes of large partnerships with almost 3,000 having more than 10,000 direct and indirect partners in tax year 2011.

[1] The prepared statement of Mr. White appears in the Appendix on page 91.

My next point is that IRS audits very few large partnerships and makes few changes when it does. For example, in 2012, the audit rate for large partnerships was eight-tenths of 1 percent, less than 1 percent. For large corporations, the audit rate was 27 percent, or 33 times higher. The few audits done of large partnerships were not very productive. Two-thirds resulted in no change to the partnerships' reported income. When adjustments were made, positive and negative changes roughly canceled each other out.

Now I turn to IRS' audit challenges, which may explain the low audit rate and poor audit results.

Tiers of partnerships create very complex income flows. An example is Figure 3 on page 9 of my statement. The audited partnership at the left earns income that passes through eight other partnerships before reaching the ultimate owner who is responsible for any tax. IRS has the challenge of tracking the income as it flows through the tiers and verifying that the amount and nature of the income is correctly reported. Are capital gains short or long term? Is income passive or non-passive?

IRS officials told us they have difficulty in identifying the business purposes of large partnerships and the source of income. And Figure 3 is a simple example with only 50 partners and 10 tiers. IRS said some have over a million partners and some over 50 tiers.

While such complicated business structures can be used for tax evasion, I want to emphasize that they can also have legitimate business purposes, such as isolating one part of the business from the liabilities of another part.

In addition to this complexity, IRS auditors said administrative procedures can make it challenging to finish an audit within the 3-year statute of limitations. The Tax Equity and Fiscal Responsibility Act of 1982, or TEFRA, was passed to correct problems with fragmented audits of multiple partners. However, auditors told us that TEFRA can hinder audits of large partnerships. One challenge is identifying the Tax Matters Partner, or TMP, who represents the partnership in an audit. IRS auditors told us that the process can sometimes take months with some partnerships using this as a delaying tactic to reduce the time available for the actual audit.

Another TEFRA challenge is passing audit adjustments through to taxable partners. According to IRS, linking a large partnership to thousands of direct and indirect partners spread over many tiers is extremely burdensome and limits the number of audits that can be done. Furthermore, by the time an audit adjustment is spread over thousands of partners, the amount per partner may be so diluted that it is not worth passing through.

To summarize, large partnerships are increasing in number. IRS audits very few and gets poor results when it does audit them. The complexity of both the partnerships and the audit procedures may explain this picture. We are still completing the review requested by this Committee and plan to issue a report this fall with more details and, if warranted, recommendations.

Mr. Chairman, this ends my statement, and I would be pleased to respond to questions.

Senator LEVIN. Thank you very much, Mr. White.

Mr. Rosenthal, substance over form, a judicial doctrine permits the IRS to recharacterize a transaction according to its actual substance. The purpose of the doctrine is to prevent a taxpayer from calling a transaction something that it is not in order to avoid tax liability.

Renaissance has asserted that its characterization of the basket option should be respected for tax purposes and that it should be entitled to long-term capital gains treatment because the basket option, they claim, was held for more than a year.

It has asserted in part that it is entitled to this treatment because the transaction had a business purpose, including the claim that the transaction provided it with more leverage than could be obtained in a margin account.

Now, does the claim of Renaissance that it had a business purpose answer the question of whether the structure was properly characterized as an option for tax purposes?

Mr. ROSENTHAL. No, in my view, Chairman Levin, I do not believe the mere existence of a business purpose demonstrates conclusively that the labels affixed to the arrangement will be respected by a court of law.

The key question in considering economic substance is what is the substance of the arrangement, not merely the form or the labels affixed by the parties to the arrangement. And here, in substance, in my view, the basket of stocks which was directed by the hedge fund—buy and sells—and controlled by the hedge fund, the benefits and burdens and the true owner of that basket of stocks in substance belonged to the hedge fund.

Senator LEVIN. Now, you have reviewed in your testimony and I have reviewed in my opening statement what some of those actual facts were that constituted beneficial ownership. Would you agree that the hedge fund was the beneficial owner here?

Mr. ROSENTHAL. Yes, I would.

Senator LEVIN. And it received all the dividends from the trades as part of the option profits. The profits were Renaissance's. Renaissance executed tens of millions of trades in a year in that account. It was charged a financing fee on the amount that it borrowed for the account. It received the rebates for the orders that it sent to the stock exchange, and, again, it received all of the profits from its trading and was exposed to most of the risk, with the exception of catastrophic risk. And there were even safeguards in the agreements to limit that risk.

Now, in connection with the transactions affected by the bank's basket accounts, it retained certain indicia of ownership, such as the legal title apparently; the right to vote shares—it is kind of hard to imagine voting shares when there are 30 million trades during a year, but, nonetheless, that right was retained—the right to lend shares out of their accounts to customers for fees.

Now, how significant is it that the banks retained those indicia of ownership for determining who is the beneficial owner of the real transactions and the items that were in the account?

Mr. ROSENTHAL. Not very significant, in my view, Mr. Chairman. The right to vote a publicly traded stock, a minority interest that was bought and sold within a few weeks, not a long-term holding, in my view is economically meaningless.

The question of ownership is broader than mere form of title, and the courts repeatedly dozens and dozens of times have admonished taxpayers that mere semblance of title does not answer the question of true ownership of the property. To determine true ownership, you need to look broadly at benefits and burdens. Who benefited when the stocks went up? Who lost when the stocks went down?

And you need to think about who actually receives the beneficial income, the income from the beneficial ownership of the stocks. And, most importantly, you need to think about control and when stocks were bought and when stocks were sold and who determined that.

In practice, I must have reviewed dozens, if not hundreds, of derivatives for a variety of investors, and derivatives by their nature derive value from some other asset or some other indicium. But there are limits to when an arrangement reflects a derivative and when an arrangement reflects ownership. And here the hedge funds simply crashed through those limits. They undertook a direction of what to buy and what to sell. They picked up all expenses, including commissions. They effectively determined what the bank would hold. They purported—I read in the materials provided to me that the bank had discretion as to whether to follow the directions of the buys and sells or whether to maintain positions. But in 30 million trades a year, over 300 million trades, I did not hear of a single instance in which the bank simply followed through and recorded ownership of the stock in the account per the direction of the hedge fund acting through Renaissance, its general partner.

So the question of ownership is a facts and circumstance question looking at all the facts. But here the key elements of ownership in my view point to the hedge fund owning the basket of stocks, not the banks, notwithstanding the nominal title that the banks purported to have of the stocks in the account.

Senator LEVIN. Now, the banks gave Renaissance direct access to the market through their trading execution system so that Renaissance executed the trades as well as receiving the profits and the losses. They had the right under their contracts not to execute. But do you know of any circumstances, looking through these materials, where they did not follow the algorithm which was provided to it?

Mr. ROSENTHAL. To my knowledge, the general partner, Renaissance, the hedge fund, would direct trades directly to the exchange. That direction would take milliseconds. There was no, as far as I could see, any practical way for the bank to intervene and stop that order from going to the market. And as a practical matter, there really was very little opportunity for the bank to take a position out of the account and sell it, understanding that the hedge fund might want to sell the position in a matter of weeks.

The bank made a lot of fees merely accommodating the hedge funds. I do not think the bank had any interest in independently owning those securities in their account.

Senator LEVIN. Now, one point, the banks suggest that the execution was simply—by Renaissance was simply a recommendation or a suggestion to the bank. Have you seen any evidence that this was a recommendation or a suggestion?

Mr. ROSENTHAL. No, I have not seen any evidence of that.

Senator LEVIN. Is there any practical way in which 30 million trades a year could be 30 million recommendations? I think

100,000 trades a day, or more. Is there any practical way that that could be a recommendation or suggestion to the banks?

Mr. ROSENTHAL. I cannot see it. I think you would need to ask the banks what mechanisms they had in place to reject the recommendation to buy or sell stocks.

Senator LEVIN. And how often in 30 million purchases a year they did that?

Mr. ROSENTHAL. In the documents that I saw and in the information provided to me by staff, I do not think they ever refused the direction of the hedge fund to buy or sell stocks.

Senator LEVIN. The banks and Renaissance claim that Renaissance is independent from the fund when it is acting as investment advisor to the banks. Did you see any evidence that they are independent from their own funds when they are acting as investment advisor, the label given to it?

Mr. ROSENTHAL. No, I did not see any evidence that Renaissance, the general partner of the hedge funds, was independent when it bought—when it acted to buy and sell stocks for the banks. Renaissance was the general partner of the fund, and I should just say in our financial structure, investment funds themselves do not have employees or computers or office equipment. They act through the general partner, and they incent the general partner to make money for them.

So when Renaissance was managing the stock in the accounts at the banks, Renaissance was concerned in buying and selling stocks in order to make a lot of money for their partnership. They were compensated for that arrangement through fees, directly or indirectly, and they participated in the profits of the fund, which were staggering. I did not see any sign that Renaissance was taking into account the interests of the bank in buying and selling stocks for the account.

Senator LEVIN. Now, they had the authority to execute trades without prior approval. That was in the contract between Renaissance and the banks. They used the banks' trading execution system to place and execute several hundred thousand trades a day to go into that so-called basket account.

Now, why would it be important then for Renaissance to claim that these are recommendations rather than to acknowledge that they are actually executing trades in the banks' so-called basket account? What is the reason they make that claim?

Mr. ROSENTHAL. Well, a key factor in tax analysis to determine who owns an asset is who controls the asset. And to the extent that the banks could assert that the hedge funds were not in control of the stocks in the account or the buying and selling of stocks in the account, that would bolster the argument that the banks and not the hedge funds were the owners of those stocks.

Senator LEVIN. And they put in the contract documents that the bank could reject the trades. And would you agree that the reason that they put that in there is to give the appearance that the activity is not Renaissance's but the banks and that the bank is not a conduit for Renaissance's activity? Is that the reason that they would put that in a contract document that they had the right to reject the trade?

Mr. ROSENTHAL. Senator, I did not understand that representation when I saw it in the documents. The representation is at odds with my understanding of both the facts and the law, including Delaware law of partnership. So I cannot say why they made that representation—perhaps wishful thinking. It is really hard for me to assess why the representation was there. But as a factual and a legal matter, I just do not see how Renaissance, the general partner of the hedge fund, was not directing, influencing, controlling the buying and selling of stocks in that portfolio.

Senator LEVIN. Now, Renaissance is the general partner of the option holders, Mosel and Badger. These are entities that were stated to be the holders of the option. At the same time, Renaissance is the investment advisor to Deutsche Bank and Barclays to manage the basket account. The parties assert that Renaissance as investment advisor to the bank is independent when it is making investment decisions for the banks and is not influenced by the option holders, Mosel and Badger.

Now, how can Renaissance be independent from the option holders when it is their general partner?

Mr. ROSENTHAL. I cannot see that. Earlier in the year, the First Circuit examined a private equity fund that claimed its general partner, in managing its investments, was not acting on its behalf. And the private equity fund argued: Ignore the efforts of our general partner; we are not responsible for those efforts for tax purposes. And the First Circuit rejected that analysis, a very important decision, Sun Capital.

I believe hedge funds, private equity funds, and others take a rosy view of what they are engaged in. When a characterization helps them, they advocate it. But as a legal matter, I just cannot see how when an agent of a fund furthers the fund's efforts to make money and that is the only objective of the fund, how the agent can disassociate its responsibilities to the fund and make money and assert that it is merely representing the bank when it is buying and selling stocks.

Senator LEVIN. And so it cannot then, as a practical and real-world matter, be independent from the option holders when Renaissance is the general partner for those option holders?

Mr. ROSENTHAL. Not in my view, sir.

Senator LEVIN. Why would Renaissance and the banks set up that fiction, that the investors in Mosel and Badger are independent of the investment advisor that is making the investment decisions for the basket account? Why would they make that claim of independence?

Mr. ROSENTHAL. From a tax point, if that assertion were true, that might help the argument that the banks actually owned other securities; that is, the investment manager of those securities, those stocks, if that investment manager were independent of the hedge funds and acting at the direction of the banks, that would help the argument that the banks owned the stocks. Again, I do not see, either under the facts or the law, how that independence could be true.

Senator LEVIN. Mr. Rosenthal, would you take a look at Exhibit 53? [1]

Mr. ROSENTHAL. Yes, Senator, I have that exhibit in front of me.

Senator LEVIN. OK. This is a June 2009 memorandum that Barclays wrote to its auditor, PricewaterhouseCoopers, PwC, concerning the deconsolidation of Palomino Limited.

Now, Palomino is a Cayman Islands entity of Barclays which was created to—in my view, at least quite clearly create an appearance that Barclays is the owner of the basket account, where all the Renaissance trades were located and on which the option was based. This is also the same account where the profits that Renaissance earned on its trading done with Barclays was located. So that is Palomino.

Now, this memorandum was written by Barclays Structured Capital Markets Group, which was responsible for developing the COLT basket option product, and it proposes to deconsolidate, to remove Palomino from Barclays financial statements.

So did you review that document?

Mr. ROSENTHAL. Yes, I did, Mr. Chairman.

Senator LEVIN. The memorandum sets out a number of significant facts and conclusions about Palomino and its relationship to Barclays and to RenTec that I would like to review with you. First, take a look at page 7, starting with paragraph a.

Mr. ROSENTHAL. Mr. Chairman, can you point—can you say the first few words? My document is not paginated.

Senator LEVIN. Yes, mine is not either, and I do not know where the "page 7" came from, but let us—OK. It is the page that starts with the heading "Consolidation Analysis."

Mr. ROSENTHAL. Yes, I have that in front of me.

Senator LEVIN. OK. Now, on that page, in paragraph a., it says, "Palomino was created solely to enable RenTec . . . to benefit (through the Badger Options and the Barclays' Options) from its long-short statistical arbitrage strategy in an efficient manner . . ." So it was created solely to enable RenTec to benefit.

Now, if you look at paragraph b., under "Decision Making," it says that, "As described in Section VII in relation to the IMA, the PB Accounts"—PB, do you know what PB stands for?

Mr. ROSENTHAL. Prime brokerage.

Senator LEVIN. ". . . [prime brokerage] Accounts are controlled by RenTec," the key words there being the "[prime brokerage] Accounts are controlled by Rentec."

The next paragraph I would like you to look to is under "Benefits," c., near the bottom of that page: "RenTec is effectively entitled (through the Badger Options and the Barclays' Options) to 100% of the benefits from Palomino's trading activities less any prime brokerage fees paid to BCI and BCSL"—those are Barclays—"in respect to the . . . Accounts." Did you follow me on that?

Mr. ROSENTHAL. Yes, I did.

Senator LEVIN. They are entitled to 100 percent of the benefits from Palomino's trading activities, Palomino being a Barclays creation.

[1] See Exhibit No. 53, which appears in the Appendix on page 654.

Then on the next page, near the bottom, where it says, "Conclusion: Following the proposed amendments to the Articles and the entry into the Side Letter, RenTec controls the major activities of Palomino and is exposed to substantially all significant risks and rewards arising from the activities carried out through the [prime brokerage] accounts, being the only permitted activities of Palomino." And, again, Palomino is Barclays' creation.

Now, if these factual representations to Barclays' auditors by Barclay are true, what does that say about whether the option basket is a true option?

Mr. ROSENTHAL. If these representations were true, Renaissance, the general partner of the hedge fund, controls the basket of stocks, and as a consequence, the control is so large that I think one would need to conclude that the hedge funds, for which Renaissance is acting, own the stocks as opposed to Barclays. And that seems to be the point of this memo for accounting purposes.

Senator LEVIN. And they would not have an option to acquire something they already own, presumably.

Mr. ROSENTHAL. No. I am trying to wrap my mind around this fiction of having an option over something you already own. My view of the option is it reflects a contractual right to the basket of stocks in substance, and I think Pricewaterhouse, or at least Barclays in these representations to Pricewaterhouse, agrees with my intuition and my belief. And I believe that Pricewaterhouse itself ultimately allowed Palomino to be deconsolidated, which I believe signals that Pricewaterhouse thought that all vested control was in the hands of the hedge fund and not in the hands of Barclays.

Senator LEVIN. And that it was not an option because they already controlled and owned it.

Mr. ROSENTHAL. Yes, they, in effect, owned the stock, right.

Senator LEVIN. Now, I would like you to take a look at Exhibit 68,[1] if you would.

Mr. ROSENTHAL. OK, I have that exhibit in front of me, yes.

Senator LEVIN. OK. Now, this is an excerpt from Barclays' annual report contained in its public filings with the SEC. And if you look at Note 41——

Mr. ROSENTHAL. I am turning to the back of the document. I only see Note 38.

Senator LEVIN. At the top of the page it says 230, then it says, "41 Investments in subsidiaries." It is for 2009. It is Form 20-F. Is that what you have?

Mr. ROSENTHAL. I have a Form 20-F, yes.

Senator LEVIN. For 2009 of Barclays PLC and Barclays Bank PLC.

Mr. ROSENTHAL. I have that in front of me. Which page is that, and where does it start——

Senator LEVIN. No, I do not have a page number. We have a note. Is that 230 at the top?

Mr. ROSENTHAL. Oh, here, I found it on the second page, "41 Investments in subsidiaries."

Senator LEVIN. And 230 is the page number at the top?

[1] See Exhibit No. 68, which appears in the Appendix on page 747.

Mr. ROSENTHAL. I see that, yes.

Senator LEVIN. Now, if you look down where it says "41" in small print there?

Mr. ROSENTHAL. Yes, I see that.

Senator LEVIN. It says, "Entities where the Group's"—now this is Barclays filing with the SEC, right?

Mr. ROSENTHAL. It appears to be so, yes.

Senator LEVIN. OK. And then it says, "Although the Group's interest in the equity voting rights in certain entities exceeds 50%, or it may have the power to appoint a majority of their boards of Directors, they are excluded from consolidation because the Group either cannot direct the financial and operating policies of these entities, or on the grounds that another entity has a superior economic interest in them."

So then it says, "Consequently"—and these are the key words: "Consequently, these entities are not deemed to be controlled by Barclays." And then it lists two entities: one, Palomino Limited. So it is representing to the SEC, it seems to me, that Palomino is not deemed to be controlled by Barclays. Is that what you read?

Mr. ROSENTHAL. Yes.

Senator LEVIN. Now, Barclays is claiming in its public filing that it does not control Palomino, which is what you have been testifying to this morning, because it either does not direct the financial and operating policies of Palomino or it does not have a superior economic interest in Palomino. Based on your review of the evidence that was gathered by this Subcommittee, who does control Palomino?

Mr. ROSENTHAL. Well——

Senator LEVIN. I mean, they are representing they do not control it. Is that a serious representation?

Mr. ROSENTHAL. I think the hedge funds through their general partner, Renaissance, control the accounts in Palomino, just like I believe the hedge funds through their general partner control the accounts held directly under Deutsche Bank. And I think that——

Senator LEVIN. Is this a serious representation when you tell the SEC that you do not control Palomino?

Mr. ROSENTHAL. I believe so. I suspect it is true, too, but, I——

Senator LEVIN. But is it also—I suspect it is true as well. In fact, our report says it is true.

Mr. ROSENTHAL. Yes.

Senator LEVIN. It is also something they are representing to the SEC that they do not control it.

Mr. ROSENTHAL. Yes.

Senator LEVIN. Part of their argument is that they do control it. I think we may hear that argument this morning.

But in any event, they claim here that they do not control it, and what they are saying is the reason they do not control it is because they do not, it says here, they do not direct the financial and operating policies of these entities. They do not control, they say—excuse me. They do not direct the financial and operating policies of Palomino and/or another entity has a controlling interest. So is this not an acknowledgment in a very significant way to a Federal regulatory body that they do not direct the financial and operating policies of Palomino?

Mr. ROSENTHAL. I would say yes, although there is the word "either" here, and I do not quite understand this formulation, "either cannot direct the financial and operating policies . . . or on the grounds"——

Senator LEVIN. No, it does not direct.

Mr. ROSENTHAL. Yes, it is—"or on the grounds that another entity has a superior economic interest in them." In either circumstance——

Senator LEVIN. That another entity has a controlling interest in them. So on either grounds.

Mr. ROSENTHAL. That is correct. Barclays is not viewed as controlling Palomino under this disclosure to the SEC.

Senator LEVIN. All right. And if you look at the next representation for the year—that was 2011. In 2012, are they telling the SEC, if you look at—it is the same exhibit,[1] 2012, do you see there the same—it is footnote 38 in this case.

Mr. ROSENTHAL. Yes, I have footnote 38 in front of me.

Senator LEVIN. And they say that they are excluded from consolidation. They are not even showing Palomino as being owned by them on their SEC form because they do not direct the financial and operating policies of these entities or another entity has controlling interest, for one or the other reasons, they are not even going to show ownership because another entity has a controlling interest or Barclays does not direct the financial and operating policies of Palomino. Right?

Mr. ROSENTHAL. Correct, at the bottom——

Senator LEVIN. And that is something you would agree with, from what you know.

Mr. ROSENTHAL. From what I saw independently of the documents, I think this representation to the SEC is correct that Palomino was not controlled by Barclays. If you look to the economic and financial activities of Palomino, it was set up as a special purpose entity and only maintained accounts to facilitate the trading for Renaissance. And I think that these assertions, quite logically so, suggest that Renaissance controls that trading and those accounts, and not Barclays.

Senator LEVIN. Yes, but at least Barclays sure does not. And that is what they have represented to the SEC. The same thing in—take a look at the next year, 2013. Here again, Palomino; country of registration or incorporation, Cayman Islands again. Can you see that is Note 38, this year. Do you see that?

Mr. ROSENTHAL. Yes, I see the same words there.

Senator LEVIN. They actually—it is slightly different words.

Mr. ROSENTHAL. Oh.

Senator LEVIN. I mean, same impact. They are excluded from consolidation. They do not want to even show them as owning this because the group, Barclays, does not have exposure to their variable returns, and these entities—that is Palomino—are managed by external counterparties and, consequently, are not controlled by the group. Same effect, slightly different words. Is that correct?

Mr. ROSENTHAL. Yes, thank you for highlighting those slightly different words. I actually think the only counterparty to Barclays

[1] See Exhibit No. 68, which appears in the Appendix on page 747.

here would be the hedge fund. I do not believe that Renaissance, the advisor, would be viewed as a counterparty. Normally the term "counterparty" is used in connection with a derivative, the ones who have the economic interest in the contract. So I think these words point more directly to the hedge funds.

Senator LEVIN. Which is what you have testified to.

Mr. ROSENTHAL. That is how I viewed the arrangement consistent with these descriptions, yes.

Senator LEVIN. So they are representing to the SEC what you say is the real-world situation, that the beneficial owner of that account was Renaissance.

Mr. ROSENTHAL. Yes, it appears to me that way, yes.

Senator LEVIN. Year after year after year, that is what they say to the SEC.

Now, the evidence shows that Renaissance on a daily basis made hundreds of thousands of these rapid-fire trades. That is an average, by the way, of three per second, using its trading discretion that it was given by contract in the banks' basket accounts. And I think you have testified to this in your opening statement, but I want to just ask you to expand a bit on it.

Do you have a view as to—and you talked about a turnover in 6 months, I believe, was like 97—what was the turnover, do you remember?

Mr. ROSENTHAL. The turnover in 3 months' time was about 87 percent.

Senator LEVIN. And in 6 months, do you have the number? I think it was 97, but at any rate——

Mr. ROSENTHAL. Something like that.

Senator LEVIN. Does that give rise to a fundamental or material change to the composition of the basket options so that these changes to the underlying positions should be deemed exchanges of property and, therefore, taxable events under the Code?

Mr. ROSENTHAL. Yes, I believe so. I believe that that argument, though, only holds if the basket contract were respected. I think in the first instance, the basket contract combined with the investment management agreements reflect direct ownership of the underlying assets, and, therefore, gains and losses would be recognized at the time that the underlying assets were bought and sold. But on the chance that some court might disagree—that there is, in fact, a contractual right only to the return and not to the underlying assets—I think that contractual right has been fundamentally changed as the portfolio turns over. And so I think the hedge funds would have a very uphill battle to persuade either the IRS or a court of law that the gains that they reported as long term and deferred really were long term and deferred.

Senator LEVIN. So this is a second reason why they would have a problem with—from a tax perspective—from what the claim of the long-term gain is.

Mr. ROSENTHAL. Yes, a second and independent reason, yes.

Senator LEVIN. I have a few questions for the GAO, but, we will now hear from Senator McCain.

Senator MCCAIN. I want to thank the witnesses. Could I say that there are many people who are watching this hearing, and there are many people like me that are not as familiar as you are with how this whole system works. So maybe for the record—and, by the way, we will have to proceed on the assumption there is no such thing as a dumb question in my questioning you. How does this thing work? What is the technologically advanced algorithm? They employ real smart people. Just for the record, how does this whole system work that they have invented which allows them now to have nothing but profits throughout the entire time, no matter what the rest of the Nation and the world's economy does? Would you, for the record, Mr. Rosenthal or Mr. White, either one or both, explain exactly what is taking place here?

Mr. ROSENTHAL. Well, we are at some handicap. These Renaissance funds were incredibly profitable——

Senator MCCAIN. This is a hedge fund?

Mr. ROSENTHAL. A hedge fund, yes, that buys and sells stocks.

Senator MCCAIN. Right.

Mr. ROSENTHAL. It pursues a strategy which has been tremendously successful, and understandably so, the funds were reluctant to share exactly what they did. But I think what they did was described as statistical arbitrage, and I am familiar generally with what statistical arbitrage entails. Statistical arbitrage entails trying to determine relationships between a couple of different assets and determine whether or not the price of one of the assets is out of kilter. Too low, you might buy; too high, you might sell.

And so for instance, you might buy Ford Motor and sell short Chrysler depending on the price of steel. Maybe Ford uses steel more intensively in its manufacturing process.

Senator MCCAIN. And that decision is made by really smart people they hire that do——

Mr. ROSENTHAL. Really smart people.

Senator MCCAIN [continuing]. Intensive study and investigation.

Mr. ROSENTHAL. Really smart people.

Senator MCCAIN. And what does the use of algorithms—where does that enter into it?

Mr. ROSENTHAL. Well, as I understand the algorithm, in the 1990's one of these really smart people, a Ph.D. from Berkeley, created the algorithm which, as I understand it, is a collection of different strategies or pricing signals to determine what to buy and what to sell. And throughout, the Renaissance investment advisor, which has more than 200 to 250 employees, including 90 Ph.D.s, math and science Ph.D.s, continued to tweak the model, search for pricing relationships, look for good investment opportunities, and they are very successful. They can spot pricing—mispricing that may be fleeting, days and weeks, and profit by it.

Senator MCCAIN. Now, is Renaissance one of the most successful of all hedge funds because of this?

Mr. ROSENTHAL. I believe so, Senator, based on my Google of the company. They are tremendously successful, very profitable.

Senator MCCAIN. So basically they are not fundamentally doing anything wrong; it is just they are smarter than a lot of other analysts and hedge funds, etc.

Mr. ROSENTHAL. Well, at its core, statistical arbitrage is a perfectly sensible and fair strategy to pursue, yes.

Senator MCCAIN. But the question here is: Are they paying their taxes that would be appropriate for the transactions they are engaged in?

Mr. ROSENTHAL. Not in my view, Senator. In my view, their strategies fundamentally are short-term strategies. And at the start, Senator, in your opening statement, you described how the average investor looks at some of these arrangements and says, "That is not fair. I cannot do that." And if you were to look to an analogy of what Renaissance funds did to what I, as an average investor might do, I cannot instruct my broker at the end of the year, after I have bought and sold stocks—IBM, AT&T and the like—I cannot instruct my broker, "Please do not send me a 1099 listing the individual gains and sales from my stocks. Instead, please send me after a year and a day my net profits so that I can treat that net profit as a payoff of a long-term investment."

I cannot do that with my retail broker. My broker sends me statements that reflect short-term profits when I pursue a short-term strategy and long-term gains when I pursue a long-term strategy, when I am fortunate enough to have a long-term gain. That is not what has happened here.

Senator MCCAIN. That is not what has happened here. So what has happened here?

Mr. ROSENTHAL. What has happened here, in my view, Senator McCain, is that the hedge funds wrapped a derivative around the short-term trading strategies, that rather than view the short-term trading strategies as being owned and the benefits passing through directly as sales occurred, those gains were simply accrued and reinvested in new positions and were only cashed out when the derivative that wrapped itself around the strategy was terminated and the gains passed through by the bank to the fund.

And as I said, the funds took the view that by arranging the wrapper, this derivative, around the strategy, that the tax law would ignore the short-term nature of the trades underlying the derivative and look only to the longer-term contract. I do not think that would withstand judicial scrutiny, Senator.

Senator MCCAIN. Mr. White, I noticed you want to make a comment on this exchange here.

Mr. WHITE. Senator, yes, we did not at GAO review this particular transaction. I want to be clear about that. What we did review is IRS' ability to audit large partnerships, and many of these hedge funds, as I said in my statement, are structured as large partnerships. What we found, is IRS is hindered in its ability to audit these kinds of entities. One of the problems is finding these kinds of transactions. If you have a tiered structure, IRS auditors have the problem of finding the ultimate source of the income because what they need to do is audit the transactions such as this particular transaction that is the example today.

The other problem that IRS faces is if they do find the transaction and make an audit adjustment, they then have to find all the partners in the structure to pass the change through to.

Senator MCCAIN. So what do we do?

Mr. WHITE. There are a couple of things that we are looking at. We are not done with our work yet. We will be issuing the final report in the fall. But there are some options here to simplify the audit process for IRS under the TEFRA rules.

One problem that we cited, the auditors told us repeatedly they have problems finding the so-called Tax Matters Partner, the representative of the partnership with whom they deal with in an audit. Right now under the law, it is not required that that Tax Matters Partner be listed. The Tax Matters Partner, if it is listed, may not be a human being. It may be another partnership. And IRS auditors told us this can delay their audit work by months. And given the statute of limitations, they may run out of time to complete an audit. So that is one option.

Another possibility is assessing the tax at the entity level, at the partnership level, and avoiding the problem of having to pass the tax through to the partners.

Senator MCCAIN. But right now, according to you, the IRS is auditing 0.8 percent of the large partnerships in the United States.

Mr. WHITE. Yes.

Senator MCCAIN. That is not exactly a deterrent to misbehavior.

Mr. WHITE. Especially when you compare it to the audit rate for large corporations, which is, as I said, 27 percent, 33 times higher than 0.8 percent.

Senator MCCAIN. So, Mr. Rosenthal, we are really talking about de facto tax avoidance here. Is that correct?

Mr. ROSENTHAL. I think that is correct, Senator. That is, we have a situation in which the hedge funds engage in very complicated transactions, and in this instance in ways that I do not think would withstand judicial scrutiny. But having the IRS find the transaction and having the IRS audit the transaction effectively is not going on. I believe from a prior GAO report the IRS stumbled across these transactions through a tip from the SEC. So there are real problems on the audit side from the IRS.

I would say TEFRA was enacted in 1982, I believe, to simplify partnership taxation to make it easier for the IRS to conduct audits at the partnership level, yet to provide some information rights to the partners, to make sure the partners knew what was going on. The TEFRA rules, designed to simplify, in fact have created quite a mess. I worked on the reform of the TEFRA rules in 1993 when I was at the Joint Committee on Taxation. I think Mr. White is correct that further reform might be desirable. But my personal view is that is not the fundamental problem here.

There are two fundamental problems, in my view: one is these derivatives are just so complicated and so opaque that to get the IRS to have the resources to sort them through——

Senator MCCAIN. Could I interrupt you there on the first one? Does that mean you rule out such transactions?

Mr. ROSENTHAL. No. On the first one on how to view derivatives, I think they serve a valuable commercial purpose. Yet I believe what we ought to do is require derivatives to be accounted for as if they had been sold every year. Chairman Dave Camp of the House Ways and Means Committee examined derivatives closely and in his tax reform proposals recommended that derivatives simply be marked to market, that is, treated as if they are sold each year, and then that income or loss recognized each year. That would help immensely to try to neuter the complexity and the difficulties of the IRS in unraveling these derivative arrangements and would, in effect, come very close to the true income from the derivatives. And that was the approach that Chairman Camp proposed and then reproposed. I think that was a sensible approach.

Senator MCCAIN. Your second point? I interrupted you.

Mr. ROSENTHAL. My second point is it is a question of resources, I think, in part to the IRS. As you suggest, Senator, a 1-percent audit rate for an increasingly large segment of our economy just invites the most aggressive behavior. And it is unfortunate—I have practiced for many years, and I have seen this scenario from so many different spots. You can find advisors who will write aggressive opinions; whereas, most advisors would not opine that a transaction works. You can find taxpayers which will take aggressive positions in circumstances in which many other taxpayers would not take advantage of a situation that they did not think was appropriate. And, in effect, what you have is the aggressive driving a race to the bottom, the competitive pressures amongst professionals and amongst taxpayers are only enhanced by the lack of enforcement and regulation by the IRS. And so the situation is very challenging.

So, again, I would try to think of systemic ways to make the audit and the taxation of derivatives simpler, but then you also, in my view, need to give the IRS more resources to do their job.

Senator MCCAIN. Thank you.

Thank you, Mr. Chairman.

Senator LEVIN. Thank you. We are near the end of a vote in the Senate now, the first of three votes. I am going to run over there now and try to catch two votes together, and then I will probably just have to miss the third vote, because we are going to come back and continue to work through these. But I just want to make it clear that you agree, Mr. White, that the IRS has recently experienced budget reductions that do constrain the resources that are potentially available for large partnership audits?

Mr. WHITE. Yes. Its overall resources have been cut. Furthermore, what is going on here is you have this very rapid growth in large partnerships. C corporations are shrinking somewhat but not enough so that IRS could reallocate resources from those audits, which are productive audits. Audits of corporations bring in several tens of billions of dollars to IRS. So reallocating resources away from those audits to large partnerships does not seem to make sense.

Senator LEVIN. All right. Thank you both. You two are excused. We are going to move to our next panel in probably 10 minutes, so we will recess for 10 minutes.

[Recess.]

Senator LEVIN. The Subcommittee will come back to order. Now we will call our second panel of witnesses:

Martin Malloy, Managing Director of Barclays in London; Satish Ramakrishna, Managing Director of Deutsche Bank Securities Inc. and Global Head of Risk and Pricing for Global Prime Finance in New York; Mark Silber, Executive Vice President, Chief Financial Officer, Chief Compliance Officer, and Chief Legal Officer of Renaissance Technologies LLC in New York; and Jonathan Mayers, Counsel for Renaissance Technologies LLC in New York.

Thank you all for being with us this morning, and thank you for the cooperation of the banks and of Renaissance. We appreciate that.

Pursuant to Rule 6, all witnesses who testify before the Subcommittee are required to be sworn, so we would ask you to please stand and raise your right hands. Do you swear that the testimony you are about to give before this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. MALLOY. I do.

Mr. RAMAKRISHNA. I do.

Mr. SILBER. I do.

Mr. MAYERS. I do.

Senator LEVIN. We will be using a timing system today. About a minute before the red light comes on, you will see the lights change from green to yellow, giving you an opportunity to conclude your remarks. Your written testimony will be made part of the record in its entirety, and please try to limit your oral testimony to no more than 7 minutes.

Mr. Malloy, we will have you go first, followed by Mr. Ramakrishna, then Mr. Silber, and then Mr. Mayers. Thank you. Mr. Malloy.

TESTIMONY OF MARTIN MALLOY,[1] MANAGING DIRECTOR, BARCLAYS, LONDON, ENGLAND

Mr. MALLOY. Good morning.

Senator LEVIN. Good morning.

Mr. MALLOY. I am Marty Malloy, and I currently serve as Managing Director and Head of Barclays' European Prime Services unit. From 1998 to 2008, I headed the equity finance team of Barclays' Prime Brokerage group. In this capacity, I oversaw the execution of the COLT transaction with Renaissance Technologies. In the last 18 months, I have met with the Subcommittee staff on several occasions in an effort to assist your review and analysis of the COLT transactions, and I am here today as a further continuation of my and Barclays' cooperation.

Barclays and Renaissance first entered into the COLT transaction in the fall of 2002, and they were already a customer of the bank at the time. Renaissance proposed aspects of a structure that ultimately became COLT in connection with ongoing discussions regarding potentially expanding its business relationship with Barclays. Over the past 12 years, Barclays and Renaissance have entered into a number of COLT transactions.

This is a commercial transaction from which Barclays earns fees in a number of ways. On options trades like this one, the bank realizes income from the spread on our execution of our principal trades. Additionally, Barclays benefited from being able to both pledge as collateral and lend out the securities held by Palomino.

Before putting on the first COLT option and when subsequent options were considered and approved, Barclays subjected the transaction to an extensive internal review process and consulted with both internal and external regulatory and tax experts. The COLT transaction, like any transaction, poses certain risks to the

[1] The prepared statement of Mr. Malloy appears in the Appendix on page 111.

bank. In particular, Barclays bears gap risk associated with being the holder of the basket of securities.

For example, over a period of several days in August 2007, this portfolio, like others using a statistical arbitrage strategy, suffered higher than expected losses. The portfolio eventually rebounded, and the losses did not exceed the limit levels that would have triggered an automatic unwind of the transaction. These risks were mitigated by features of the transaction, including Barclays' right to unilaterally unwind the transaction if losses exceeded the amount of the premium paid by Renaissance on any existing options. There is also a monitoring system to oversee performance of the reference portfolio and certain limitations such as concentration and skew limits.

While Barclays had the risks and protections I just described, the COLT transaction was unique in at least one important way in that it was non-recourse. In other words, unlike other transactions in which the bank provides financing, with the COLT transaction we cannot pursue legal remedies from Renaissance in the event the portfolio suffers losses in excess of the amount of premium paid.

An issue raised by this Subcommittee is whether historically Renaissance has applied the correct tax rate to its earnings from the COLT options. The IRS issued generic legal advice in 2010, but to my knowledge, the IRS has issued no further guidance or decisions on these transactions.

Although Barclays feels strongly that this transaction was subject to sufficient and significant internal and external review to ensure it complied with applicable tax laws and regulations, ultimately the question of what tax rate should Renaissance pay is a question to be resolved between Renaissance, as the taxpayer, and the IRS.

I hope my testimony has been helpful, and I will do my best to answer the Subcommittee's questions. I should note that although I have been involved with many aspects of this transaction over the course of its execution at Barclays, I have not been responsible for the deal's day-to-day operations since May 2008. To assist the Subcommittee, the bank has done its best to collect as much information as possible related to this transaction and, therefore, at times, my testimony and answers will reflect not my personal knowledge, but what I have been informed of by others working at the bank.

Thank you.

Senator LEVIN. Thank you very much, Mr. Malloy.

Mr. Ramakrishna.

TESTIMONY OF SATISH RAMAKRISHNA,[1] MANAGING DIRECTOR, DEUTSCHE BANK SECURITIES INC., GLOBAL HEAD OF RISK AND PRICING FOR GLOBAL PRIME FINANCE, NEW YORK, NEW YORK

Mr. RAMAKRISHNA. Chairman Levin, good morning.

Senator LEVIN. Good morning.

Mr. RAMAKRISHNA. My name is Satish Ramakrishna. I am Managing Director and Global Head of Risk and Pricing for Global Prime Finance in Deutsche Bank Securities. I am currently based

[1] The prepared statement of Mr. Ramakrishna appears in the Appendix on page 118.

in the New York office of Deutsche Bank, and I have been at Deutsche Bank for approximately 16 years.

Before I became a risk manager in 2007, the job that I do now, I was an equity derivatives trader. I ran the structured products derivatives desk for Deutsche Bank in New York and later ran a derivatives desk in London. As a result, I have extensive experience performing quantitative analysis of equity derivatives, including pricing and evaluating the risk profile of various options. My colleague Barry Bausano and I have submitted detailed written testimony.

I want now to briefly describe some of the specific features of the MAPS product at Deutsche Bank and provide some background on how and why we developed what we call "New MAPS" in 2008. Mr. Bausano will then provide you with a brief overview of the MAPS product in Deutsche Bank.

MAPS was an option on a trading strategy. The option buyer, a hedge fund, paid a premium to Deutsche Bank to purchase the option. If the strategy did not generate gains in excess of the initial premium, the buyer simply paid for the costs and benefits of the option and received the remaining value in the option at maturity. However, if the strategy generated positive returns, the buyer received the amount of those returns, less the costs and fees for the option paid to Deutsche Bank. The bank engaged an investment advisor affiliated with the option holder to run the trading strategy within strict parameters and to purchase in short in the bank's own account the securities or positions that comprised the strategy as a hedge to the option.

While the bank's exposure under the option was hedged, MAPS was not without risk to the bank, particularly absent the controls which we put in place. If the value of the securities held in the account fell below the barrier price of the option, the bank bore all losses.

The extent of this risk became clear to me in August 2007, a few months after I joined Prime Finance as a risk manager, when hedge funds employing a statistical arbitrage, market-neutral strategy experienced what has come to be known as the "quant quake." The quant quake demonstrated that such funds were riskier than believed because of the high correlation in the positions held by different funds employing similar strategies.

As a result, in late 2007, I began to consider ways to provide the Bank with better protection if the value of the portfolio of securities the Bank was holding relating to MAPS suddenly dropped. At the same time, those in the bank's control functions, including legal, tax, and compliance, were assessing MAPS in light of ongoing dialog and observations concerning the regulations surrounding derivatives products. Those efforts were merged together as we at Deutsche Bank worked to restructure MAPS and develop "New MAPS" in 2007 and 2008.

The MAPS restructuring included a number of changes. Let me highlight three of them.

First, New MAPS included key risk reduction terms that provided the bank with certain rights at declining levels of account value and that required the investment advisor to follow a defined balanced and liquid investment strategy.

Second, the New MAPS agreements further provided that the securities traded for each option would be held in separate sub-accounts and the options staggered in maturity for risk purposes.

Third, New MAPS was changed from an American style to a European style option, which could not be terminated early without forfeiting a significant part of the premium.

In addition to these changes to the product, we took steps to improve internal controls and apply intra-day risk management, thus better managing the bank's risk under New MAPS. I also ensured that the revised option price calculation accurately compensated the bank for its risks and costs. Pricing was done through the use of traditional option-pricing methods, and the strike price was adjusted so that the cost of the option and the financing cost of the portfolio were reflected in the strike price of the option.

In sum, we priced New MAPS as an option, managed it as an option, and documented it as an option. We did so because MAPS was an option and the bank was compensated for and managed its risk accordingly.

Thank you for this opportunity to speak to you today, and I look forward to answering your questions.

Senator LEVIN. Thank you very much.

Next will be Mr. Silber.

TESTIMONY OF MARK SILBER,[1] EXECUTIVE VICE PRESIDENT, CHIEF FINANCIAL OFFICER, CHIEF COMPLIANCE OFFICER, AND CHIEF LEGAL OFFICER, RENAISSANCE TECHNOLOGIES LLC, NEW YORK, NEW YORK, ACCOMPANIED BY JONATHAN MAYERS, COUNSEL, RENAISSANCE TECHNOLOGIES LLC, NEW YORK, NEW YORK

Mr. SILBER. Thank you. Chairman Levin, and Members of the Subommittee, good morning.

Senator LEVIN. Good morning.

Mr. SILBER. My name is Mark Silber, and I appreciate the opportunity to present a brief opening statement on behalf of Renaissance.

Renaissance's mission is to produce superior financial results by adhering to mathematical and statistical models in the design and execution of trading strategies. Our equity trading and advisory activities add liquidity to the markets, reduce inefficiencies, and improve capital formation. We have invested billions in the research that supports our models, and we have been very successful, but we know that past success does not eliminate future risk.

I want to be clear: Renaissance's Medallion fund purchased barrier options from Deutsche Bank and Barclays for substantial non-tax business reasons. We would have purchased these options regardless of their tax treatment. I can confidently speak to our motivations for buying these options because I have been a part of the Renaissance leadership team for over 30 years.

When we exercised a barrier option held for more than a year, we reported any gains resulting as long-term capital gains in accordance with current tax law. We reported short-term capital

[1] The prepared statement of Mr. Silber appears in the Appendix on page 129.

gains on options held for less than a year. If the tax law relating to barrier options changes in the future, we will, of course, comply.

Under current law, derivative instruments permit higher leverage than many other forms of investments. Again, if the rules concerning leverage change, we will comply.

Medallion purchases barrier options to obtain a combination of leverage and loss protection that we have been unable to obtain through any other means. This is entirely permissible under current law. The Joint Committee on Taxation has recognized that derivatives are critically important tools in the risk management process and that, compared to actually stock ownership, derivative contracts typically afford a party much higher leverage than would be commercially possible or permitted by relevant margin regulations.

Our options are not prime brokerage accounts with more than normal benefits. They come with a different bundle of rights and obligations. Owners of stock in prime brokerage accounts receive customer protections in bankruptcy and other benefits that we do not. For example, if one of our counterparties were to collapse or default, as Lehman Brothers and other large institutions have recently done, we would be a general creditor at the back of the line with no guarantee of recovering any portion of the value of the option. We have accepted these trade-offs in order to obtain greater leverage and loss protection that is not available in prime brokerage.

The way in which we have used the barrier options also demonstrates that we were driven by business imperatives. The average holding period of the Deutsche Bank options from 2000 through 2009 was around 450 days. For Barclays, it was around 400 days. After the August 2007 Quant Quake, we exercised a Barclays option after only a few months, and then did so again in 2009 during the market turmoil surrounding the financial crisis. Today all of the new options that Medallion enters into have terms of less than 1 year.

Like all prudent investors, we were also mindful of the tax consequences of our actions. This is entirely permissible and in no way negates the compelling business reasons that led us to enter into these transactions.

As you know, the IRS has been reviewing these options for over 6 years now. Renaissance has been cooperating fully with that review and is working through the issue within the IRS's established process. Frankly, we wish things would move faster. Ultimately, we expect to prevail because we have complied with the law.

We also note that Congress many years ago gave the IRS the authority, in Code Section 1260, to prospectively change the taxation of options like these, and it has not done so.

We appreciate the opportunity to be here today to explain our transaction, and we look forward to your questions.

Senator LEVIN. Thank you, Mr. Silber.

Mr. Mayers.

Mr. MAYERS. Senator Levin, Mr. Silber's remarks were on behalf of Renaissance as a whole, and I will not be making a statement separately.

Senator LEVIN. Thank you.

OK. Let me first ask you some questions, Mr. Silber. In the basket deals with Deutsche Bank, RenTec used two different entities to purchase the options: Franconia and then later on Mosel. Franconia was a Bermuda corporation, and it was used by Renaissance to be the option buyer in 20 basket deals between 2000 and 2007.

How many employees did Franconia have?

Mr. SILBER. None.

Senator LEVIN. Who controlled Franconia?

Mr. SILBER. Renaissance as the general partner.

Senator LEVIN. Now, take a look at Exhibit 6,[1] if you would.

Mr. SILBER. I have that exhibit.

Senator LEVIN. If you take a look at page 1, it is stated that RenTec was authorized without further approval by or notice to the client—that is Franconia—to make all investment decisions concerning the account. Is that correct? Do you see that?

Mr. SILBER. I am looking for it, but I believe that is correct.

Senator LEVIN. OK. Now, in terms of RenTec's control over Franconia, if there were any doubt, take a look at the signature page. Who signed that agreement for Renaissance?

Mr. SILBER. I did.

Senator LEVIN. And who signed on behalf of Franconia?

Mr. SILBER. I did.

Senator LEVIN. So you are signing that deal with yourself. More significantly, Renaissance is signing a deal with itself, and the company is such a shell that you, as an executive officer of RenTec, sign all of the papers.

Now, the next entity RenTec used in these basket deals was Mosel. Am I pronouncing that correctly?

Mr. SILBER. Yes, Senator.

Senator LEVIN. Mosel was a Delaware partnership and has been used by RenTec to be the option buyer in basket options between 2007 and 2010. It has also entered into all of the short-term deals that RenTec and Deutsche Bank have entered into since 2012. How many employees does Mosel have?

Mr. SILBER. None.

Senator LEVIN. And who controls Mosel?

Mr. SILBER. We do as general partner.

Senator LEVIN. Take a look at Exhibit 8,[2] if you would.

Mr. SILBER. Yes, sir.

Senator LEVIN. This is a copy of the Limited Partnership Agreement for Mosel. RenTec is Mosel's general partner. According to page 6 of the agreement, the general partners, subject to the terms and conditions of the agreement, "shall have complete and exclusive responsibility for managing and administering the affairs of the Partnership, and shall have the power and authority to do all things necessary to carry out its duties hereunder." Do you see that language?

Mr. SILBER. Yes, Senator.

Senator LEVIN. OK. Now, look at the signature pages 15 and 16. Who signs for RenTec?

Mr. SILBER. I did.

[1] See Exhibit No. 6, which appears in the Appendix on page 274.
[2] See Exhibit No. 8, which appears in the Appendix on page 292.

Senator LEVIN. And who signs for all of the partnerships that are the limited partners?

Mr. SILBER. I did.

Senator LEVIN. Full control by RenTec. RenTec's general partner Mosel is also the agent of Mosel. Is that correct?

Mr. SILBER. We are the general partner of Mosel.

Senator LEVIN. Are you the agent of Mosel?

Mr. SILBER. As general partner, we had all the authority and responsibility for the activities.

Senator LEVIN. Now, I want to explore some of the fictions that I have referred to in some detail, and we are going to do so by looking specifically at the option deals involving RenTec and Deutsche Bank. What the bank and the hedge fund want is to create a reality, an alternate reality, in which RenTec can borrow lots of money from Deutsche Bank to make millions of short-term trades while both avoiding leverage limits and RenTec also claiming long-term capital gains rates. And the vehicle to create that alternate reality is a basket option that derives its value from a basket of securities that sit in a Deutsche Bank account, but that RenTec can change the mix of the assets in the basket as it wishes.

The idea, however, of a hedge fund holding an option whose value derives from an account that that same hedge fund controls would be absurd, to have an option on yourself. So to maintain the fiction of a real option, RenTec creates an entity that it owns, Franconia, to hold the option. RenTec controls the Deutsche Bank account. The created entity Franconia holds the option on the account. That supposedly sets up a wall between the entity controlling the trades and the entity controlling the option. But on even the most cursory examination, that wall crumbles. These two entities are one entity, as we can see from the chart in front of us.

Now, Mr. Silber, take a look at Exhibit 7,[1] if you would. It is a confirmation document for one of the basket deals between RenTec and Deutsche Bank in 2002. Do you see where the heading there is "Deutsche Bank," and it says, Franconia, it is addressed to Franconia Equities.

Mr. SILBER. Yes.

Senator LEVIN. Care of Renaissance Technologies.

Mr. SILBER. Yes.

Senator LEVIN. OK. Franconia, again, the RenTec-controlled shell, is the option buyer. Deutsche Bank is the seller.

Now, if you look at one of the representations made in this document on the bottom of page 10, Article (v), there is a representation in that article that the buyer—that is Franconia—has made an independent judgment of the experience and expertise of the investment advisor. The investment advisor to Deutsche Bank is RenTec, who we have already seen is the investment advisor for Franconia, wholly owned by RenTec, who owns it and controls it. Franconia has no employees.

Now, how can Franconia be able to make an independent judgment of RenTec?

Mr. SILBER. I am missing—I am sorry, Senator. I see where the seller——

[1] See Exhibit No. 7, which appears in the Appendix on page 129.

Senator LEVIN. At the last line, "The buyer has made an independent judgment of the experience"——

Mr. SILBER. ". . . and expertise of the investment"—that is correct. Franconia is an investment vehicle owned by ultimately the beneficial owners of the fund, Medallion fund, which was the owner of Franconia. RenTec is an individual—is an independent entity which acts as Investment Advisor to both Medallion and Franconia.

Senator LEVIN. Right. So how can Franconia make an independent judgment of the experience and expertise of RenTec? It was created by RenTec.

Mr. SILBER. It was.

Senator LEVIN. It has no employees.

Mr. SILBER. That is correct.

Senator LEVIN. So how does it make an independent judgment?

Mr. SILBER. We as the——

Senator LEVIN. Who makes the judgment at Mosel?

Mr. SILBER. Renaissance——

Senator LEVIN. I am sorry. At Franconia. Who makes the judgment?

Mr. SILBER. Renaissance acting as the general partner with duties to the—fiduciary duties to its investors, is speaking on behalf of those investors with regard to RenTec, the same entity, in its role as investment advisor.

Senator LEVIN. So RenTec is making a judgment on RenTec.

Mr. SILBER. It is.

Senator LEVIN. OK. If that is your definition of "independence," I would like to find a dictionary—send me a copy of the dictionary that has that kind of a definition of "independence," making a judgment on yourself.

So take a look, if you would, please, at page 11[1] of that same document. And then in the second paragraph there, under "Investment Advisor," it says, "Other than as provided above, Buyer agrees"—that is Franconia—"that it shall not contact directly the Investment Advisor"—that is RenTec—"regarding the terms or subject matter of this Transaction."

How is it under any definition conceivable that the Buyer, Franconia, with no employees, will not contact directly the Investment Advisor that creates it regarding the terms or subject matter of this transaction? How is that possible?

Mr. SILBER.I agree. I do not understand—that sentence may not have been relevant to this transaction.

Senator LEVIN. But it is highly relevant, trying to create a fictional wall. I am just asking you: How is it conceivable, under what definition is it possible that Franconia, with no employees, agrees that it will not contact the investment advisor, which is RenTec, regarding the terms and subject matter of this transaction? Would you agree that is not feasible, physically?

Mr. SILBER. In this circumstance, I think you are correct.

Senator LEVIN. All right. Now, Deutsche Bank in 2008 revised its basket option product called "MAPS," and Mosel then replaced Franconia as the option buyer on behalf of RenTec. Please take a

[1] See Exhibit No. 7, page 11, which appears in the Appendix on page 279.

look at Exhibit 27.[1] If you look at page 21, this is the agreement now between Deutsche Bank and Mosel Equities care of Renaissance. This is the confirmation, so-called, for a basket deal in 2009. This is after the restructuring of MAPS. There is a representation, if you would, on page 21 near the top, end of paragraph (v), the "Buyer"—so now it is Mosel—"agrees that it shall not attempt to direct or influence the choice of investments in the Basket."

The investment advisor to the Deutsche Bank account, the entity making the decisions for the trading account, is RenTec. The company controlling Mosel is RenTec. RenTec is the agent of Mosel. So how can Mosel represent to Deutsche Bank that it will not attempt to direct or influence the choice of investments in the basket when Mosel and RenTec are really the same entity? How is that possible?

Mr. SILBER. Senator, Renaissance is playing two different roles in this transaction. With regards to the option, it is recommending trades for the reference basket, and with regard to Deutsche Bank, we are recommending and initiating trades for their hedge portfolio.

Senator LEVIN. Would you agree that Mosel and RenTec are the same entity?

Mr. SILBER. They are not the same entity. They are both controlled by Renaissance, but they have different ownership.

Senator LEVIN. Well, Renaissance controls Mosel.

Mr. SILBER. Renaissance manages and has control of the activities of Mosel.

Senator LEVIN. And so Mosel is controlled by Renaissance.

Mr. SILBER. On an activities basis, that is correct.

Senator LEVIN. So Mosel is now agreeing it will not attempt to direct or influence the choice of investments in the basket, but the entity that controls it will.

Mr. SILBER. I think Renaissance is——

Senator LEVIN. Renaissance controls it.

Mr. SILBER. Renaissance——

Senator LEVIN. They are going to make the decisions.

Mr. SILBER. And when we make the decision——

Senator LEVIN. But then Mosel is saying, Mosel will not do it, the person that owns us, the entity that owns us is going to do it. The problem is it does not say that anywhere here, does it?

Mr. SILBER. No, it does not. Renaissance does not own Mosel. It controls Mosel.

Senator LEVIN. It controls Mosel.

Mr. SILBER. So Renaissance——

Senator LEVIN. So Mosel is telling Deutsche Bank, we are not going to make a recommendation, but the entity, it does not say, that controls us is going to make the recommendation, right?

Mr. SILBER. In its role as advisor to Deutsche Bank, that is correct.

Senator LEVIN. OK. Now, Mr. Ramakrishna, you signed this document on behalf of Deutsche Bank. And you are familiar with the operation of the basket deals.

Mr. RAMAKRISHNA. Yes, sir.

[1] See Exhibit No. 27, which appears in the Appendix on page 425.

Senator LEVIN. Do you think it is possible that Mosel, totally controlled by RenTec, could not be influencing the——

Would you agree that RenTec not only influenced the choice of investments, it made the decision on investments. Would you agree to that?

Mr. RAMAKRISHNA. I think we did realize that the option buyer and the investment advisor are affiliated.

Senator LEVIN. Not affiliated. That RenTec controls Mosel. You knew that.

Mr. RAMAKRISHNA. We knew there was a relationship. I cannot speak to the control feature. It is not something I am an expert on.

Senator LEVIN. But now that you know that Mosel is owned by RenTec, does it make any sense for Mosel to represent to you that it is not going to be making any decisions relative to what is in that basket? It does not add parenthetically, but the entity that owns us is. RenTec controls Mosel. So Mosel is telling you, Deutsche Bank, we, Mosel, we are not going to make any recommendations to you. But what they do not add in that agreement is, the entity that owns us is going to make those decisions. Doesn't that change the whole nature of the contract? If they said that, the facts are that RenTec owns Mosel. You are told in this contract Mosel represents to you, Deutsche Bank, that it is not going to make decisions relative to what is in that basket, right? That is what it is telling you.

Mr. RAMAKRISHNA. Senator, I am not an attorney, and I am sure the word "control" means something special.

Senator LEVIN. It means what it says. You signed the agreement, didn't you?

Mr. RAMAKRISHNA. Yes, I did, sir.

Senator LEVIN. Did you understand what you were signing?

Mr. RAMAKRISHNA. I think I did, yes.

Senator LEVIN. And did you understand that Mosel, which signed the agreement with you, owned by RenTec, representing to you that it is not going to make decisions, did you understand that the entity that owned it, RenTec, that owned Mosel, was going to be making decisions? Did you know that when you signed it?

Mr. RAMAKRISHNA. We definitely knew that the two were connected——

Senator LEVIN. No, but did you know that RenTec—when you were told in this agreement—was represented to you that Mosel was not going to be making the decisions. Did you realize and understand that RenTec, the party that was making the decisions in its agreement with you, owned Mosel? Did you know that?

Mr. RAMAKRISHNA. I do not think I knew personally if RenTec owned Mosel, but I do know that the two were strongly connected.

Senator LEVIN. Senator Johnson.

Senator JOHNSON. Nothing right now, Mr. Chairman.

Senator LEVIN. OK. Let me just ask you, Mr. Silber, the entities that were involved in the Barclays-RenTec basket deals were similar to the ones that were involved with the Deutsche Bank-RenTec deals. In the deal with Barclays, RenTec used two different entities to purchase the basket options. Bass Equities was a Cayman Island company that was used by RenTec to be the basket option buyer in eight basket deals between 2002 and 2004. Badger was a Delaware partnership and has been used by RenTec to be the option buyer in 31 basket options between 2007 and 2012.

Now, Mr. Silber, you signed all the formation papers for all the parties. RenTec controlled Bass and Badger, and RenTec was the investment advisor for the Barclays option account, which was held in the name of a Barclays special purpose entity called "Palomino." Is that correct?

Mr. SILBER. Yes, Senator.

Senator LEVIN. OK. And you were the investment advisor to Bass and Badger. Is that correct?

Mr. SILBER. Yes.

Senator LEVIN. By the way, Senator Johnson, whenever you are ready, let me know. I would be happy to yield to you, because I have been going on for some time.

Senator JOHNSON. Unfortunately, I missed the first part.

Senator LEVIN. OK. Mr. Mayers, a critical event regarding the question of who controlled the bank accounts occurred in 2009 when there was a change in the Articles of Association of Palomino, which is the Bermuda entity that Barclays used to hold the account related to the basket transactions. And it was followed by a side letter that effectively gave Renaissance power to approve changes to Palomino's Articles of Incorporation.

So we have a situation here where Palomino's activities were restricted to those that it was currently engaged in by that side letter. Basically Palomino was restricted to basket option transactions with Renaissance and could only use Renaissance as the investment advisor to the Palomino account.

Mr. Mayers, I believe you told Subcommittee staff that RenTec wanted to make sure that it could mitigate as much as possible the chance that Barclays could unilaterally undertake some activity that could void the investment management agreement and possibly terminate the option because RenTec wanted to preserve the access that it had to the leverage financing. Is that correct?

Mr. MAYERS. Senator, in the context of the discussion with your staff which you are referring to, I advised that by the time I got involved in the side letter discussions, the reason for them had been—it had already been decided that it was going to be done. My role at that time was to review the documentation to see how it affected the rights and obligations as far as the option transactions were concerned.

In reviewing those documents, the first thing that I noticed was that it did not negatively affect these rights and obligations, and as you correctly refer—as you correctly state, I was thinking that there may be a benefit in that side letter. I have since gone back and can see no way where that benefit can accrue.

Senator LEVIN. Now, back to Mr. Malloy, Barclays had discussions with Renaissance about changes to the Articles of Association. Is that correct?

Mr. MALLOY. Yes.

Senator LEVIN. And the problem was that since Barclays was the sole shareholder of Palomino, Barclays could always go back and eliminate the restrictions in Palomino's Articles of Association. So in order to ensure that the restrictions on Palomino would stay in place, RenTec and Barclays entered into a side letter. Would you take a look at Exhibit 55,[1] please?

Mr. MALLOY. Yes.

Senator LEVIN. Now, this side letter, at the second from the last paragraph, addressed to you, Mr. Malloy, by Renaissance Technologies, signed by Mr. Silber, stipulated that the amendments to Palomino's articles would not change the obligations and duties that Barclays and Palomino had to RenTec regarding the basket transactions. In addition, the side letter said the following, and this is what I am reading to you from that second from the last paragraph: "Barclays hereby further covenants to Renaissance that it shall not make any amendments or modifications to the Memorandum and Articles of Association of Palomino after the date hereof without first obtaining the prior written consent thereto of Renaissance; provided that the Investment Management Agreement has not been terminated by either Palomino or Renaissance."

So what you do is you give Renaissance veto authority over Palomino's entire Articles of Association. That is a huge sign of RenTec's control. Not only does it have contractual and functional control over the accounts of Palomino; it also now has veto authority over the details of the organization's charter.

Mr. Malloy, this was one of the factors that Barclays used to justify the deconsolidation of Palomino in its financial statements in 2009. Is that right?

Mr. MALLOY. Yes.

Senator LEVIN. Now, when Barclays deconsolidated Palomino, which means it removed Palomino from its annual financial reports, and when it removed it from its financial statement in 2009, Barclays took the position that Palomino is controlled by RenTec. Barclays' reasons for taking this position were laid out in a June 2009 memorandum that it wrote, Barclays wrote, to its own auditor, Pricewaterhouse. So if you would take a look, please, at Exhibit 53.[2] This is a memorandum that was written by Barclays' Structured Capital Markets Group, which was responsible for developing the basket transactions.

Now, I reviewed the reasons in depth with the first panel, the reasons given, and the full list is, again, available here for all the reasons that it represented what it did. So I am just going to summarize the reasons that Barclays gave to its auditor for wanting to deconsolidate Palomino. Here are the reasons:

The trading activities of Palomino are managed solely by RenTec such that RenTec can obtain the majority of the benefits from Palomino's activities;

The prime brokerage accounts are controlled by RenTec;

RenTec effectively is entitled to 100 percent of the benefits from Palomino's trading accounts;

RenTec is exposed to 100 percent of the risks from Palomino's trading accounts.

And this is the conclusion which you can see to that document. It is on page 139764, so that is the Bates number there, do you see that? "Following the proposed amendments to the Articles and the

[1] See Exhibit No. 55, which appears in the Appendix on page 667.
[2] See Exhibit No. 53, which appears in the Appendix on page 654.

entry into the Side Letter, RenTec controls the major activities of Palomino and is exposed to substantially all significant risks and rewards arising from the activities carried out through the [prime brokerage] accounts, being the only permitted activities of Palomino."

"Consequently," Barclays—which is BBPLC—"should de-consolidate Palomino from the date these proposed amendments are effective because they give rise to a loss of control."

So now you are representing—you, being Barclays—representing to your auditor that, from the date of those amendments, Barclays no longer controls Palomino. Is that correct? That was the representation in that letter to Barclays' auditor. Is that correct?

Mr. MALLOY. Mr. Chairman, I think there is a number of points——

Senator LEVIN. But did I read it correctly?

Mr. MALLOY. You read the statement that is in there, but I think you actually have to look at different aspects of this particular documentation.

Senator LEVIN. OK.

Mr. MALLOY. To put it into context, this is a document between accountants going back and forth over European accounting standards, and if we take some of the components that you talk about where you mention the risks, there are several spots within this documentation that actually highlights that, as I mentioned in my opening statement, that Barclays is exposed to the gap risk. So this is, when we are looking at this particular language, it is from an accounting perspective, Mr. Chairman, that they are starting to talk about the control component.

I would observe that control is more a conclusion. If we go back to the——

Senator LEVIN. Well, what was the conclusion that Barclays gave to its auditor?

Mr. MALLOY. This is a conclusion from an accounting standards perspective. Palomino——

Senator LEVIN. You mean it did not control? You are saying that it controlled it for accounting purposes but not for tax purposes? Is that what it says in here?

Mr. MALLOY. Palomino was deconsolidated for accounting purposes. It was still consolidated, though, for regulatory purposes.

Senator LEVIN. Well, let us look at the regulatory purposes. Look at, if you would, Exhibit 68,[1] the statement to the SEC.

Mr. MALLOY. Yes.

Senator LEVIN. Your annual report to the SEC in filings, you have excluded Palomino from consolidation because Barclays does not direct the financial and operating policies of these entities or does not have a superior economic interest in Palomino because Barclays either cannot direct the financial and operating policies or, on the grounds that another entity has a superior economic interest in Palomino. Now you are talking to the regulator, right? You are saying we are not going to consider Palomino part of us anymore, it is excluded from consolidation. This is what you are re-

[1] See Exhibit No. 68, which appears in the Appendix on page 747.

porting to the SEC. Is that correct? In Exhibit 68, do you read that, on page 230?

Mr. MALLOY. Yes.

Senator LEVIN. ". . . these entities are not deemed to be controlled by Barclays." And what is one of the entities? Cayman Islands-owned Palomino. So now you are talking to the regulators. Was that statement true?

Mr. MALLOY. As I understand it, Mr. Chairman, this is an outcome from the analysis that was done on the accounting, so for the accounting standards, under that definition of the accounting standards associated with it, yes. I would point out, though, that——

Senator LEVIN. Yes, what? That the statement was true.

Mr. MALLOY. I do not know of any factual inaccuracies in the memo that was submitted to PwC.

Senator LEVIN. Well, my question is: Is the representation to the SEC that the entities are not deemed to be controlled by Barclays, was that a true statement to the SEC? That is my question.

Mr. MALLOY. Mr. Chairman, I am not an accountant——

Senator LEVIN. No, I am asking you whether or not this statement to the SEC was correct. That is all I am asking. It is not an accounting statement. It is a factual statement that you made to the regulator. "These entities"—now we are talking about Palomino—"are not deemed to be controlled by Barclays." That is a very direct question.

Mr. MALLOY. I am sure the statements that we made to the SEC are accurate. I was just pointing out it is from an accounting standard, Mr. Chairman.

Senator LEVIN. So it is accurate for an accounting purpose, but inaccurate for what other purpose?

Mr. MALLOY. No, I am not suggesting that these are inaccurate statements going to our regulators.

Senator LEVIN. Well, you are saying it was accurate here, but it was not accurate for some other purpose. So where was it inaccurate?

Mr. MALLOY. What I am pointing out is when you are doing some of the analysis that are going back, when you start talking about some of the language that is associated with it, the language could mean different things to different aspects, one from an accounting perspective, one from a tax perspective.

Senator LEVIN. So in other words, you did not tell the SEC that we do not control this for SEC purposes, but we are going to claim we control it for tax purposes? Did you tell that to the SEC?

Mr. MALLOY. I am not aware of exactly——

Senator LEVIN. Did the SEC refer this to the IRS?

Mr. MALLOY. I became aware later that it did, yes.

Senator LEVIN. So take a look at Exhibit 68, 2010, same statement: "These entities," including Palomino, "are not deemed to be controlled by Barclays." 2011, same statement: "These entities," again Palomino, "not . . . controlled by Barclays." Year after year you are representing to the regulator these entities are not controlled by Barclays.

But then it is interesting. You say in Exhibit 68—take a look, if you would, at the 2013 representation to the SEC. You are saying, if you look on the third paragraph under Note 38——

Mr. MALLOY. I am sorry, Mr. Chairman?

Senator LEVIN. Sure, Note 38, Exhibit 68. This is now the 2013——

Mr. MALLOY. OK.

Senator LEVIN [continuing]. Representation to the SEC, Fiscal Year ended December 31, 2013.

Mr. MALLOY. OK.

Senator LEVIN. The third paragraph, do you see that? It starts, "An interest in equity voting rights," do you see that paragraph?

Mr. MALLOY. I do.

Senator LEVIN. And at the end it says, "However, certain entities are excluded from consolidation because the Group does not have exposure to their variable returns." And then it says the following: "These entities are managed by external counterparties and consequently are not controlled by the Group." Not controlled by Barclays. That is, again, Cayman Island-registered Palomino Limited.

So, again, Barclays does not control it, you are representing, but someone else, an external counterparty, manages it. Who is that?

Mr. MALLOY. I believe what we are referring to here is the structure of the overall option where Renaissance——

Senator LEVIN. No, but who is the external——

Mr. MALLOY [continuing]. Was the investment manager as part of that. But I think it is also worth pointing out, though, Mr. Chairman, that we talk about this whole concept, Barclays still was 100 percent owner of Palomino.

Senator LEVIN. Yes, I know that——

Mr. MALLOY. We still did all of the capitalization of Palomino. We managed all of the financing. We took all of the collateral that we had the full rights to use that Renaissance was never even aware of. So I think it is important that you look at different aspects of the overall structure to see who is acting in which capacity.

Senator LEVIN. Yes, I could not agree with you more as to who the beneficial owner was of this account, who got the profits and losses, who made the decisions on what to buy. All of the key indicators of ownership point right to RenTec. In fact, that is the purpose this account was set up, was to service RenTec. In fact, you can make a claim that you represented—that we did not control it to SEC, but really we still owned it legally. You claimed that you are the beneficial owner of Palomino?

Mr. MALLOY. We are the beneficial owner of the reference accounts and the asset——

Senator LEVIN. No, not the reference accounts. Are you claiming that you are the beneficial owner of Palomino?

Mr. MALLOY. Palomino is a 100 percent wholly owned subsidiary of Barclays.

Senator LEVIN. Do you claim you are the beneficial owner of the account that Palomino ran, of that basket account? Do you claim to be the beneficial owner of that basket account?

Mr. MALLOY. Yes, we are the beneficial owner of the assets in that account.

Senator LEVIN. OK. Now, for each of the options, for more than 10 years, Renaissance used Barclays' software system, right?

Mr. MALLOY. Yes.

Senator LEVIN. It gave direct access to the stock market. RenTec executed tens of millions of trades per year in Barclays' Palomino accounts. Renaissance received the stock dividends from all those trades as part of the option profits. It was charged commissions and trading costs by Barclays for each of the transactions that it executed. It was charged finance fees by the bank to borrow shares for its short selling activity in the Palomino account. It was charged a financing fee by the bank on the amount that it used for leverage in the account. Renaissance even received the rebates from stock exchanges for the orders using Barclays' execution system that it sent to the stock exchange. Is that true, what I just said?

Mr. MALLOY. In general, yes.

Senator LEVIN. Now, when Renaissance sends a marketable order using your software system to the stock market, 30 million—or, I guess—yes, 30 million a year between the two banks, about 15 million per bank. It is executed in a microsecond, is it not? In a second or less? Orders are executed——

Mr. MALLOY. The order——

Senator LEVIN. In microseconds.

Mr. MALLOY. Right, again, just to maybe back up and explain how it worked.

Senator LEVIN. OK. And the same was true, Mr. Ramakrishna, for Renaissance activities at Deutsche Bank. Is that correct?

Mr. RAMAKRISHNA. Did you say microseconds?

Senator LEVIN. Yes, these orders were executed in microseconds.

Mr. RAMAKRISHNA. Usually—I mean——

Senator LEVIN. There are 15 million of these orders a year at your bank, right?

Mr. RAMAKRISHNA. Yes. The orders were sent through our slower system initially, which was in the range of a few milliseconds. Microseconds is a thousand times smaller, so not on that level.

Senator LEVIN. And who placed the orders?

Mr. RAMAKRISHNA. They were placed by RenTec.

Senator LEVIN. Renaissance.

Mr. RAMAKRISHNA. Yes in Deutsche Bank's name.

Senator LEVIN. In your name. And, Mr. Malloy, did Renaissance receive all the profits from the trading reflected in the Palomino accounts when it closed out the account?

Mr. MALLOY. Renaissance via the option did get the performance of the overall portfolio, yes.

Senator LEVIN. OK. Was the same true, Mr. Ramakrishna, for Deutsche Bank?

Mr. RAMAKRISHNA. Sorry. I think I missed exactly what——

Senator LEVIN. OK. Let me repeat the question. Did Renaissance receive all the profits from the account which was run by Deutsche Bank? So here we are talking about Deutsche Bank's account, which held the stocks which were directed and ordered by RenTec. Did RenTec have most of the risk for those stocks?

Mr. RAMAKRISHNA. RenTec had the risk up to the premium that they paid for the option.

Senator LEVIN. Exactly.

Mr. RAMAKRISHNA. Beyond that, Deutsche Bank took all the risk.

Senator LEVIN. You never took a loss on any of these purchases, did you?

Mr. RAMAKRISHNA. Honestly, Senator, we did not take a loss on any of these accounts owing to proactive risk management.

Senator LEVIN. I understand——

Mr. RAMAKRISHNA. We had other trades——

Senator LEVIN. But there were 30 million buys in these two banks, and you guys did not take a loss on any of those buys, right?

Mr. MALLOY. No, we did not take a loss on——

Senator LEVIN. So you have 15 million buys ran through you to this account, profits and losses all belong to RenTec, they did the ordering, and you guys did not lose a penny on any of 30 million buys, and that was all RenTec's risk, right?

Mr. RAMAKRISHNA. Senator, there was a lot of careful selection of——

Senator LEVIN. I know it is carefully done. I am asking you, did you lose a penny on any of 15 million buys?

Mr. RAMAKRISHNA. No.

Senator LEVIN. Did you lose a penny on any of 15 million buy?

Mr. MALLOY. No. That is not to say we did not have risk, though, Mr. Chairman.

Senator LEVIN. I understand the risk that you are claiming. I am just saying you did not——

Mr. MALLOY. No, we did not.

Senator LEVIN. For 10 years, tens of millions of buys, you did not lose a penny on any of the buys. I understand the risk you took, which never panned out. You never lost on any of that risk. But, nonetheless, that is not my question.

Now, Mr. Malloy, isn't it the case that for the options, the COLT options, that were written on a basket of securities that were held by Palomino and that RenTec determined the composition of and the overall investment strategy, is that the case? They determined the composition of the basket and the overall investment strategy.

Mr. MALLOY. Yes, they made the decisions of what to purchase and sell.

Senator LEVIN. The options were written on the basket of the securities that were held by Palomino. Is that correct?

Mr. MALLOY. Yes.

Senator LEVIN. OK. To both you, Mr. Malloy and Mr. Ramakrishna, your banks' profits from the options came from financing and transaction fees. Is that correct?

Mr. RAMAKRISHNA. Senator, we charged in excess of what we would normally charge for financing and transaction fees.

Senator LEVIN. But that is where your profits came from.

Mr. RAMAKRISHNA. The revenues came from that, yes.

Senator LEVIN. And, Mr. Malloy?

Mr. MALLOY. Yes, we also were able to—in this particular transaction, we had profits that came from the ability of the use of the collateral.

Senator LEVIN. Right.

Mr. MALLOY. We could use that for securities lending, and that also was as part of the revenue stream.

Senator LEVIN. Right. Did the banks, either of your banks, from these tens of millions of trades that were executed every year in your accounts for the option basket and from the billions of dollars of profits earned in those accounts, did your banks receive any of the profits from the trading activity after you deducted what was owed to Renaissance?

Mr. MALLOY. No. The trading activity that occurred, the account would be up or down, losses or gains on any individual day. But Barclays did not receive any of the performance, no.

Senator LEVIN. Is that true, Mr. Ramakrishna, with your bank?

Mr. RAMAKRISHNA. Mr. Chairman, the——

Senator LEVIN. Is what he said true with your bank?

Mr. RAMAKRISHNA. The payoff of the option was indeed the——

Senator LEVIN. No. I am just asking you whether it's true? If you cannot answer, it is OK. What he has just said, was that true with Deutsche Bank?

Mr. RAMAKRISHNA. I would like to just qualify it with one extra statement, which is that, for instance, when you have a trade from a customer, you may have crossing profits because you are able to cross internally. That sort of profit would not be recognized as Renaissance's profit. That would be Deutsche Bank's profit. But, otherwise, the account determined what the option value was, which is what Renaissance got back.

Senator LEVIN. Now, to both of you, Renaissance is using the bank's trading execution system to place and execute by itself, several hundred thousands trades a day that go into the basket account. The banks do not even get involved. Renaissance has direct access to Barclays' and Deutsche Bank's trading platforms to place orders. These orders go out directly to the exchanges in microseconds or seconds. If they are marketable orders, they get executed immediately.

Renaissance was purportedly your investment advisor, but they were given by contract discretionary authority to execute trades so they could execute trades, which they did, by the millions in the banks' Palomino accounts and the banks' account without prior approval of the bank. Is that correct, Mr. Malloy? They could execute the trades without prior approval?

Mr. MALLOY. No.

Senator LEVIN. They could not?

Mr. MALLOY. No.

Senator LEVIN. Did you approve 15 million trades during these years?

Mr. MALLOY. No. What we did is you have to have a process that puts in place——

Senator LEVIN. You approve the process.

Mr. MALLOY. No, if I could——

Senator LEVIN. Sure.

Mr. MALLOY [continuing]. There is actually a process that actually goes in place. As you rightly pointed out, there are a lot of transactions that are going through there, so your ability to look at that, you look at the accession-based processes. So what we had in our particular systems is we had—in this particular transaction, there was a disproportion, and the majority of the trading activity had to be done through our infrastructure so we had control of that. We have the ability to block that on a name-by-name basis. We have the ability to put that in a restriction as far as the overall notionals. And we monitor the basket as it is going intra-day. And that is not to say that on the next day, even though it is going from a—in a fashion of quick execution after the fact, and we have done that several times, where we did not like a particular security through restriction and the like and asked them to take it out.

Senator LEVIN. All right. How many times did that happen?

Mr. MALLOY. On the restrictions of names? That is on a daily basis.

Senator LEVIN. No. How many times did you veto anything in their purchases?

Mr. MALLOY. From an execution point of view, I do not recall. It was after the fact, Mr. Chairman.

Senator LEVIN. All right. How about Deutsche Bank?

Mr. RAMAKRISHNA. Senator, the way in which Renaissance traded through us, given that they are a technologically forward organization, we did not intercept every single trade and approve or disapprove it. We had very strict guidelines in place for portfolio composition, diversity and liquidity, and the concentrations in various names, plus we had a restricted list. All this was supplied to them at an updated point of time several times a day, and they would have to conform to those restrictions. So we did not at any point actually go back and revisit trades because we did not have to. Those trades would be banned by definition.

Senator LEVIN. All right. You had already set what the conditions were, but 30 million trades went through without you stopping any of them from going through?

Mr. RAMAKRISHNA. We had exception policies in places, which would basically make sure that trades that should not go through did not go through.

Senator LEVIN. OK. And so you had about 15 million trades that went through without exception. Is that correct?

Mr. RAMAKRISHNA. We had lots of trades that went through after they passed the vetting.

Senator LEVIN. How many trades were stopped by your guidelines?

Mr. RAMAKRISHNA. Given that the restrictions put in place prevented trades that should not have gone through, all I can tell you is that Renaissance took great pains to make sure that we had no exceptions, and we had very few exceptions. I cannot think of any in my own tenure there.

Senator LEVIN. OK. So of the 15 million trades at your bank, the guidelines did not stop any of those trades. Within your guidelines, they made the decision, they made the purchases and sales. Is that correct?

Mr. RAMAKRISHNA. Exactly. They never violated the guidelines, yes.

Senator LEVIN. OK. So your guidelines never stopped any of these millions and millions of decisions that they made. Is that true also with Barclays, Mr. Malloy?

Mr. MALLOY. What I would say, Mr. Chairman, is we actually stopped the transactions that did not fit into the guidelines ahead of time.

Senator LEVIN. Yes, well, in other words, you said guidelines——

Mr. MALLOY. No, but we restricted the names before they even got into execution.

Senator LEVIN. And how many times did that happen over the years?

Mr. MALLOY. Every day.

Senator LEVIN. So you actually stopped them from making purchases every day.

Mr. MALLOY. We would block in our system——

Senator LEVIN. Your system blocked, you said?

Mr. MALLOY. Yes.

Senator LEVIN. OK. If it was inside of the investment guidelines, all of the trades would go through. Is that correct?

Mr. MALLOY. If it was inside the investment guidelines, yes.

Senator LEVIN. OK. And you would agree——

Mr. MALLOY. As a normal course of business, because it reduced our risk associated with the hedge.

Senator LEVIN. I understand. But you had agreed on what those guidelines were.

Mr. MALLOY. Yes.

Senator LEVIN. OK. So they had agreed to guidelines, and they lived by the guidelines. And if they did not, the purchase would have been caught.

Mr. MALLOY. I am sorry?

Senator LEVIN. The purchase would have been prevented, the transaction would have been prevented if it violated the guidelines.

Mr. MALLOY. Yes.

Senator LEVIN. And that would be by their own algorithm or something you put in place?

Mr. MALLOY. It depends upon what aspect of the investment manager that they are referring to.

Senator LEVIN. OK. Did they basically buy those 15 million shares that went through your system through an algorithm?

Mr. MALLOY. As I understand it, yes.

Senator LEVIN. Is that true with you, too, Mr. Ramakrishna?

Mr. RAMAKRISHNA. I believe that they used an algorithm, yes.

Senator LEVIN. Was that their algorithm?

Mr. RAMAKRISHNA. The algorithm that they used decided what they wanted to buy and sell.

Senator LEVIN. Whose algorithm was it?

Mr. RAMAKRISHNA. It was presumably Renaissance's algorithm.

Senator LEVIN. Do you know whose algorithm it was?

Mr. MALLOY. Renaissance, as I understand it, yes.

Senator LEVIN. Did they share their algorithm with you, by the way?

Mr. MALLOY. They have not.

Mr. RAMAKRISHNA. Sadly, no.

Senator LEVIN. Decidedly not.

Mr. RAMAKRISHNA. No, they have not.

Senator LEVIN. Senator Johnson.

Senator JOHNSON. Thank you, Mr. Chairman. I apologize for missing the earlier panel and the testimony here.

We are obviously drilling down to some fairly detailed levels, and I would kind of like to just pull back a little bit and try and get a little bit simpler understanding of something that is probably pretty complex.

But to followup on the Chairman's questioning there in terms of basically hiring a manager to manage a portfolio within the banks, do you have examples of other managers that you use similarly to manage certain funds in your banks, Mr. Malloy?

Mr. MALLOY. In this particular transaction, we only had one counterparty that we did this in, and within the prime brokerage space, no, I am not aware of another example of that.

Senator JOHNSON. No, I am talking about just other managers do other mutual funds that your bank holds for your customers. Is there another—do you hire another manager to do something similar? I am not saying really high-frequency trading like this based on an algorithm, but just a manager to manage portfolio stocks for your customers.

Mr. MALLOY. I really could not speak across the bank. I would not be surprised if there was one, but I am just not aware of one.

Senator JOHNSON. Mr. Ramakrishna, does Deutsche Bank have something similar to that?

Mr. RAMAKRISHNA. In the Asset Management Division, we definitely have external managers who are often hired to manage portfolios for customers. We have a couple of external managers on our own platform, which are going to be phased out very soon, which manage money for us.

Senator JOHNSON. Other than the frequency of the trades and the number of stocks they buy and sell, is there any real difference between how your relationship is with those managers versus with Renaissance?

Mr. RAMAKRISHNA. They also run portfolios of similar, maybe a little smaller size, with a large number of names. And they may not use the same algorithms or the same frequency of trading, but they do trade a lot.

Senator JOHNSON. But, again, your guidelines in terms of how you deal with those managers, is it similar or identical? In other words, you hire them to manage a particular fund you make available to a potential customer, and you are selling a mutual fund that could be bought and sold with a capital gain attached to it?

Mr. RAMAKRISHNA. I would characterize the rules they use for Renaissance as much tighter. We had constraints on liquidity, concentration, size of position, which stocks they could actually trade, sector concentrations, country concentrations, that we would never put on any other manager because at some level that is their strategy and if they want to run it, it is fine. The reason we ran these portfolios this way was because of the risk we ran in this portfolio.

Senator JOHNSON. But, again, the guidelines in terms of how you manage your manager, the different guidelines, but is it similar— I mean, you have a similar—you have guidelines that you work with the manager to manage your portfolio of stocks or bonds or options or whatever type of investment vehicle there is? Again, I am just trying to find out if there is something similar to Renaissance in terms of structure, not necessarily in terms of frequency of trade?

Mr. RAMAKRISHNA. Not really, no.

Senator JOHNSON. So this is pretty unique?

Mr. RAMAKRISHNA. It is pretty unique, yes.

Senator JOHNSON. As I was studying this and getting prepared for this, what this appears to be is a question of form over substance. Is that a basically true statement, Mr. Malloy? The form of how you structured this deal versus the actual substance of what is happening?

Mr. MALLOY. Again, the way in which this was structured is as an option. It has those features in it. I do not know if I actually understand the question.

Senator JOHNSON. Let me just ask: To what extent has this been adjudicated in any kind of tax court or through the IRS? I have some memorandums passed. Is this really being looked at? Do you think this is going to eventually go before a tax court?

Mr. MALLOY. As I understand it, there is an ongoing—it is a better question, obviously, for probably Renaissance, but——

Senator JOHNSON. OK.

Mr. SILBER. Thank you, Senator. Yes, as I said in my opening statement, the IRS has been—we have been in conversation with the IRS for about 6 years now on this. They have had full transparency. They understand the structure very well, and we are in the midst of that process. We are hopefully going into the appellate level of the IRS shortly.

Senator JOHNSON. So has this gone before a tax court at all? You are saying the appellate level. You are still working through——

Mr. SILBER. Not yet, no. We are still working through the administrative process.

Senator JOHNSON. OK. Mr. Malloy, an earlier question by the Chairman was really talking about control. And there are different levels of control based on tax versus accounting standards versus potentially SEC. How many different bodies do you have to comply with in terms of determining whether, for example, Barclays would control a particular entity?

Mr. MALLOY. I think it really comes down to what aspect of the transaction you are going to. From my lens, when I think about control, it is who ultimately has—who is the beneficial owner of the assets and whether you can actually use the assets.

Senator JOHNSON. The point I am trying to make is, grappling with some of the different issues, there are criteria to determine whether the IRS is going to take a look at this is a controlled entity or versus whether accounting standards determine that.

Mr. MALLOY. Right.

Senator JOHNSON. And they are not always the same, correct?

Mr. MALLOY. Correct, although you have the advantage there—I am neither an attorney or a tax attorney, but as I understand it, yes.

Senator JOHNSON. Mr. Ramakrishna, can you speak to that? How many different bodies do you report to that you have to try and comply with in terms of determining whether or not a particular group is under control of your bank?

Mr. RAMAKRISHNA. Senator, as a risk manager and the person who would take the first hit if there were a loss in this portfolio, it was very clear to me that we had ultimate control because we were the ones who were going to bear the brunt of a catastrophic loss. We did give the investment manager permission to trade in the account, and we had an option whose delta was essentially managed by this investment manager. But it was very clear to me that if there was a loss, it would be on my head and on Deutsche Bank's head, not in the investor's court.

So in my mind at least, control was very settled. I do not know the legal ramifications of what control means for other organizations. I am sure there are accounting and tax standards. I do not know them, though.

Senator JOHNSON. OK. Mr. Silber, do you know the point I am trying to make here? I am not trying to judge whether or not this was a controlled entity. I am just trying to point out, in trying to comply with whether it is the tax authority or whether it is the SEC, whether it is just basic accounting standards, how many different bodies provide different standards and different criteria for determining—to make these judgments whether something is truly an option or whether it is under your control? Do you understand the point I am making?

Mr. SILBER. Yes, I understand, Senator. We are nowhere near as diverse an entity as either of the banks here, but we ourselves are subject to multiple levels of regulatory review and filings, many of—from the IRS, the SEC, we are regulated by the CFTC, we have ongoing filings, many of which have different definitions. You used the example of "control." That is important in some of the filings and not in the others. Even something as simple as assets under management, under our U.S. general accounting statements filings versus Form PF, which we now file with the SEC regularly, definitions of similar words will differ across—for different purposes for different agencies. Tax standards usually are different than accounting standards. Those are the ones that I am most familiar with. But we have a variety of reporting regimes that we file under, and the definitions are not always consistent.

Senator JOHNSON. So suffice it to say it is very difficult to comply——

Mr. SILBER. We do our best——

Senator JOHNSON [continuing]. With all the different standards, with all the people you report to?

Mr. SILBER. I would not say it is difficult. We put a lot of time into it. We do comply. But sometimes it is very hard to compare two sets of filings and try and get them to reconcile. They may be using different definitions. So as I say, I use the example of assets under management, for example, should be fairly straightforward English. Different purposes will give different results, and both will be correct under the applicable rules.

Senator JOHNSON. So I am really trying to drill down in terms of what is the appropriateness of these transactions of this relationship. Really you are going to have to—if it is a tax issue, you really have to go through the tax authorities and take a look at exactly their rules versus if we are going to go through accounting standards and reporting, you are going to have to go through the SEC and figure out—it is a little more difficult in a setting like this where we are talking sometimes at cross purposes about different standards between different agencies. Is that basically correct?

Mr. SILBER. Yes, I believe so, Senator.

Senator JOHNSON. OK. I have no further questions, Mr. Chairman.

Senator LEVIN. Mr. Ramakrishna, I think you just said that Deutsche Bank gave permission to Renaissance to trade in Deutsche Bank's accounts. Is that correct?

Mr. RAMAKRISHNA. Yes.

Senator LEVIN. You just said that? You gave them the right to execute——

Mr. RAMAKRISHNA. In Deutsche Bank's name, yes.

Senator LEVIN. In your name.

Mr. RAMAKRISHNA. In Deutsche Bank's name, yes.

Senator LEVIN. OK. And is it not true that they had discretionary—"they" being RenTec—has total discretion, full discretion and authority without obtaining your prior approval to manage the investment in the trading of the accounts? Is that true? Both of you.

Mr. RAMAKRISHNA. I will take it first, sir. Given the constraints we had placed on them, which were maintained on their systems electronically, under those constraints, yes.

Senator LEVIN. All right. The constraints were agreed to, and then within those constraints, Deutsche Bank had the full discretion and authority without obtaining your prior approval to manage the investment and trading of the accounts. Is that correct?

Mr. RAMAKRISHNA. Yes. Under those constraints, yes.

Senator LEVIN. Is that also true for Barclays?

Mr. MALLOY. Subject to the Investment Management Agreement, but——

Senator LEVIN. Of course.

Mr. MALLOY. Yes. I would not characterize it, though, as "unfettered." We looked at those transactions, we monitored it in real time.

Senator LEVIN. How about full discretion?

Mr. MALLOY. I would not say "full" because it was subject to restrictions under the Investment Management Agreement.

Senator LEVIN. You would or would not?

Mr. MALLOY. I would say it was restricted under the Investment Management——

Senator LEVIN. Would the words "full discretion" be accurate?

Mr. MALLOY. Subject to the Investment Management Agreement, they had discretion.

Senator LEVIN. Full discretion?

Mr. MALLOY. Not unfettered discretion, Mr. Chairman.

Senator LEVIN. I am just asking you, did they have full discretion or not within the agreement that you reached?

Mr. MALLOY. If they stayed within the guidelines, they could make the transactions. They had full discretion to deploy the portfolio——

Senator LEVIN. I asked you three times did they have full discretion within those guidelines?

Mr. MALLOY. Yes.

Senator LEVIN. You hesitated to say "full discretion."

Mr. MALLOY. The only reason I hesitated is because we do have some restrictions within there and I can step in. That is my only hesitation——

Senator LEVIN. OK. Other than they had to operate within the guidelines, they could buy and sell anything they wanted, right?

Mr. MALLOY. Yes.

Senator LEVIN. And they did 15 million times, right?

Mr. MALLOY. There was a lot of activity that went through the accounts, yes.

Senator LEVIN. OK. And that was within the guidelines they had full discretion and authority, is that right, without your prior approval, within those guidelines?

Mr. MALLOY. Within the guidelines.

Senator LEVIN. That you two had agreed to.

Mr. MALLOY. Yes.

Senator LEVIN. OK. Is that true with your bank, Mr. Ramakrishna?

Mr. RAMAKRISHNA. Yes.

Senator LEVIN. OK. Now, if they operated within those agreed upon guidelines that they had agreed to with you, since they had full discretion, the decisions as to what to buy and sell as theirs. Is that correct, Mr. Malloy?

Mr. MALLOY. Yes.

Senator LEVIN. Mr. Ramakrishna.

Mr. RAMAKRISHNA. It is probably hundreds tens of thousands, hundreds of thousands [securities] that their algorithm could choose. Within those guidelines, that decision was theirs. Is that correct?

Mr. RAMAKRISHNA. Yes, sir, about 6,000 securities.

Senator LEVIN. Six thousand?

Mr. RAMAKRISHNA. Securities, roughly, yes.

Mr. MALLOY. Yes.

Senator LEVIN. OK. So within those guidelines, among those 6,000 securities, it was their discretion, and they were not making recommendations to you then, were they? Within those guidelines?

Mr. MALLOY. They would make the recommendations and then execute on our behalf to hedge——

Senator LEVIN. Well, wait a minute. I thought they had full discretion within those guidelines.

Mr. MALLOY. They had the full discretion to make the——

Senator LEVIN. Buy and sell within those guidelines.

Mr. MALLOY. To buy and sell within the guidelines.

Senator LEVIN. That they had agreed to.

Mr. MALLOY. Yes.

Senator LEVIN. OK. If they were not within those guidelines when they made those decisions, using your platform, that was not a recommendation to you. They made the decision within those guidelines, within that number of 6,000 securities or whatever it was, that was their discretion, their decision. Is that correct?

Mr. MALLOY. Yes. We still had the legal right, although, as we discussed——

Senator LEVIN. You did not exercise it.

Mr. MALLOY. We did not exercise it until after the fact in many instances, yes.

Senator LEVIN. Mr. Silber, you have been listening to this testimony about when you operated within those guidelines, as you had agreed to, that you had full discretion under the contracts. Is that correct?

Mr. SILBER. Within the guidelines, yes.

Senator LEVIN. All right. And if you operated within the guidelines, you considered that that decision as to what to buy and sell was yours. You had full discretion?

Mr. SILBER. Yes.

Senator LEVIN. And your algorithm that you put together would pick and choose. is that correct?

Mr. SILBER. Was put together by our group.

Senator LEVIN. By your group.

Mr. SILBER. Yes.

Senator LEVIN. The algorithm would pick and choose——

Mr. SILBER. That is correct.

Senator LEVIN [continuing]. Among those 6,000 securities? Is that about what it was?

Mr. SILBER. Approximately.

Senator LEVIN. But within those guidelines, it was not for you to make a recommendation, it was for you to make a decision as to what to buy. Is that not true, your algorithm?

Mr. SILBER. We had the authority to act—to make the decisions for the reference basket, which was the important criteria for options. At the same time, we were making the recommendations, which I referred to as almost always executed for the hedge account for the banks.

Senator LEVIN. So if you operated within the guidelines——

Mr. SILBER. Yes, then it would be——

Senator LEVIN. Then it was your decision.

Mr. SILBER. For the initial investment, yes.

Senator LEVIN. The initial investment. What does that mean?

Mr. SILBER. It meant that the banks in either case had the ability—I do not know if they ever exercised it—to have changed the—de-levered—I am sorry, excuse me, wrong language—to remove their hedge or to hedge in a different manner. The purpose of our exercise——

Senator LEVIN. They had the authority, but they never exercised it. Within those guidelines that you had agreed to, there may have been 6,000 securities that you had the right, the discretion to buy and sell, within those guidelines?

Mr. SILBER. They were placed into the account.

Senator LEVIN. And the decision was yours within those guidelines?

Mr. SILBER. Our firm's, yes.

Senator LEVIN. Your firm's, of course.

Mr. SILBER. Yes.

Senator LEVIN. So they are not a recommendation to them. Within those guidelines. Would you agree?

Mr. SILBER. Correct.

Senator LEVIN. OK. Mr. Malloy, take a look, please, at Exhibit 36.[1] This is a Product Proposal for Project COLT, which is the project we are talking about. That is the basket option project. This was dated May 28, 2002. Your name is on it, so I assume you are

[1] See Exhibit No. 36, which appears in the Appendix on page 482.

familiar with it. And if you look at page 3, if you look at page with Bates number 2-1-2-546.

Mr. MALLOY. Yes.

Senator LEVIN. At the bottom. Let me read this to you: "COLT"—that is what we are talking about here—"is targeted"—this is your product proposal, 2002. It is "targeted at those Funds with a high proportion of US individual investors, stable year-on-year returns and strategies involving short-term trading. This gives rise to significant short-term capital gains for the investors regardless of whether or not they are invested in the fund for the shorter or longer term."

Then it says on page 4, "COLT provides an after-tax benefit to these investors through the conversion of their return from the fund from short-term capital gains (taxed at 39.6%) to long-term capital gains (taxed at 20%)." Did I read that right?

Mr. MALLOY. Yes, you did.

Senator LEVIN. Now, was this a product being proposed for Renaissance?

Mr. MALLOY. The initial structure for COLT, yes, the initial and subsequently only client was Renaissance.

Senator LEVIN. All right. So what you were in your proposal saying is that this proposal had an after-tax benefit through a conversion of their return from the fund from short-term capital gains taxed at 39.6 percent to long-term capital gains taxed at 20 percent. That was obviously an important part of your proposal.

Mr. Silber, back in 2002 this was a pretty important part of their proposal. Hey, this is for Renaissance, we can convert, short term into long term, it is like magic. Do you still say that was not something that crossed your mind back in 2002?

Mr. SILBER. I am not saying that it did not cross our mind. Once we had initiated the structure with Deutsche Bank, we came to realize that they had the potential for a favorable tax treatment, so we certainly were aware of it. But I cannot speak to this internal Barclays document.

Senator LEVIN. And wasn't this part of the proposal that was made to you?

Mr. SILBER. No, I have never seen this——

Senator LEVIN. No, I am not saying that this is written, but when you were discussing this with Barclays, are you saying that they never mentioned to you the tax benefits in 2002?

Mr. SILBER. Actually, I believe we actually proposed a structure of this to Barclays. They did not market it to us.

Senator LEVIN. OK.

Mr. SILBER. Deutsche Bank did market the structure to us. It was a product that they had already used, and they had not used the tax benefits as a selling point at all.

Senator LEVIN. Deutsche Bank never did. And Barclays was marketing this to you, weren't they?

Mr. SILBER. We actually had suggested it to them, so——

Senator LEVIN. After you suggested it to them, because you already had one with Deutsche Bank, where did they get this language from?

Mr. SILBER. I do not know.

Senator LEVIN. You do not know. So this was never discussed with Barclays?

Mr. SILBER. Not to my knowledge, no.

Senator LEVIN. OK. Barclays, did you ever discuss this with Renaissance? It was in your proposal. Did you ever discuss the tax benefits with Renaissance in 2002?

Mr. MALLOY. I will answer the question two ways, Mr. Chairman. I was not personally involved with covering the account at that particular time, but as you can—so I am not sure exactly what the first exchange was. I subsequently did cover the account from a relationship perspective. But it was clear within the bank, though, that there was a tax benefit along with other benefits in the structure.

Senator LEVIN. So take a look, if you would now, at Exhibit 42.[1] This is a product approval memorandum for the same basket option. We are looking at page 3.

Under the term "Economics and Economics Drivers. Fund Benefit. US individual investors of the Fund would obtain a post-tax benefit if the Call Option is exercised after 12 months because all of the gain on the Call Option would be treated as a long-term gain for US tax purposes and would therefore be taxed at 15% as opposed to 35%."

Does that look familiar?

Mr. MALLOY. I am not familiar with this particular document.

Senator LEVIN. But is this a Barclays document?

Mr. MALLOY. Yes. It appears to be, yes.

Senator LEVIN. And take a look, please, at Exhibit 37,[2] that Barclays wrote to its regulator, and this is on page 1, on "Background," right in the middle of page 1: "This transaction is designed to provide hedge funds with a tax-effective means of undertaking the business and for Barclays it would generate both a structuring fee and additional volume for the prime brokerage business." So you told your regulator back in 2002 this was designed to provide hedge funds with a tax-effective means.

Mr. MALLOY. We were very transparent in this particular transaction——

Senator LEVIN. You were very aware of it.

Mr. MALLOY. And very concerned as—and one of the advantages, there was a tax advantage along with others, yes.

Senator LEVIN. Now, Mr. Ramakrishna, when MAPS was restructured in 2008, was Deutsche Bank concerned that the old structure, the MAPS structure, would not be respected as a derivative or more specifically as an option for tax purposes? Was that one of your concerns in 2008?

Mr. RAMAKRISHNA. Mr. Chairman, my initial concern was purely devoted to risk issues. There was a parallel conversation going on between lawyers in tax and legal, which I was not privy to, which I gather developed around restructuring the transaction. It is probably a——

Senator LEVIN. Was there a question in these conversations with your tax people, that there was a concern that the old MAPS, the

[1] See Exhibit No. 42, which appears in the Appendix on page 557.
[2] See Exhibit No. 37, which appears in the Appendix on page 496.

old approach, might not be respected as a derivative or it might not be respected as an option for tax purposes? Was that a concern?

Mr. RAMAKRISHNA. I have no idea, Mr. Chairman.

Senator LEVIN. OK. But if it were not respected as a derivative, then it would lose the tax benefits that was offered. Is that correct?

Mr. RAMAKRISHNA. I presume so, yes.

Senator LEVIN. OK. And that benefit was turning short-term capital gains into long-term capital gains. Is that true? That is what the tax benefit was?

Mr. RAMAKRISHNA. That was the tax benefit, yes, sir.

Senator LEVIN. OK. And are you saying, again, to make sure I understand your answer, that one of the reasons that this was restructured was to address the concern over the tax benefit, that it was one of the reasons? Is that what you said? Or you do not know?

Mr. RAMAKRISHNA. I do not know. The reason I was involved was because of a risk reason that I raised.

Senator LEVIN. All right. You heard conversation about concerns as to whether or not there would be a tax benefit under the old structure, you heard conversations about that?

Mr. RAMAKRISHNA. Certainly not, Senator.

Senator LEVIN. Did you ever have conversations with a man named Brocksmit?

Mr. RAMAKRISHNA. Yes, sir.

Senator LEVIN. And in that conversation, did you indicate to him that tax reasons were one of the reasons for this structure?

Mr. RAMAKRISHNA. Senator, I had several conversations——

Senator LEVIN. No, in one of the conversations.

Mr. RAMAKRISHNA. Yes. The conversation I had was most about explaining the risk issues.

Senator LEVIN. I understand. That is not my question.

Mr. RAMAKRISHNA. Yes. In the course of the conversation——

Senator LEVIN. Did you tell him that one of the concerns was whether or not there would be a tax benefit under the old structure? Did you tell him that?

Mr. RAMAKRISHNA. In the conversation he mentioned that as a benefit, and I agreed with him, and I said there were other reasons, too.

Senator LEVIN. That is fine. You agreed with him in that conversation.

Mr. RAMAKRISHNA. Yes, sir. It was one part of a large conversation.

Senator LEVIN. A minute ago you said you had never heard of that.

Mr. RAMAKRISHNA. I think you had asked me if I had heard anybody from tax and legal talk about it. I did not do that. This was also a conversation——

Senator LEVIN. Well, who is Mr. Broeksmit?

Mr. RAMAKRISHNA. He was head of risk and optimization of——

Senator LEVIN. So you heard from someone in your own division that there was a concern about whether the tax benefit would really be there under the old structure.

Mr. RAMAKRISHNA. Mr. Broeksmit was not in charge of——

Senator LEVIN. Not in charge of. What division was he with?

Mr. RAMAKRISHNA. He was at a central level head of risk across the bank.

Senator LEVIN. Fine.

Mr. RAMAKRISHNA. Across the corporate bank.

Senator LEVIN. Fine. Did you hear from him that there was a concern about whether the tax benefit would be there under the old structure?

Mr. RAMAKRISHNA. I did not hear it from him that he was concerned about tax risk.

Senator LEVIN. You had a conversation, you said, with him in which the question as to whether the tax benefit would—is solid in the old structure.

Mr. RAMAKRISHNA. No, that was not a conversation I had. It was a conversation which said what are the benefits of the transaction, at which point I gave him the benefits, and he mentioned tax benefit as one of them.

Senator LEVIN. So you heard him say——

Mr. RAMAKRISHNA. He did say tax benefit was one of the benefits, yes. He knew as well as I did.

Senator LEVIN. We thank you, all four of you. We appreciate your being here, and your cooperation with our Subcommittee, and this panel is excused.

Let me now call our last panel of witnesses for today's hearing: Gerard LaRocca, the Chief Administrative Officer, Americas, for Barclays, Chief Executive Officer for Barclays Capital Inc., in New York; Barry Bausano, President and Managing Director of Deutsche Bank Securities and Co-Head of Global Prime Finance, in New York; and Peter Brown, the Co-Chief Executive Officer and Co-President of Renaissance Technologies in East Setauket, New York.

We thank you for being with us today, and we also thank you and those with whom you work for, for your cooperation with this Subcommittee.

Pursuant to Rule 6, all the witnesses who testify must be sworn before this Subcommittee, so please stand and raise your right hand. Do you swear that the testimony you are about to give will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. LAROCCA. I do.

Mr. BAUSANO. I do.

Mr. BROWN. I do.

Senator LEVIN. Were you here before? Are you familiar with our timing system we have been using? Well, if not, let me repeat it. About a minute before a red light comes on, you are going to see the lights change from green to yellow. That gives you a chance to conclude your remarks. Your written testimony is going to be printed in the record in its entirety. Please try to limit your oral testimony to no more than 7 minutes.

Mr. LaRocca, let me call on you first.

TESTIMONY OF GERARD LaROCCA,[1] CHIEF ADMINISTRATIVE OFFICER, AMERICAS, BARCLAYS, CHIEF EXECUTIVE OFFICER, BARCLAYS CAPITAL INC., NEW YORK, NEW YORK

Mr. LAROCCA. Good afternoon, Senator.

Senator LEVIN. Good afternoon.

Mr. LAROCCA. I am Gerard LaRocca, and I serve as the Americas Chief Administrative Officer of Barclays Bank. You have asked us to assist the Subcommittee in its review of certain issues related to the COLT transaction.

As with other complex transactions, from the outset of COLT, the bank undertook a comprehensive review and approvals process to ensure that the transaction received proper scrutiny. This included review by the bank's tax, regulatory, risk, and legal departments, as well as a review by at least seven different law firms over the life of the transaction. Barclays disclosed its participation in the transaction to our auditors and regulators, here in the United States and the U.K. We did not take this matter lightly and were ultimately comfortable engaging in the transaction.

The question raised by the Subcommittee seems to be: What is the proper tax rate to apply to profits earned by Renaissance through the exercise of its options?" This is a matter to be handled between Renaissance, as a taxpayer, and the IRS. It is my understanding that the question has not been answered definitively.

You have asked me to discuss the impact of the 2010 IRS advisory memorandum known as a GLAM, including the bank's decision last year to change the tenor of the options going forward. All of this did not occur in a vacuum. Like other financial institutions, Barclays has faced numerous challenges in recent years. Our bank has endeavored to meet these challenges head on, and at times resolving them has resulted in significant changes, both in process and in personnel at the bank. Today we have new leadership and feel strongly we are moving in the right direction, transforming the way we do business.

In 2012, Barclays had launched Project Mango, an internal review of our investment banking operations, and also commissioned Sir Anthony Salz to conduct an independent review of Barclays. Finally, Barclays embarked on the TRANSFORM program, an internal review aimed at establishing the conditions necessary for the bank's long-term success, including the implementation of the 34-point road map for change detailed in the Salz Report.

As part of TRANSFORM, the bank adopted five overarching tax principles that we now apply to all transactions. These are:

Transactions must support genuine commercial activity;

Two, they must comply with generally accepted custom and practice;

Three, they must be of a type that taxing authorities would expect;

Four, they must only involve financially sophisticated customers;

And, five, transactions must be consistent with our purpose and values.

[1] The prepared statement of Mr. LaRocca appears in the Appendix on page 114.

It is against this backdrop that we considered what impact, if any, the GLAM should have on our participation in the COLT transaction.

In December 2010, Renaissance made a routine request to enter into a new option. In light of the GLAM's recent publication and prior to moving forward, we consulted with Renaissance and again with our own legal advisors regarding the impact of the GLAM. After extensive internal consideration and consultation with external advisors, Barclays approved the issuance of a new option. We agreed to continue to monitor relevant IRS announcements going forward.

In February 2013, the bank issued its new tax principles and undertook a review of all existing transactions, including COLT. As noted, one of the principles provides that Barclays will not structure transactions of a type different than tax authorities would expect. The end result of our review was a decision that, going forward, we would limit the tenor of any new COLT options to a period of 11 months. The IRS had not made a final determination as to the appropriate tax treatment. However, the bank made a proactive and voluntary choice to shorten these options to ensure we met the tax authorities' expectations. This was a decision that brought the transaction into conformity with our newly adopted tax principles. By doing this, the bank committed not only to following specifically applicable laws, but also to refrain from engaging in transactions that, while legal, might not meet the expectations of the relevant tax authorities.

Therefore, any questions the Subcommittee may have about these transactions do not relate to the Barclays of today or the Barclays of the future. These are transactions from the past, about which we are awaiting a final determination as to the proper tax treatment.

Thank you for the opportunity to provide this testimony. I look forward to answering the Subcommittee's questions.

Senator LEVIN. Thank you very much.

Mr. Bausano.

TESTIMONY OF M. BARRY BAUSANO,[1] PRESIDENT AND MANAGING DIRECTOR, DEUTSCHE BANK SECURITIES INC., CO-HEAD OF GLOBAL PRIME FINANCE, NEW YORK, NEW YORK

Mr. BAUSANO. Good afternoon, Chairman Levin.

Senator LEVIN. Good afternoon.

Mr. BAUSANO. My name is Barry Bausano. I am currently President of Deutsche Bank Securities Inc. and Co-Head of Global Prime Finance Business. After growing up in a suburb of Detroit and coming east for college, I am now based in the New York office of Deutsche Bank and has worked there for approximately 12 years.

My colleague Satish Ramakrishna has already discussed some of the specific features of our MAPS options. I want to provide you with an overview of the product and Deutsche Bank's involvement with it.

I would note that Mr. Ramakrishna and I have submitted written testimony, which I would request be entered into the record,

[1] The prepared statement of Mr. Bausano appears in the Appendix on page 118.

and you can find a more comprehensive discussion of these subjects in the written testimony.

Senator LEVIN. It will be made part of the record.

Mr. BAUSANO. Thank you.

Derivative financial instruments are a critical component of global finance as they allow participants to alter risk and the distribution of returns relative to holding the underlying investments. Deutsche Bank strongly believes that it acted at all times responsibly, indeed proactively, in its ongoing consideration of MAPS in the light of evolving views regarding the regulatory landscape surrounding derivative products, and that its conduct demonstrates a strong commitment to be well within the bounds of the law.

MAPS was not a tax-motivated product. It provided clients with significant non-tax advantages as compared with other products. Let me briefly discuss what I view as the three most significant of those advantages.

First, Deutsche Bank was comfortable providing the option buyer with greater leverage at the fund level than it would have allowed in a traditional prime brokerage relationship.

Second, the MAPS option limited the client's downside risk to the premium it paid to purchase the option.

Third, the client could pursue its trading strategy anonymously because any market transactions associated with the trading strategy were made in Deutsche Bank's own name.

On the bank side of the equation, MAPS provided the bank with greater visibility, risk controls, and operational protections relating to the underlying trading activity than existed for a prime brokerage account. The bank imposed significant constraints on the investment advisor strategy, required the advisor follow a defined and balanced investment strategy.

The bank also had specific contractual rights to require the investment advisor to reduce its leverage and for DB to take over the management of the portfolio and to assume control and liquidate the positions being traded by the investment advisor if the value of the portfolio fell beneath certain benchmarks. The bank owned the securities in its own account and had complete visibility, ownership rights and controls over that account, and the bank earned a premium for selling the option.

The MAPS product does involve symmetric and economic exchange of risks and benefit for both the bank and its client.

I understand the IRS expressed concerns with a particular type of barrier option contract and the potential for associated long-term capital gain treatment as set forth in an IRS Generic Legal Advice Memorandum, or GLAM, issued November 12, 2010. Importantly, in 2010, Deutsche Bank was not entering into any barrier option contracts as described in the GLAM. Indeed, the bank had ceased offering a product based on agreements similar to the ones described in 2008, when, in consultation with outside counsel, we independently restructured our MAPS product. Despite having no knowledge of any IRS intention to release the GLAM, Deutsche Bank proactively addressed virtually every factor considered in the GLAM approximately 2 years before its issuance. The restructured Deutsche Bank product is now referred to as "New MAPS."

It is important to note the limited scope and use of New MAPS at Deutsche Bank. From 2008 through today, Deutsche Bank has entered into New MAPS options with only one client, Mosel LP, a RenTec affiliate. And even with that one client, Deutsche Bank entered into only one long-term option following the IRS' issuance of the GLAM. That option was negotiated prior to the GLAM and entered into on the business day following its issuance, and only after Deutsche Bank conferred with outside counsel to confirm that New MAPS was not the same structure as the product described. Indeed, and importantly, shortly after issuance of the GLAM, Deutsche Bank reassessed its participation in barrier option contracts. Despite its belief that New MAPS was in compliance with applicable laws and regulations, Deutsche Bank decided that it did not wish to risk being associated with any controversy over the tax treatment of MAPS. Therefore, it decided to cease entering into any New MAPS transactions with a duration of more than 1 year.

Deutsche Bank has affirmatively and proactively undertaken steps to ensure compliance with applicable tax and securities laws and regulations. While the Subcommittee has raised important questions about tax policy in this area, we did our best at all times to ensure compliance with the laws and regulations as written and understood by the subject matter experts at the time. I do note that it is a widely accepted principle, one that the Subcommittee report acknowledges, that tax consequences differ among various financial instruments. New MAPS, which was an option, was treated by Deutsche Bank in accordance with the tax rules relating to financial derivatives at all times.

In sum, with respect to MAPS, Deutsche Bank initiated steps to ensure that its conduct was well within the boundaries set by applicable legal requirements. As of today, neither the IRS nor any court or regulator has found that a New MAPS option or, indeed, any Deutsche Bank MAPS option, did not qualify as a derivative for tax, securities, or any other purpose. Deutsche Bank believes strongly that it acted appropriately in entering the New MAPS options when it did and that it acted conservatively and responsibly when it decided to stop entering them for business reasons after the issuance of the GLAM.

Thank you for this opportunity to speak to you today, and I look forward to answering your questions.

Senator LEVIN. Thank you very much.

Mr. Brown.

TESTIMONY OF PETER F. BROWN,[1] CO-CHIEF EXECUTIVE OFFICER, AND CO-PRESIDENT, RENAISSANCE TECHNOLOGIES LLC, EAST SETAUKET, NEW YORK

Mr. BROWN. Good afternoon, Chairman Levin.

Senator LEVIN. Good afternoon.

Mr. BROWN. My name is Peter Brown. I am the co-CEO of Renaissance Technologies, a company that manages investment portfolios with computer programs that are based on complex models of the financial markets.

[1] The prepared statement of Mr. Brown appears in the Appendix on page 129.

As my colleague Mark Silber discussed in his testimony, barrier options have been extremely important to Renaissance's business objectives by providing our fund with both leverage and loss protection. These go hand-in-hand, because when trading with leverage, a single mistake can be disastrous for our firm.

On an unlevered basis, our models would produce modest returns with very low volatility. Therefore, we can responsibly increase our leverage to produce stronger returns. But in so doing, we must protect ourselves from the catastrophic losses that might occur should we encounter a Black Swan event outside of our previous experience. The world is littered with financial institutions that have failed after putting too much trust in their models—institutions that did not account for the unknown unknowns.

We are determined that Renaissance not suffer such a demise. The barrier options we use provide precisely the protection we need.

While we have been well aware of Black Swan risks since Long Term Capital Management collapsed in 1998, for me personally the wake-up call came on March 13, 2000. Up to that point, our models had been performing exceptionally well. Then the dot-com bubble burst, and in a very short period we took very large losses. We worked non-stop for days trying to understand where things had gone wrong.

It turned out that we had positions in Nasdaq stocks which our models thought were hedged by positions in NYSE stocks. It just never occurred to us or to our models that these markets could diverge so rapidly. Not having slept for days and being incredibly distraught by the losses, I offered to resign, but my boss at the time rejected my offer, telling me, "You are now far more valuable because you now know never to put your full faith in a model."

Six months later, we entered into our first barrier option. Not only do these options protect us from model failures, they also protect us from programming errors like the one that led to the demise of Knight Capital in 2012. If we did not have loss protection, then with over a million lines of code in our system, we too could face the risk of massive losses from a simple software bug.

I have not yet had the opportunity to review your staff's report as closely as I would like. I appreciate the time it has taken to prepare and the policy issues it raises. But I will note that I was surprised to see the report characterize the risk from which these options protect us as "small," apparently because of our historical track record.

I have worked with extraordinary scientists my entire career, building large and complicated models that are embedded in large and complicated computer programs. If there is one lesson I have learned, it is that models and computer programs can go horribly wrong. Mortgage models at Fannie Mae and investment banks had spectacular 50-year track records until the 2008 subprime crisis. For 35 years, money market funds were considered risk-free, until the Reserve Primary Fund broke the buck. The list goes on and on.

The single biggest mistake we can make is to be so confident in our models that we have no fear of the risks we did not see coming. That is why loss protection is so important to us.

We understand there is an active debate on how best to reform the Tax Code and that proposals are being made to mark all derivatives to market and to tax all capital gains at the same rate. I will only point out that if there were no rate differential between long-term and short-term capital gains, the Tax Code would be far simpler, far more certain, and far more fair.

I want to thank you for the opportunity to speak on behalf of Renaissance, and I am happy to answer any questions you may have.

Senator LEVIN. Thank you very much, Mr. Brown.

Mr. LaRocca, will you please take a look at Exhibit 53? [1]

Mr. LAROCCA. I have it in front of me, Senator.

Senator LEVIN. Thank you. This is the document we have been talking about this morning. It is the representation that Barclays made in 2009 to PricewaterhouseCoopers, PwC, its independent auditor. And the representation was here, if you look near the bottom of page 64—those are the last two letters in the Bates numbers—the conclusion is that, "RenTec controls the major activities of Palomino and is exposed to substantially all significant risks and rewards . . ." Was that statement true?

Mr. LAROCCA. I see the language, Senator. There is qualifying language in the PwC memo.

Senator LEVIN. I mean, it does not change that conclusion. This is the conclusion. You have got all the qualifiers in advance, ahead of the conclusion, and then it says here, "RenTec controls the major activities of Palomino . . ." Palomino is the entity that you guys created.

Mr. LAROCCA. It controls the trading activities, Senator.

Senator LEVIN. It says it "controls the major activities."

Mr. LAROCCA. I know what it says, Senator, but it controls the trading activities. The securities lending is controlled by Barclays. The financing is controlled by Barclays. So they control——

Senator LEVIN. But the major——

Mr. LAROCCA. They did control a major activity. That was their role, investment manager, Senator.

Senator LEVIN. Right. So they controlled the major activities. This is what was represented to PwC. It is exposed to substantially all significant risks. Was that true?

Mr. LAROCCA. Up to the premium, Senator.

Senator LEVIN. I am just saying it is exposed to substantially all significant risks. I know there was a risk after the premium was used. We know that. It never was reached, but we know what the risk was. Ten years it never was reached, but still, theoretically it could be reached, and you guys protected against even that possibility. That is OK. You have got a right to protect yourself. When you tell your auditor that—substantially all significant risks and rewards arising from the activities are RenTec's, my question is: Was that true? That is my question.

Mr. LAROCCA. Senator, it is true that RenTec controlled the trading activities and controlled the substantial risk. That is why we were able to deconsolidate Palomino, Senator.

[1] See Exhibit No. 53, which appears in the Appendix on page 654.

Senator LEVIN. It was not control the substantial risk. It was exposed to substantially all significant risks. That is what was written. Was that true?

Mr. LAROCCA. With the exception of gap risk, Senator, that is correct.

Senator LEVIN. OK. So substantially all significant risks were taken by RenTec.

Now, you then made a report—"you" being Barclays—made a report annually to the SEC, and if you will take a look at Exhibit 68,[1] you will see those reports. They are the past 5 years. And in that report, you stated that Barclays does not control Palomino. Were you here this morning when we went through these?

Mr. LAROCCA. Senator, I heard the discussion this morning.

Senator LEVIN. Take a look at Exhibit 68, if you would, then, starting with page 230. This was a note to the account file with SEC for the year ending December 31, 2009. And what you told the SEC, if you will look at the end of the first paragraph in Note 41, "these entities"—you are referring to the Cayman Islands-incorporated Palomino, is one of the two entities you are referring to—"are not deemed to be controlled by Barclays." Was that true when you told that to the SEC?

Mr. LAROCCA. Yes, Senator, for accounting purposes that is 100 percent true.

Senator LEVIN. And did you tell the SEC that you really do not mean it for other purposes?

Mr. LAROCCA. Senator, I do not know what specifically was said to the SEC. It does not surprise me that these regulatory filings are consistent with the correspondence that we laid out in PwC. That should not surprise us, Senator.

Senator LEVIN. It does not surprise me at all. What surprises me is that you are waffling on the question of whether or not Palomino was controlled by Barclays. You represented it was not.

Mr. LAROCCA. Senator, I am not waffling on the question, Senator——

Senator LEVIN. Well, you are waffling because you are saying for some purposes it was controlled. For other purposes control means something totally different. If that is not a waffle, I do not know what is.

Mr. LAROCCA. Senator, we own the entity. We con—the results are reflected in our annual report in the footnotes. We comprise the board. We have risk. We shared in some revenues, Senator.

Senator LEVIN. I am talking about what you represented to a regulator at the SEC.

Mr. LAROCCA. Senator, this representation to the SEC says that Barclays did not have control of the trading activities.

Senator LEVIN. No, it does not. It says the entities-—you are talking about Palomino, is managed by external counterparties and consequently are not controlled by you. You do not say for trading activities. You just say they are not controlled. You did not qualify it here.

Mr. LAROCCA. Senator, I will agree with you, Senator, that is what this says.

[1] See Exhibit No. 68, which appears in the Appendix on page 747.

Senator LEVIN. You will agree with me that I read it correctly.

Mr. LAROCCA. Correct, Senator.

Senator LEVIN. And you will agree with me that it was not limiting what was meant by they are not controlled——

Mr. LAROCCA. I agree there is no qualifying in this report, Senator.

Senator LEVIN. That is progress. That is year after year after year, right? I will not go through them all, but Exhibit 68, the same words essentially for 2010, 2011, 2012, 2013. There is a slight modification in the words, but it is essentially the same.

So now, in your statement, you indicate that the question of the proper tax rate to apply to the profits earned through Barclays' basket transaction is "a matter to be handled between Renaissance, as a taxpayer, and the IRS." But now I would refer you to Exhibit 38.[1] This is a Barclays document, 2002, August 22. The third paragraph, it says, "COLT"—that is what we are talking about here today—"is targeted at those funds with a high proportion of US individual investors, stable year-on-year returns and strategies involving short-term trading. This gives rise to significant short-term capital gains for the investors regardless of whether or not they are invested in the fund for the shorter or longer term."

Then come the key words: "COLT provides an after-tax benefit to these investors through the conversion of their return from the fund from short-term capital gains (taxed at 39.6%) to long-term capital gains (taxed at 20%)."

So this is what you are selling to Renaissance. This is what is in your project.

Now, do you have any responsibility at all, to your clients in terms of representing that there are certain magic ways of converting short term into long term? Don't you think that you have a responsibility to determine whether or not you are aiding and abetting a fiction?

Mr. LAROCCA. Senator, I would not characterize this as "fiction."

Senator LEVIN. If it were a fiction, do you think that you should be responsible for avoiding it?

Mr. LAROCCA. Senator, I would not characterize this as a "fiction." We have a responsibility to our clients to assist them with transactions and ideally to do them in a tax-efficient way.

Senator LEVIN. "Tax-efficient," what does that mean?

Mr. LAROCCA. Senator, we do not have clients who call up investment banks and tell us, "We would like to do a transaction, and we would like to pay the maximum amount possible."

Senator LEVIN. Of course. I would hope not.

Mr. LAROCCA. The phone would never ring, Senator.

Senator LEVIN. I agree. So now you are targeting funds, like RenTec—that is the target here—and you are saying that one of the major benefits is that you can convert, to use your words, short-term gains, which are taxed at 39 percent, to long-term gains, which are taxed at 20 percent. You are holding that out as an advantage. Is that correct?

Mr. LAROCCA. Senator, we did not target Renaissance. They approached us with this structure. This is an internal approvals proc-

[1] See Exhibit No. 38, which appears in the Appendix on page 506.

ess where we are being very transparent to all the decisionmakers about the tax elements of the transaction, Senator.

Senator LEVIN. But in your own words here, you are saying that Renaissance—who I believe is the only user, the only basket option that this was aimed at. Is that correct? That Palomino was aimed at? That was aimed at Renaissance. Is that correct?

Mr. LAROCCA. Senator, this correspondence says we would target funds, but we only executed the transaction with Renaissance.

Senator LEVIN. OK. And you say that it provides the benefit of converting something. And are you saying that that was never mentioned to Renaissance?

Mr. LAROCCA. Senator, I do not cover the account, Senator. I am not aware of the dialog. I would—I believe both parties understood the tax benefits associated with these barrier options.

Senator LEVIN. But it was targeted at funds that were involved in short-term trading. Is that correct? By your own document, it was targeted at those funds that involve short-term trading strategies.

Mr. LAROCCA. Senator, I would not know if——

Senator LEVIN. That is your own words.

Mr. LAROCCA. Senator, this is an internal approvals correspondence.

Senator LEVIN. Does that make it less or more accurate?

Mr. LAROCCA. It does not, Senator.

Senator LEVIN. Is it accurate or not?

Mr. LAROCCA. Let me respond, Senator. You asked me if we, in fact, targeted funds, right?

Senator LEVIN. Right.

Mr. LAROCCA. My response was I do not know. We only executed with Renaissance. This suggested that, if approved, we would target additional funds. Whether we, in fact, put this product in front of other clients, I do not know Senator. I am not a salesperson. I do not, in fact, know the answer to that question.

Senator LEVIN. Was this targeted at funds such as Renaissance?

Mr. LAROCCA. The structure was brought to us by Renaissance, Senator.

Senator LEVIN. Is COLT targeted at funds such as Renaissance?

Mr. LAROCCA. Not to my knowledge, Senator.

Senator LEVIN. OK. Then I am reading from your document: "COLT is targeted at those funds with a high proportion of U.S. individual investors . . . and strategies involving short-term trading." You are saying that was not targeted at RenTec?

Mr. LAROCCA. Senator, I have said that RenTec brought this structure——

Senator LEVIN. I understand. RenTec brought it to your attention. But I am asking you, was the structure which resulted after they came to you asking you to design a structure, which you then offered to them, I am asking you, was that structure targeted at those funds—I am reading your Barclays document.

Mr. LAROCCA. Senator, it was targeted at RenTec.

Senator LEVIN. That is what I am saying. And those funds involve short-term trading, have a strategy involving short-term trading, and this provides an after-tax benefit to magically convert short-term to long-term gains. But the point is this structure that you created after RenTec asked you to offer them a structure, this was targeted at RenTec, and you were aware of the fact that it would provide an after-tax benefit like I described.

Mr. LAROCCA. Yes, Senator, that is——

Senator LEVIN. All right.

Mr. LAROCCA [continuing]. Absolutely correct. I was confused and thought you were asking if we had targeted other funds other than RenTec.

Senator LEVIN. All right.

Mr. LAROCCA. And I am not aware of that.

Senator LEVIN. Now, in November 2010, the IRS issued a generic legal advice memorandum, a GLAM, advising that basket option transactions similar to what Barclays was using should not be treated as an option for tax purposes. That same day, an employee of Barclays sent an e-mail to his colleagues recognizing the GLAM was describing the Barclays basket transaction. That did not stop you, Barclays, from continuing with the transaction. Over the next 2 years, from late 2010 to late 2012, Barclays entered into another nine basket option transactions with Renaissance. Renaissance gained about $4 billion from six of those transactions, and three are still ongoing.

Now, in light of the GLAM, this seems to be a pretty aggressive position that Barclays took. Why is it that you dismissed the position that the IRS put out in the GLAM and continued to proceed with so many of those transactions?

Mr. LAROCCA. Senator, we took the GLAM very seriously. At the time of the receipt of the GLAM, we again consulted with our external advisors as well as our internal experts and felt that the GLAM was not the law; it was an IRS view and perspective. We consulted with our accountants. In fact, I would point out, in a paper we submitted to the Committee, there is a document from PwC which is skeptical of the IRS analysis and conclusion, Senator.

We continued to monitor for IRS bulletins, but we made a decision at that time that the transaction was appropriate and that we would continue.

Senator LEVIN. OK. Now, that IRS GLAM says the following about hedge fund basket option contracts: "This memorandum addresses certain contracts styled as options in form but acting like direct ownership of the underlying property and substance. This memorandum should not be used or cited as precedent." And here is what it says, its conclusion—I assume you take IRS conclusions seriously. Do you?

Mr. LAROCCA. Absolutely, Senator.

Senator LEVIN. Here is the conclusion: Let me read you what the issue is because it fits like a glove to what these banks, your two banks were doing. "Where a taxpayer, a partnership, entered into a contract styled as an option to purchase a basket of securities that the taxpayer's general partner also actively managed and controlled while the contract remained open, and with respect to which the taxpayer had opportunity for full gain and income and substantially all risk of loss, one, whether the contract should be treated as an option for tax purposes; and, two, whether the taxpayer should be treated as the tax owner of the securities."

Now, that is about as accurate a description of what was going on here as I can read. We tried very often to describe this in our report and in my opening statement, and I cannot do much better. Here is the conclusion:

"One, the contract does not function like an option and should not be treated as such."

"Two, a contract that provides a taxpayer with dominion and control over a basket of securities the opportunity for full gain and income and substantially all of the risk of loss provides to the taxpayer beneficial ownership of the securities for tax purposes."

Were you aware of this?

Mr. LAROCCA. Yes, Senator, I was.

Senator LEVIN. All right. Now, I would hope that that would be taken seriously, but here is what happened: For 2 years, you continued to sell these basket options.

And then in July 2012, following a number of investigations into Barclays' business practices and its participation in tax avoidance structures, Barclays undertook an independent review, known as the "Salz review," and the objective was to review Barclays' business practices. The review was critical of the bank's culture, describing it as "winning at all costs," and finding that it took a "robust position with regulators and followed the letter rather than the spirit of the rules."

Were you in attendance at a meeting in October 2012, Mr. LaRocca, at which Barclays decided to approve another COLT transaction?

Mr. LAROCCA. Yes, I was, Senator.

Senator LEVIN. If you take a look, please, at Exhibit 61,[1] this is the minutes of the Structured Capital Markets Approval Committee at Barclays, and the topic of the meeting was consideration of a new COLT transaction. Some of the key points that were made during the discussion that led to the approval of a new COLT option—this is now October 2012, after the Salz review was undertaken. This is what the key points of the discussion were, according to the notes:

The option was recommended for approval, again, the same basket option. Why? "The tax risk is assumed by the client." Right off the bat, tax risk is assumed by the client.

"There is a reputation risk for Barclays, especially if the matter proceeds to court."

"The New Option Transaction does not meaningfully increase Barclays' reputation risk in relation to the Option Transactions, because writing a new option (or exercising an existing one) should be viewed as the maintenance of a longstanding structure."

Now, you were the chairman of this meeting, Mr. LaRocca. You knew about the GLAM. You knew there was reputational risk. You knew that the Salz review had started and was reviewing the business practice because Barclays had been subject to tax investigations. But you still recommended that the transaction be approved.

You were then and now are the most senior executive in the United States, Barclays. At a minimum, shouldn't you have been concerned about the reputational risk to the bank, approving the

[1] See Exhibit No. 61, which appears in the Appendix on page 732.

same option after the GLAM had been issued on this—the IRS could not be clearer in the GLAM. At any rate, you decided we are going to approve it anyway. Shouldn't you have been more concerned about the reputational risk to your bank at that time?

Mr. LAROCCA. Senator, I was very concerned about the reputational risk of the bank.

Senator LEVIN. And should you have recommended continuing on that course?

Mr. LAROCCA. Senator, looking at the same document, you will see the actions I took as chairman. Again, we look for reaffirmation of our legal opinions and our external advisors. We spent a considerable amount of time. I escalated this issue to members of our Executive Committee, Senator. I also recommended that this transaction be reviewed by our Reputational Risk Committee. I was very much aware that the Salz review was underway, and we concluded, Senator, at this point in time that we should continue the options.

Senator LEVIN. I know you concluded it, but basically the IRS had spoken, and Barclays said, "So what?" Now, that is an aggressive—that is what we call an "aggressive tax position." And it was taken after all of these events which we have described had occurred. When the IRS in a GLAM just describes it, it is precisely what you guys were doing, and says, as it did, that this is not an option and this is not going to be recognized as long-term capital gains for tax purposes, your committee—you are the chairman—still recommended that you go ahead with another one. Why? Because you are already at risk, what is a little more risk? I mean, just the fact that somebody has been used repeatedly and then challenging by the IRS, what kind of argument is it that, well, we have done it before, we will continue doing it? That is not a good argument in terms of reducing reputational risk. Quite the opposite, it seems to me.

Mr. LAROCCA. Senator, the IRS has not yet made a decision on what the appropriate tax treatment is. When we have consulted with our external experts—legal, tax accounting—they raised serious questions regarding the analysis that underpins the GLAM.

Senator LEVIN. The IRS describes GLAMs as "providing authoritative legal opinions on certain matters such as industry-wide issues."

Mr. LAROCCA. Senator, I hope the GLAM——

Senator LEVIN. I do not think you take it very seriously. I got to tell you, if you are really worried about reputation, given all the problems that Barclays has, and given the fact you got a GLAM from the IRS and it is right on point describing exactly what you are doing and it says this is not an option——

Mr. LAROCCA. Senator——

Senator LEVIN [continuing]. It would seem to me a caution, if you are worried about your reputation, you would say, "Whoa, let us hold off on this thing, folks." That is what caution does. That is what concern about reputation does. It is not—we have been doing this for years. So what? We will continue to do it in the face of a GLAM. I do not consider that to be concern about a bank's reputation.

Barclays then in 2013 initiated a bank-wide effort called "Project Transform" to ensure that the bank no longer offered or participated in abusive tax shelter products. Barclays' counsel informed the Subcommittee that as a result of Project Transform, Barclays developed a number of principles, including in the tax area. One of these principles is that Barclays will not engage in transactions that will not meet expectations of the relevant tax authority. At that point, you revised the COLT, this option, to make sure it could not be used to argue that the gains are long-term capital gains. You changed that in 2013 after another project of yours adopted a principle saying do not engage in transactions that would not meet expectations of the relevant tax authority. If you had adopted that earlier, you would not have issued those later options. Is that correct?

Mr. LAROCCA. That is correct, Senator.

Senator LEVIN. OK. Now, you have got some existing basket transactions, do you not?

Mr. LAROCCA. Yes, we do, Senator.

Senator LEVIN. There are three of them, I believe, and they do not conform with the new policy, and the contract with Renaissance allows for the unwinding of those contracts. Why not unwind them? Under the policy you have adopted—as a result of Project Transform—new principles, we are not going to engage in transactions that will not meet the expectations of the relevant tax authority. But apparently you are going to continue to participate in transactions that do not meet that expectation because you have not unwound those three existing basket options. Why not unwind them?

Mr. LAROCCA. Senator, we have made the decision to not enter into any new transactions, Senator.

Senator LEVIN. I understand. But why not unwind existing transactions because they do not meet the expectations of the relevant tax authority? Why not unwind them? You are allowed to under the contract.

Mr. LAROCCA. Senator, we are allowed to unwind them, and we have not looked at the historical transactions that we approved prior. So the decision——

Senator LEVIN. Maybe you ought to. What do you think?

Mr. LAROCCA. We will take it under advisement, Senator.

Senator LEVIN. Thank you.

Let us see. Mr. Bausano, you have testified that Deutsche Bank engaged in a major restructuring of its MAPS product—that is this basket option transaction—and you engaged in a major restructuring in 2008. This ties in with what we had heard, our staff had heard from Mr. Haas, who was the global head of Deutsche Bank's Prime Brokerage Division, and from your counsel who represented to staff that Deutsche Bank had concerns whether the old structure would be respected as an option for tax purposes. So in 2008, Deutsche Bank undertook an effort to make MAPS look more option-like. I believe your Global Prime Finance Division described the MAPS restructuring project as an effort to "provide a new multiple MAPS structure that will more closely resemble a traditional options structure."

Now, I want to just explore one example of that concern that you had that caused you to engage in that restructuring.

Before the restructuring, Deutsche Bank paid Renaissance a flat advisory fee which was well below industry standard fees for an investment advisor. So did you make the change in the fee structure to make this transaction look more option-like?

Mr. BAUSANO. We restructured the option on the basis of two parallel tracks:

The first, as was described by Mr. Ramakrishna, was a concern about the risk profile and the higher risk associated with gaps in the cluster of statistical arbitrage strategies as evidenced in the summer of 2007, August 2007.

The second parallel push was a combination of concerns in the evolving regulatory landscape as communicated to me through my internal control functions—legal, tax, compliance, et cetera. You know, our view is that this has a significant number of option features and it is clearly an option. The idea that you have an asymmetric payout where your risk is limited to the premium you have paid, you have an upside convexity to leverage and performance if you succeed is to me the key hallmarks—it is a contract with a duration and an expiry, are all things that are hallmarks of an option.

Senator LEVIN. Did you offer the increase to Renaissance without being prompted by them?

Mr. BAUSANO. I was not part of those negotiations.

Senator LEVIN. Do you know whether or not Deutsche Bank——

Mr. BAUSANO. I do not know which side proposed that.

Senator LEVIN. Well, then, let me ask you the question again. Was the shift, change in the fee done in part in order to make the transaction look more option-like?

Mr. BAUSANO. I do not know what the negotiation went on. I was not part of it.

Senator LEVIN. I am not asking you about what the negotiation. I am asking you whether the change in the fee from a flat fee was done in part to make the transaction look more option-like. That is what I am asking you.

Mr. BAUSANO. I really do not think so. I think it reflected what the standard investment advisor agreement to a fund would have been.

Senator LEVIN. OK. Prior to the 2008 restructuring, did Deutsche Bank have any indications that the old MAPS structure would not be respected as an option? Do you want me to repeat the question?

Mr. BAUSANO. No. Before 2008.

Senator LEVIN. Before the restructuring.

Mr. BAUSANO. Before the restructuring. Not to my knowledge.

Senator LEVIN. You had no indications that the old MAPS structure would not be respected as an option?

Mr. BAUSANO. No. As a matter of fact, to this date no court or regulator or statute has disqualified it as an option, either old or new.

Senator LEVIN. That is not what I am asking, whether a court or regulator has—I am asking you, was there an indication from any source that the old MAPS structure would not be respected. You answered it, we did not hear from a regulator or court. That is not my question.

Mr. BAUSANO. To my knowledge, no. However, I am aware that my control functions were in regular conversations with all of the external regulatory constituencies on an ongoing basis.

Senator LEVIN. How about internally?

Mr. BAUSANO. Internally we discussed——

Senator LEVIN. Was there any evidence internally, attorney discussion internally to that effect?

Mr. BAUSANO. That it would not be respected? Not to my knowledge.

Senator LEVIN. Was that question ever referred by you to a law firm for an opinion on it?

Mr. BAUSANO. I am sorry. Repeat again?

Senator LEVIN. Was that issue ever referred to a law firm to give you an opinion on that question?

Mr. BAUSANO. I am aware we had a "should level" opinion on that.

Senator LEVIN. Was that before or after the restructuring?

Mr. BAUSANO. I do not have the specific date, but I know it was early in the life cycle of the trade.

Senator LEVIN. Do you know whether it was before or after the——

Mr. BAUSANO. I do not know.

Senator LEVIN. Deutsche Bank entered into a non-prosecution agreement with the Department of Justice stemming from its involvement with abusive tax structures, and under the non-prosecution agreement Deutsche Bank promised to stop participating in and implementing fraudulent tax shelters and agreed to bring to the attention of the Department of Justice "products or transactions that may run afoul of U.S. Federal income tax laws, rules, and regulations."

Now, Mr. Bausano, in your written testimony, you said that, "It bears noting that the bank discussed the MAPS product with the Department of Justice, the IRS, the SEC, and the independent expert Deutsche Bank retained as part of the NPA. All of the discussions took place well before this Committee began its investigation. Indeed, the bank communicated with the independent expert about MAPS at a meeting on February 3, 2011, and discussed the MAPS product with the Department of Justice and the IRS at several meetings in 2012 and 2013."

You stated in your testimony that Deutsche Bank discussed this matter with the SEC. My question to you is: Weren't those discussions initiated by the SEC as part of an SEC examination of MAPS?

Mr. BAUSANO. You know, I was not part of that conversation. My secondhand knowledge is it was part of an examination, but that is arm's length.

Senator LEVIN. Arm's length or secondhand?

Mr. BAUSANO. Secondhand.

Senator LEVIN. So secondhand you say you heard that this discussion with the SEC came as part of an SEC examination. Is that correct? That is what you heard secondhand?

Mr. BAUSANO. As part of my preparation for this conversation, I was made aware of that.

Senator LEVIN. OK. Are you aware of the fact that the SEC referred Deutsche Bank's activities to the IRS because the basket option strategy was being used to turn short-term capital gains in the portfolio into long-term capital gains and the options were being exercised after 1 year, thus subjecting the returns to long-term capital gains tax? Were you aware of the fact that because of that claim that there was a long-term capital gain that the SEC referred this activity to the IRS? Were you aware of that?

Mr. BAUSANO. I was made aware of it as part of my preparation.

Senator LEVIN. The first time that Deutsche Bank communicated the MAPS program to the Department of Justice was in 2012. Deutsche Bank did not disclose its MAPS program to the Department of Justice when it was negotiating the non-prosecution agreement in 2010. Is that correct?

Mr. BAUSANO. I was not part of that negotiation. I learned about the NPA upon its settlement.

Senator LEVIN. OK. Were you aware of the fact, however, that Deutsche Bank did not disclose this MAPS program to the Department of Justice when it was negotiated the non-prosecution agreement in 2010? Even though you were not part of it, were you aware of that?

Mr. BAUSANO. As part of my preparation, I have heard that. I have no knowledge.

Senator LEVIN. No personal knowledge, but you were informed of that? As part of your preparation, that is what you were informed?

Mr. BAUSANO. That prior to the-could you repeat what I——

Senator LEVIN. I will. Were you informed that the first time Deutsche Bank communicated the MAPS program to the Department of Justice was in 2012 and that it did not disclose the MAPS program to the Department of Justice when Deutsche Bank was negotiating the non-prosecution agreement with the Department of Justice in 2010?

Mr. BAUSANO. I am not specific on the date of the conversation with the DOJ. I am aware that the judgment of the negotiators in the NPA was that it was not shared at that time.

Senator LEVIN. OK. Are you aware that Deutsche Bank went to the Department of Justice with the MAPS matter, disclosed it to the Department of Justice, only after the Federal Reserve Bank of New York, which had been examining MAPS, expressed concerns and instructed the bank to go to the Department of Justice?

Mr. BAUSANO. My understanding is that the independent expert that was in Deutsche Bank at the behest of the DOJ was informed of MAPS, and it was our presupposition that, as the direct conduit to the DOJ, that would have been passed through. When we learned that was not the case, we informed them directly.

Senator LEVIN. And then when you informed them directly, was that after the Federal Reserve Bank, which had been examining MAPS, expressed concerns and instructed the bank to go to the Department of Justice?

Mr. BAUSANO. I am not aware of the specifics of that.

Senator LEVIN. OK. Was there any concern within Deutsche Bank that to continue with the New MAPS after signing the non-prosecution agreement might put the bank in violation if it continued with that transaction?

Mr. BAUSANO. With the New MAPS?

Senator LEVIN. Yes. Was there any concern within Deutsche Bank that to continue with the New MAPS after signing the NPA would be a violation—or could be a violation?

Mr. BAUSANO. Well, we had moved to a less than 1-year only posture by that point, I believe.

Senator LEVIN. OK. Now, when Deutsche Bank put a temporary halt to MAPS transactions in late 2010, it still had three basket transactions outstanding in 2011. They all lasted a year or more after the GLAM. Why didn't Deutsche Bank cancel those, unwind those? As I just asked Mr. LaRocca, you had the right to do so under the basket contracts. Why not do it?

Mr. BAUSANO. We felt that in an abundance of caution to cease the product was appropriate and it was what we did. The ones that were extending we felt that they were at that point and continued to be legal and legitimate transactions and elected to honor the terms of those transactions to their conclusion while not pursuing any further.

Senator LEVIN. I understand that, but you decided not to continue to issue these contracts because of various concerns which you had. Why not unwind the contracts which you had since you were allowed to do that? Under the contract you could have unwound these. These were obviously finally of concern to you. It took a whole lot of years to get there, but nonetheless, you finally reached that point. So why not do what you were allowed to do under the contract, and that is to unwind contracts which are problematic? And your answer is that you did not. But why didn't you? Did you think about it? Did you consider it?

Mr. BAUSANO. It was the business judgment that we were being sufficiently aware of and respectful of the guidance we had gotten both from the legal, regulatory, and guidance perspective by ceasing to go on, and that the balance of risks was we would be better served to keep the contract as we had originally negotiated it with the existing clients. So we were aware of it, and we thought we were being especially and deliberately respectful of the changing regulatory landscape already.

Senator LEVIN. I think you may have been wrong in terms of the New MAPS as it related chronologically to the NPA.

Mr. BAUSANO. OK.

Senator LEVIN. The NPA was 2010, and I think you said that you had no concern there about whether the New MAPS would be compliant with the NPA. But wasn't the NPA in existence before the New MAPS was put in existence?

Mr. BAUSANO. I do not believe that is correct. I have a chronology that has been submitted to you——

Senator LEVIN. OK. Let me rephrase it because I was inaccurate, my phrasing. You moved to an 11-month term in 2012, I believe, to make sure that the option when exercised could not be claimed to be a long-term capital gain. Is that correct? That was 2012, I believe.

Mr. BAUSANO. I have April 2012 as the first New MAPS shorter dated.

Senator LEVIN. But the NPA was in existence in 2010.

Mr. BAUSANO. Right. New MAPs was struck in 2008.

Senator LEVIN. In 2008. But your short options—your 11-month option was not put in place until 2012, and so the question is: Were you concerned after the NPA about that issue? And if so, why didn't you change to the short option, the 11-month option, before 2012?

Why did it take you so long?

Mr. BAUSANO. The New MAPS structure was fully—ready?

Senator LEVIN. I am ready.

Mr. BAUSANO. We were fully advised internally by our control functions—legal, credit, tax, compliance, and external advisors—at the time that it was compliant and well within the boundaries and well within the area of ambiguity and, therefore, thought it was safe to proceed.

Senator LEVIN. All right. So, in other words, Mr. Brown, in your statement, you say that the reference portfolio for each option was generated by Renaissance's trading algorithm, and you make it sound like the selections were made by a machine with no human intervention. Now, your scientists and your experts are continually looking for inefficiencies in the market, and when they find something new, as I understand you in your testimony, they try to adjust the computer model and incorporate that into the algorithm, and that will affect the decisions that are generated. It could also have an impact on what positions are bought and sold. So there is a lot of ongoing human involvement in this process. Is that correct?

Mr. BROWN. That is correct.

Senator LEVIN. And how many employees are there at RenTec?

Mr. BROWN. I think roughly 300.

Senator LEVIN. And of these employees, how many work part-time or full-time on the algorithm strategy that supports or supported RenTec's basket option transaction?

Mr. BROWN. Well, on the strategy, 50 or so.

Senator LEVIN. OK. And these would be employees with backgrounds in mathematics, physics, and computer science?

Mr. BROWN. That is correct.

Senator LEVIN. The employees that worked on the overall strategy to identify market inefficiencies in order to take advantage of them I assume did this on an ongoing basis. is that correct?

Mr. BROWN. Yes.

Senator LEVIN. And how frequently were they identifying these inefficiencies and modifying the inputs that go into the overall strategy? Was that a frequent occasion?

Mr. BROWN. Well, most of the modifications involved maintenance, changes to—the system has a million lines of computer code, and when you have a million lines of computer code, it has to be maintained. Interfaces change. I do not know if you are counting those kinds of changes.

Senator LEVIN. No. Just when they tweak the algorithm.

Mr. BROWN. I'm sorry. What was the question? How many people work on——

Senator LEVIN. No. How frequently were you doing that? Was that a daily change?

Mr. BROWN. No.

Senator LEVIN. Weekly? Monthly?

Mr. BROWN. No, more like weekly.

Senator LEVIN. OK. So every week there would be roughly?

Mr. BROWN. One or two changes, roughly, on average.

Senator LEVIN. In the algorithm?

Mr. BROWN. Yes. The algorithm has been developed over 25 years. It probably has a thousand man-years of work into it. It is very mature at this point. It is very hard to make significant improvements. So these are minor changes typically.

Senator LEVIN. But you have 50 people working on this. There is a lot of human involvement in RenTec in this——

Mr. BROWN. Oh, that is not all they do. We trade commodities, futures——

Senator LEVIN. I know that, but I specifically asked you the question for this particular process, this basket option process, how many were working full-time or part-time on the strategy that supported RenTec's basket option transactions?

Mr. BROWN. I think my answer is accurate.

Senator LEVIN. OK. So we will stick with 50. That is fine.

Mr. BROWN. I mean, roughly. I do not know——

Senator LEVIN. That is fine, about 50. That is a lot of people, a lot of human intervention. Wouldn't you agree? Fifty people working on these basket options? OK. I will let it speak for itself. You do not have to agree with it.

Mr. BROWN. OK.

Senator LEVIN. That is a lot of expertise.

Now, did RenTec personnel intervene in the strategic to respond to market events?

Mr. BROWN. Well——

Senator LEVIN. You know, like during the Greek crisis.

Mr. BROWN. Oh, sure.

Senator LEVIN. RenTec——

Mr. BROWN. We made a strategy—what happened—about the Greek crisis, for example, if you like, what happened there is that we were concerned at that time that Barclays had a lot of exposure to Greece.

Senator LEVIN. And so you could shift billions of dollars of its portfolio, for instance——

Mr. BROWN. No. That is not what happened.

Senator LEVIN. Well, could you?

Mr. BROWN. Could we have?

Senator LEVIN. Did you shift any money from Barclays to Deutsche Bank?

Mr. BROWN. Shift money? No.

Senator LEVIN. OK. Did you direct more of the sales orders to one bank and more of the purchase orders to another—to the other bank?

Mr. BROWN. Yes, we made a change to the process that distributes portfolio among the options, so the algorithm produces a bunch of trades and produces a portfolio, and more or less of it can go to different options. So prospectively going forward, we made a change so that we would tend to put more portfolio with Deutsche Bank and less with Barclays.

Senator LEVIN. And that was some of the type of work that your 50——

Mr. BROWN. That is correct.

Senator LEVIN [continuing]. Experts would do? And so with the human intervention in this process, this affects what positions are bought, sold, and how long they are held. Is that correct?

Mr. BROWN. Yes. As I said, the changes are modest, but yes.

Senator LEVIN. Who changes the models? Human beings? What did you just say?

Mr. BROWN. Changes are modest.

Senator LEVIN. Changes their Models?

Mr. BROWN. Small.

Senator LEVIN. You make changes in the models?

Mr. BROWN. There are modest changes in the models.

Senator LEVIN. Modest changes in the models by these human beings.

Mr. BROWN. That is correct.

Senator LEVIN. This algorithm was not just making changes by itself. It took human beings to make changes.

Mr. BROWN. Sure. The human beings wrote the code.

Senator LEVIN. Good. And changed the code?

Mr. BROWN. That is correct.

Senator LEVIN. Tweaked the code and once or twice every week changed——

Mr. BROWN. On average.

Senator LEVIN. On average, OK. When you made these changes in the algorithm, did you consult with the banks?

Mr. BROWN. No.

Senator LEVIN. Is the algorithm RenTec's proprietary strategy?

Mr. BROWN. It is.

Senator LEVIN. Do the banks ever change the algorithm?

Mr. BROWN. No.

Senator LEVIN. Now, you have about 300,000 transactions executed in the banks per day for RenTec's basket contracts. Were these submitted in the form of recommendations or suggestions to the banks?

Assuming they met the guidelines, of course, which you had already agreed upon. But were these submitted, 300,000, approximately, transactions in the banks each day for the basket of contracts, were they submitted in the form of recommendations or suggestions, but were they automatically sent to the market providing they met the guidelines which you had agreed to?

Mr. BROWN. So they were most commonly sent to the banks' trading systems.

Senator LEVIN. All right.

Mr. BROWN. And if they—sometimes they were rejected. Not very often. And, otherwise, they went to the market. That is correct.

Senator LEVIN. And not very often would mean if they did not meet the guideline?

Mr. BROWN. I think that is the only—the only ones I know of where, you know, the restricted list had been changed and we were not aware of it, that kind of thing. Those are the ones I know of.

Senator LEVIN. All right. So there was an agreement, there were guidelines, a restricted list, whatever you want to call it. If it did not meet that, then it would not go to market.

Mr. BROWN. That is my understanding, yes.

Senator LEVIN. And that did not happen very often.

Mr. BROWN. No, it did not.

Senator LEVIN. How many times?

Mr. BROWN. I do not know how many times——

Senator LEVIN. How many times in a year?

Mr. BROWN. A few.

Senator LEVIN. A few in a year.

Mr. BROWN. I would guess. You know, I am not——

Senator LEVIN. I know.

Mr. BROWN. I am guessing there.

Senator LEVIN. To the best of your ability, you are guessing a few times a year?

Mr. BROWN. Yes. I mean, you know, if it is 20, it would not surprise me. If it is three, it would not surprise me. In that range.

Senator LEVIN. All right. That is out of 30 million a year.

Mr. BROWN. I have not done the multiplication, but that is probably correct.

Senator LEVIN. That is not multiplication. That is a question of fact.

Mr. BROWN. Well, I do not know if it is 30 million or 35 million or 40 million. It is millions, many millions.

Senator LEVIN. Tens of millions.

Mr. BROWN. Yes.

Senator LEVIN. It could have been three or five or ten times it did not meet the guidelines.

Mr. BROWN. That is correct.

Senator LEVIN. I am going to conclude. We have a vote on here now, so let me just end with a few remarks here.

The situation that we have looked at here over a year or more is where an armada of law firms and hedge funds and financial institutions have devised financial structures that in substance are far from what they pretend to be. A series of fictions is created to create one big fiction, and that is to gain advantages which otherwise could not be obtained.

Now, the structure the Subcommittee has explored today is an example of what we have been doing for many, many years looking at these structured transactions just to see how tax avoidance works in this country. The companies that engaged in the basket options and the law firms that support them ignore the realities of the transactions that they are engaged in by employing a structure that seeks to portray the activities as something from what they really are, and they hope that those that are reviewing the transactions will not catch it.

Now, those who complain about the complexity of the Tax Code should look at these examples of tax avoidance and tax abuse and realize that it is this kind of gamesmanship that drives the complexity in the Tax Code, because the IRS is always trying to catch up and clarify that the fictions that are concocted are not in compliance with the law. If the parties that use these fictions and these structures want the tax system to be more straightforward and clear, they should end the gamesmanship. That is the issue that underlies what the Subcommittee has been addressing. I hope the regulators and Federal agencies will take note and try to address the larger issue that has been posed here. I hope members of the financial and legal communities will do that as well.

The structures that we have examined today have real consequences because they offload billions of dollars in taxes that are shrugged off by hedge funds onto the backs of ordinary American taxpayers. They add billions of dollars in leverage to the U.S. financial system, and it does not have to be this way. The IRS can audit hedge funds and collect taxes that were not paid. The SEC can stop basket options from being used to circumvent leverage limits. The Financial Stability Oversight board, working with other agencies, can impose new reporting obligations to detect and stop hidden leverage through derivatives. Congress can amend TEFRA to remove obstacles to IRS audits of large partnerships like hedge funds.

Congress could go further and adopt the proposal of my colleague from Michigan, Congressman Camp, and tax all derivatives at the end of the year on their market value. That would short-circuit a lot of the games.

Option baskets are being misused and abused to dodge taxes and to circumvent leverage limits, and we are going to continue as long as I am here to do everything I can to stop these abuses.

We end the hearing with thanks to our witnesses for their cooperation with our Subcommittee, and we stand adjourned.

[Whereupon, at 2:55 p.m., the Subcommittee was adjourned.]

APPENDIX

Statement of Senator Carl Levin (D-Mich.)
Before
U.S. Senate Permanent Subcommittee on Investigations
On
Abuse of Structured Financial Products:
Misusing Basket Options to Avoid Taxes and Leverage Limits

July 22, 2014

In recent years, this Subcommittee has devoted significant time and effort to exposing complex financial arrangements that profitable corporations and wealthy individuals employ to avoid their obligations to pay all their U.S. taxes. We also have examined reckless behavior that has put the stability of the financial system – and by extension, the U.S. economy – at risk. Today's hearing brings those two themes together.

Our focus today is on how two banks and a handful of hedge funds developed a complex financial structure to engage in highly profitable trades while claiming an unjustified lower tax rate and avoiding limits on trading with borrowed money. This structure worked well for the banks, which earned hundreds of millions of dollars in fees. It worked well for the hedge funds, which made billions of dollars in profits. But it didn't work for average taxpayers, who had to shoulder the tax burden these hedge funds shrugged off with the aid of the banks. And it didn't work for the financial system, which is still recovering from a devastating crisis brought on by excess risk, and remains ill-equipped to withstand another shock from over-leveraged financial institutions.

In essence, today's hearing is about a series of fictions, one piled on top of another, fictions that major banks and their hedge fund clients used to avoid taxes and federal leverage limits.

The key financial product involved in these fictions is called a "basket option." The basket options examined by the Subcommittee were developed and sold by two banks, Deutsche Bank AG and Barclays Bank PLC, to more than a dozen hedge funds. Together, the banks sold 199 basket options to hedge funds that used them to make over $100 billion in trades. Two of the largest basket option users were Renaissance Technologies LLC, known as RenTec, and George Weiss Associates.

Although there were minor differences in specifics, the basket option basics worked like this. The bank sold its hedge-fund client a structured financial product, labeled an "option," whose payoff equaled the profits generated by a "basket" of securities held in a designated account at the bank. The basket, here, is key. It was an open account with ever-changing contents. Technically, the account and the securities it contained were held in the name of the banks in its own trading account. The hedge fund put up 10% of the cash needed to buy the securities, and the bank lent the other 90%.

This arrangement included a number of fictions which defied reality, but resulted in big profits for the hedge funds and the banks.

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First, though the structure was designed to create the appearance that the bank owned the assets in the basket option account, the hedge fund made all the trading decisions for those accounts – and in fact, used the bank's computerized trading system to execute trades in the account. RenTec estimates its trading through basket option accounts averaged more than 100,000 trades each day, or about 30 million trades a year. Also, the hedge fund reaped all of the trading profits, even though the financial structure created the illusion that the bank owned the assets. The beneficial owner, the real owner, was the hedge fund.

Second, the hedge fund's control of all the trading for the basket option account demolishes the fiction of a legitimate option. So the hedge funds set up new entities, which they controlled, to serve one function, and that was to act as the option holder. The hedge funds would then claim that their control of the option holder was totally independent of their role in making the trading decisions for the basket option account. Documents we will explore today show the extraordinary lengths to which RenTec and the banks went to perpetuate the illusion that the option holder and trader were somehow independent, when in fact the hedge fund, RenTec, played both roles.

The fictional option was structured so that it could be exercised more than one year after it was created. Under that structure, the hedge funds claimed that trading profits from the account were long-term capital gains and thereby qualified for the reduced long-term capital gains tax rate.

The tax code gives long-term capital gains a reduced rate on the theory that it provides an incentive for investors to risk their capital on the kind of long-term investments that grow the economy and create jobs. The high-volume trading that, for example, RenTec conducted through its basket options doesn't meet that test. When securities are held for weeks or days or even seconds, it's surreal to characterize those trading profits as long-term capital gains.

But that's what the hedge funds did. The banks and hedge funds used the fictional option structure to collapse millions of individual trades into one transaction, the execution of an option. As if by magic, the option structure transformed what would be short-term capital gains from an ordinary trading account into long-term capital gains subject to lower taxes. Subcommittee staff estimates, based on basket option profits that RenTec reported from 2000 to 2013, that RenTec avoided paying more than $6 billion in taxes.

That's a lot of money even by Washington standards. It would, for example, pay for almost two-thirds of the cost to replenish the Highway Trust Fund so that it doesn't run out of money next month and create havoc in road projects around the country.

This isn't the first time options have been abused to try to convert short-term trading profits into long-term capital gains. That's why, in 1999, Congress passed a law in part to stop that practice, Section 1260 of the tax code. The basket options at issue here were written to skirt Section 1260's prohibitions. In 2010, the IRS warned that the type of basket options used here could not claim the lower long-term capital gains tax rate. Despite that IRS warning, Barclays continued to sell basket options to RenTec for another two years, before finally revising its option product in 2013, so that the options expired in less than a year and couldn't be used to game the tax code. Deutsche Bank suspended its issuance of new basket options after the 2010 IRS warning, but continued to administer multiple basket option accounts already in existence.

It also resumed offering them in 2012, although with a term of less than one year and a requirement that the option holder treat the profits as short-term capital gains.

Tax avoidance through financial engineering is not the only problematic element here. These banks and hedge funds also used basket option accounts to circumvent regulations designed to limit systemic risks to the banking system posed by excessive leverage – that is, excessive lending to finance stock trading.

The stock market crash of 1929 devastated the U.S. economy, not just by the collapse of thousands of stock speculators, but also by the failure of thousands of banks that had lent them money and couldn't collect on the loans. In the aftermath of the Great Depression, Congress enacted laws limiting the use of borrowed money to trade securities. Those limits are included in a set of "margin rules" that essentially prohibit U.S. broker-dealers from lending more than $1 to brokerage clients for each $1 of the client's own money in the account – in other words, for every $2 in a brokerage account, only $1 of that $2 can be borrowed from the broker.

Had the hedge funds involved in these transactions been using normal brokerage accounts, they would have been subject to the 2-to-1 leverage limit. But because the basket option accounts were opened in the name of the banks in their own proprietary trading accounts, it looked as though the money placed into those accounts was the banks' own proprietary money rather than money they were loaning to a customer. This is another fiction. The banks and hedge funds pretended the bank funds were not loans, even though the hedge funds paid financing fees and posted collateral.

So instead of complying with the 2-to-1 leverage ratio, the banks offered their hedge-fund clients leverage as high as 20-to-1. RenTec used the increased leverage to borrow billions of dollars for its trading strategies, which produced huge profits for RenTec, while the lending generated huge additional fees for the banks.

But as we've learned over and over – in the Depression, in the 1990s collapse of the hedge fund Long Term Capital Management, and in the financial crisis from which we're still recovering – excessive leverage doesn't always produce profits. Sometimes it produces losses. And when huge losses happen, they can bring down not just a reckless borrower, but the financial institution that lent it money, and that failure can ripple throughout the entire financial system. While it appears the two banks the Subcommittee has examined have stopped selling basket options as a way to claim long-term capital gains rates, they are still selling these products as a way to avoid leverage limits – meaning our financial system and economy still face unnecessary risk.

RenTec, through its Medallion Funds, used basket options to produce profits from 1999 to 2013 totaling more than $30 billion. The banks charged financing, trading, and other fees that, over the same period, produced revenues totaling about $570 million for Deutsche Bank and $655 million for Barclays. Basket options were clearly a lucrative line of business for the participants.

But this money-maker was built on an interlocking series of fictions. The key fiction is the option itself – the idea that this structure was really an option, when in fact what it did was give hedge funds the profits from buying and selling assets in accounts that the hedge funds themselves controlled. It was fiction to treat the banks as the true owners of the basket option assets, when the hedge funds controlled and executed all of the millions of trades in the accounts, the hedge funds paid the daily trading costs, and the hedge funds reaped the profits. It was fiction to suggest that the borrowed money that financed the trades was considered proprietary funds of the banks, rather than loans to the hedge funds. It was fiction to treat the profits from trades lasting days or even seconds as long-term capital gains deserving a reduced tax rate. And it was a fiction to pretend that hedge funds were not acting both as option-holder and as trade decision-maker. These were all fictions, but fictions with real-world consequences: they shifted billions of dollars in tax burden onto the backs of ordinary taxpayers, and they added billions of dollars in hidden risks to our financial system.

Congress and financial regulators can and should work together to stop these abuses.

The IRS should seek to collect taxes owed on billions of dollars in basket option profits unjustifiably claimed as long-term capital gains.

Federal financial regulators should make clear to banks that participating in abusive structures designed to avoid leverage limits and taxes is unacceptable, and penalize the banks that do.

The Financial Stability Oversight Council, working with other agencies, should establish reporting and data collection requirements to detect and stop abuse of structured financial products to circumvent leverage limits that safeguard our economy.

Finally, Treasury, and the IRS should remove impediments to audits of large partnerships, like hedge funds, 99% of which today escape IRS audits – meaning we are largely blind to how many other hedge funds may be using these structures to avoid risk limits and taxes.

These measures would help protect the interests of ordinary Americans who pay their taxes and must pay the price for tax avoidance schemes. It is these same Americans who would bear the burden of economic devastation that unaddressed systemic risks can cause.

I want to thank Senator McCain and his staff for their hard work in making today's hearing and our bipartisan report possible. The staff of this Subcommittee, majority and minority, through the years have been able to work together as one team. I'm very proud of them.

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JOHN ★ McCAIN
U.S. Senator ~ *Arizona*

AS PREPARED FOR DELIVERY:
Tuesday, July 22, 2014

Contact: Brian Rogers or Julie Tarallo
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OPENING STATEMENT BY SENATOR JOHN McCAIN AT THE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS HEARING ON BASKET OPTIONS

Washington, D.C. – U.S. Senator John McCain (R-AZ) today delivered the following opening statement at the Permanent Subcommittee on Investigations (PSI) hearing, "Abuse of Structured Financial Products: Misusing Basket Options to Avoid Taxes and Leverage Limits."

"Thank you, Mr. Chairman. Today's hearing sheds light on how Renaissance Technologies was able to avoid paying more than $6 billion in taxes by disguising its day-to-day stock trades as long term investments. To accomplish that, Renaissance set-up a quote 'basket option,' which is an artificial structure – not available to ordinary consumers – that allowed Renaissance to legally classify its short-term trading profits as long-term capital gains, subjecting those gains to a substantially lower tax rate.

"Renaissance profited from this tax treatment by insisting on the fiction that it didn't really own the stocks it traded – that the banks that Renaissance dealt with, did. But, the fact is that Renaissance did all the trading, maintained full control over the account, bore all the real risk, and reaped all of the profits. This setup allowed Renaissance to claim that profits from its day-to-day trades were actually long-term investments, thereby avoiding payment of billions in taxes.

"In reaction to Renaissance's use of this structure, the IRS opened an investigation and, today, is in the process of litigating the legal issues. It's not the Subcommittee's place to weigh in on those proceedings and determine whether the behavior in question was illegal. But, this basket-option practice – available to hedge funds but inaccessible to the average investor – needs to be fully examined and addressed.

"The biggest reason why it should be examined is the tremendous amount of taxes Renaissance was able to avoid paying by using this structure. In the course of its investigation, the Subcommittee learned that between the years 2000 and 2014, Renaissance exercised 60 long-term basket options with Deutsche Bank and Barclays, earning in the neighborhood of $34 billion in pre-tax profits and potentially avoiding over $6 billion in taxes.

"Meanwhile, Deutsche Bank and Barclays happily took part in the basket options because they made hundreds of millions of dollars in fees from these transactions, while incurring no actual risk. That is, until the IRS started to investigate. To protect themselves, Deutsche Bank in 2010 and Barclays in 2012 decided to only offer Renaissance options lasting less than one year so that all the profits from the options would have to be considered short-term capital gains.

"Large trading firms will always try to stay one step ahead of the game when it comes to pushing the envelope on the tax code to minimize paying taxes. And, regulators will inevitably struggle to detect and stop new schemes as they arise. It is, therefore, critical that regulators use the resources they have in an efficient manner to target the most likely offenders. So, whatever practical impediments currently disable the IRS from auditing large partnerships that use these sorts of tax structures, should be eased or eliminated. Doing so would allow the IRS to audit companies based on a careful assessment of the likelihood that a given company is engaging in activities that warrant an audit. This would differ from the current practice which focuses on the corporate form selected by that company, which has led to corporations being disproportionately audited.

"One thing is clear: Americans are tired of seeing Wall Street firms playing by a set of rules other than those that apply to ordinary citizens. Even as consumers worried about losing their savings in the 2008 financial crisis, Renaissance remained enormously profitable throughout by, among other things, utilizing the tax-avoidance structure detailed in today's hearing. When ordinary citizens make short-term trades, they get taxed at the short-term rate. When financial firms like Renaissance make short-term trades, they shouldn't be treated any differently. The perception that Wall Street self-deals or plays by its own rules engenders a deep-seeded distrust and cynicism among Americans that is neither desirable nor healthy for the nation.
I want to thank the witnesses for appearing before the Subcommittee today and I look forward to their testimony.

"Thank you, Mr. Chairman."

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Testimony of Steven M. Rosenthal
Before the U.S. Senate Permanent Subcommittee on Investigations of the Committee on Homeland Security and Governmental Affairs

Abuse of Structured Financial Products: Misusing Basket Options to Avoid Taxes and Leverage Limits
July 22, 2014

My name is Steven M. Rosenthal. I am a Senior Fellow at the Urban-Brookings Tax Policy Center, where I research, speak, and write on Federal income tax issues.[1] I have practiced tax law in Washington, D.C. for over 25 years, most recently as a partner at a major law firm. In private practice, I regularly advised hedge funds and other investors on the tax treatment of derivatives. In the 1990s, I was a Legislation Counsel with the Joint Committee on Taxation, where I helped draft tax rules for financial institutions, financial products, capital gains, and related areas. I am the former Chair of the Taxation Section of the District of Columbia Bar Association.

I would like to thank Chairman Levin and Ranking Member McCain and the Subcommittee for inviting me to testify.

Today, I will describe how two hedge funds (the Hedge Funds), with the help of two investment banks (the Banks), purported to convert short-term trading profits into long-term capital gains with derivatives—which lowered the tax rate on their gains from 35% to 15% (the difference in rates for short-term and long-term gains for most of the years in question). I believe the funds stretched two key elements of the tax law to achieve their goal. The Hedge Funds (1) mischaracterized their investment arrangements as derivatives and (2) improperly deferred gains from their arrangements until final settlement. I believe the IRS should challenge both of these assertions—and need only defeat one. I also recommend legislation to address the misuse of derivatives more comprehensively.

I. The Stakes: Short-term or Long-term Capital Gains

The tax preference for long-term capital gains was established long ago. In 1921, Congress first lowered the rate for gain from the sale of property held for more than two years: from 58%, the top individual tax rate for the year, to 12.5%.

Congress cited the "lock-in" effect of high rates to justify the capital gains preference:

> "The sale of farms, mineral properties, and other capital assets is now seriously retarded by the fact that gains and profits earned over a series of years are under the present law taxed as a lump sum (and the amount of surtax greatly enhanced thereby) in the year in which the profit is realized. Many such sales, with their possible profit taking and

[1] I am testifying at the request of the Subcommittee, by letter dated July 9, 2014, from Chairman Carl Levin and Ranking Member John McCain. The views I present here are my own and not those of the Urban Institute, the Brookings Institution, or any other institution or person.

consequent increase of the revenue, have been blocked by this feature of the present law."[2]

Today, our tax rules reduce the tax rate for gain from the (i) sale or exchange, (ii) of a capital asset, (iii) held for more than one year. But to determine whether gain from a sale or exchange qualifies as long-term capital gain, the tax law looks to the substance of the transaction, not the label a taxpayer puts on the transaction.

II. The Investment Transactions

The Hedge Funds are Delaware partnerships and were organized to "purchase, sell (including short sales), invest, trade and deal in securities and other financial transactions related thereto."[3] The funds pass their gains and losses through to their partners.[4]

Investment funds typically separate their investment assets from their operations. So, the Hedge Funds hold investments (including derivatives), but own no equipment or offices--and they do not employ any workers. Rather, they rely on their general partner, Renaissance Technologies LLC (Renaissance).[5] A general partner is "an agent of the partnership for the purpose of its business, purposes or activities."[6] Thus, Renaissance's efforts on behalf of the Hedge Funds are, legally, attributable to the Hedge Funds.[7] And Renaissance employed more than 250 professionals, 90 of whom hold math and science PhDs, mainly to develop and pursue the strategies for these Hedge Funds.

Starting years ago, Renaissance developed investment strategies for the Hedge Funds, which they describe as an algorithm. The strategies pursued statistical arbitrage—which exploits small, and fleeting, pricing anomalies of publicly-traded assets. The strategies were low-risk: they were both diversified and market neutral (with both long and short positions). But they required frequent trading—more than 100 thousand trades a day, and more than 30 million trades a year. Renaissance also sold stocks quickly: it sold 87% within three months, and more than 99% within a year.

In most respects, the Hedge Funds' trading was conventional, albeit frequent and extensive. The Hedge Funds identified assets that were mispriced and arbitraged those pricing anomalies.

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[2] H.R. Rep. No. 67-350, at 10-11 (1921)
[3] The Hedge Funds are Badger Holdings LP and Mosel Equities LP, with identical objectives in their limited partnership agreements.
[4] Their partners are other partnerships, known as feeder funds, which are tailored to meet the tax and non-tax objectives of different categories of investors, including tax-exempt entities, foreign investors and others.
[5] Each Hedge Fund gave Renaissance "complete and exclusive responsibility for managing and administering the affairs of the partnership."
[6] Del. Code Ann. Tit. 6, sec. 15-301(1).
[7] *Sun Capital Partners III LP v. New England Teamsters & Trucking Industry Pension Fund et al.*, 724 F.3rd 129, 147 (1st Cir. 2013) (the efforts of a general partner, and its affiliates, to manage a portfolio company are attributable to the partnership).

But the Hedge Funds did not buy, hold, and sell the stocks directly. Instead, the Banks purported to buy, hold, and sell the stocks.[8] The Hedge Funds and the Banks used two interrelated contracts to structure the investment arrangement: First, a Bank agreed to pay a Hedge Fund the net profits from the trading of a basket of stocks in a designated account at the Bank (the "Basket Contract").[9] Second, the Bank granted The Hedge Fund's general partner, Renaissance, the exclusive authority to buy and sell stocks for the designated account (the "Investment Management Agreement"). That permitted Renaissance to select the stocks to buy and sell, when to buy and sell, and how to route the orders.

To enter a Basket Contract, a Hedge Fund might deposit, say, $10 million, in the account at a Bank. The Bank also might contribute, say, $90 million, which permitted up to $100 million to trade (a leverage ratio of 10). The Basket Contract typically had a term of three years—but a Hedge Fund could "exercise" (i.e., cash out) the Basket Contract at any time. In fact, the Hedge Fund typically exercised the Basket Contracts after more than a year to qualify their gains as long-term. The Bank also could "knock-out" (i.e., terminate) a Basket Contract if the value of the account fell to or below $90 million. But the risk of a knock-out was remote, in part because the Banks had early trigger points to require the Investment Manager to sell positions, or reduce leverage, before losses fell to $90 million.[10] In fact, neither Bank terminated any of the more than 60 Basket Contracts of the Hedge Funds.

Upon a Hedge Fund's exercise of a Basket Contract, the Bank paid the Hedge Fund the greater of (1) zero or (2) the return of the Hedge Fund's $10 million deposit (less amortized fees for the Bank), increased by (i) the basket profits—which were the gains, interest, and dividends that had been earned in the account and reduced by (ii) the basket losses—which were the losses, interest expense, commissions and other trading costs that had been incurred and further reduced by (iii) an interest charge on the $90 million advance.[11] As mentioned earlier, in remote circumstances, a Bank could knock-out a Basket Contract early but, otherwise, the Hedge Fund would invariably exercise the Basket Contract, as the Hedge Fund could receive some value and would pay nothing to exercise.

As mentioned above, Renaissance, the general partner of the Hedge Funds, directed the trading in the designated accounts—not the Banks and not a third party. Under some Investment Management Agreements, Renaissance could trade without prior approval by the Bank. According to other agreements, the Bank could reject any trade prior to actual execution. But Renaissance sent the trades directly to the exchange, and did not did not notify a Bank of its

[8] The Banks were Barclays Bank PLC and Deutsche Bank AG.

[9] The Banks labeled the contracts "Barrier Options" or "Basket Options," but I believe "Basket Contracts" better describes the contracts. An option is a right, but not the obligation, to buy or sell designated property at a fixed price. And the right may or may not be exercised. Here, the Hedge Funds were virtually certain to exercise the Basket Contracts (at a price of zero)—so, in my view, they were not options.

[10] The Banks also imposed trading parameters that further limited the possibility the Bank could lose money (e.g., the Banks limited the concentration of investment in a single company or industry).

[11] The Banks profited through fees and financing charges. Otherwise, the Banks were indifferent—any loss (or gain) on the Basket Contracts was offset by the gain (or loss) on the stock in the account.

trades in advance. Thus, there was no opportunity for a Bank to reject a trade, nor did a Bank ever reject or reverse a trade.[12]

In substance, the Basket Contracts and the Investment Management Agreements replicated a typical brokerage arrangement. That is, the Hedge Funds, through their general partner, Renaissance, directed the buying and selling of stocks for the accounts at the Banks, and the Hedge Funds profited from the trading.

But the Hedge Funds also achieved a substantial non-tax and tax advantage. As a non-tax matter, the Hedge Funds could borrow more than a regular brokerage customer, who often is subject to regulatory limitations.[13] As a result, the Hedge Funds increased their leverage and limited recourse to the Hedge Fund's other assets. Under the Basket Contracts, the Hedge Funds averaged a leverage ratio of 12 or 13. For a typical brokerage customer account subject to Federal Reserve regulation, the maximum leverage ratio is 2.

For tax purposes, the Hedge Funds reported the profits from their rapid trading as long-term gain (from terminating a derivative they held for more than a year), rather than short-term gain from the sale of stocks held for a shorter period. At the time of most of these transactions, gain realized on the sale or disposition of capital assets held for more than a year was taxed at a top individual rate of 15%, compared to a regular top rate of 35% (now 20% and 39.6%[14]).

III. Basic Tax Issues for the Basket Contracts

In general, stock, derivatives, and other investments are capital assets. And, as noted above, gain from the sale of a capital asset that is held for more than a year is taxed at reduced rates.[15]

The Hedge Funds pursued a short-term trading strategy. Normally, their gains would be short-term. But the Hedge Funds wrapped the Basket Contracts around their investment strategies and claimed long-term gain upon exercise (after more than a year).

The Hedge Funds must overcome two hurdles to treat their gains from the Basket Contracts as long-term: first, the Basket Contracts must represent derivatives and not, in substance, the ownership of the basket of stocks in the designated accounts (which are bought and sold throughout the year). Second, if the Basket Contracts represent derivatives, and not the

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[12] The Banks compiled a list of stocks which the Hedge Funds could not purchase because the Banks could not hold the stocks for regulatory reasons. From time to time, the Banks might add another stock to the list—which, in theory, could cause the sale of that stock.

[13] For example, the Federal Reserve, with Reg. T, requires an investor to post an initial margin of 50% and to maintain a margin of 25% thereafter.

[14] There is also now a 3.8% tax on net investment income, whether short-term or long-term, for higher-income taxpayers. Code sec. 1411.

[15] A derivative also is subject to sec. 1234A, which provides that "[g]ain or loss attributable to the ... termination of a right or obligation ... with respect to property which is (or on acquisition would be) a capital asset ... shall be treated as gain or loss from the sale of a capital asset." An investor's gains from the termination of a derivative with respect to stock are capital.

stock in the designated accounts, the Basket Contracts must not be fundamentally changed during the year (which would require gains to be recognized early).

For tax purposes, I believe Hedge Funds would lose both challenges—not win both. That is, I believe the Basket Contracts represent ownership of the basket of stocks in the designated account. And, were the Basket Contracts derivatives (and not ownership of the stocks), the Basket Contracts were fundamentally changed during the year.

A. Do the Basket Contracts Represent Derivatives—or the Ownership of the Stocks in the Referenced Accounts?

A derivative is a financial contract that derives its value by reference to other assets or indices—in the case of the Basket Contracts, the baskets of stock and other positions in the designated accounts at the banks. And derivatives vary: they include forward contracts, futures, options, notional principal contracts, and many other arrangements.

Businesses and investors use derivatives to manage price or interest-rate risk. For example, an airline might enter a forward contract to lock-in the price of jet fuel for the future—the forward would fix a price for a specified grade of jet fuel to be delivered later. Or an investor could buy a put option to hedge against a fall in the price of her stock—the put would entitle the investor to sell her stock at a pre-set price (which might, ultimately, be higher than the market price of the stock at the exercise date).

In recent years, as technology advanced, the use of derivatives expanded. Now investors and others use derivatives for a wide range of purposes, sometimes to replicate returns that are economically similar to holding an asset or a portfolio of assets.

The Hedge Funds reported their gains on the Basket Contracts as gains from derivatives—not accumulated gains from the ownership of an ever-changing basket of stocks in the designated accounts. But the tax law characterizes an arrangement based on its substance, not its form. So, does the Basket Contract represent a derivative that references the value of a basket of stocks—or the actual ownership of the basket of stocks, with the accumulated gains? I believe the ownership of the basket of stocks, for three reasons.

To start, the label of a contract does not matter, as the IRS explained in holding that a purchaser of a deep-in-the-money "option" effectively owned the referenced stock.[16] That was because the "option" was so likely to be exercised the taxpayer effectively assumed the benefits and burdens of owning the stock. The IRS added its ruling was "based on the application of the doctrine of 'substance over form,' [and] it will be applied whenever the substance of the transaction is the purchase of stock, not an option."

[16] Rev. Rul. 82-150, 1982-2 C.B. 110, 111. In my view, the Basket Contracts are not options for tax purposes, as the Hedge Funds would almost certainly exercise these "options." For tax purposes, there must be a "substantial likelihood" that a taxpayer will not exercise a contract for the taxpayer to treat the contract as an option, regardless of the label of the contract. See Rev. Rul. 85-87, 1985-1 C.B. 268. Although a Basket Contract is not an option, it might, in theory, be another form of derivative (for example, a cash-settled forward contract). The tax rules are similar.

Second, to identify the true owner of stock, we must look through "wrappers." For example, a court looked through a "wrap-around annuity" to find that a taxpayer who directed the investment of funds for an account at an insurance company beneficially owned the investments, not the insurance company.[17]

Third, to identify the true owner of stocks, we must examine the benefits and burdens of the ownership of the stocks. With the basket of stocks referenced by the Basket Contracts, the Hedge Funds received all of the opportunities of gain from trading the stocks and incurred the burden of losses--until the Bank stopped the trading. The Hedge Funds also earned the interest, dividends, and other income from the stocks, bonds, and cash in the account—and paid the financing, commissions, and other expenses from the trading. Finally, and unusually, the Hedge Funds, through Renaissance, selected the stocks to buy and sell for the designated accounts, when to buy and sell them, and how to buy and sell them (that is, the size of the lots to trade and the routing of the orders). As a result, the Basket Contracts, combined with the Investment Management Agreements, simply rewarded the Hedge Funds for their own trading efforts; the Hedge Funds did not derive their return from the performance of specified assets or indices, which is the hallmark of a derivative.

The Hedge Funds might assert their arrangement transferred some indicia of ownership of the stocks to the Banks but, these indicia were, in my view, economically trivial. The Hedge Funds apparently allowed the Banks to vote the stock in the accounts—but the right to vote publicly-traded stock, held for a short period, generally is worth very little. And the Hedge Funds permitted the Banks to loan the stock in the accounts, but customers with brokerage accounts also typically permit their brokers to loan their stock—and these customers own the stocks, or the right to the return of the stocks, in the account.

The Hedge Funds might also argue the economic substance of their investment arrangement differed from a regular brokerage account since the arrangement allowed the Hedge Funds to leverage their investments more than a regular brokerage account would permit. But the extra leverage, by itself, does not answer whether the arrangement is a derivative or ownership. In my view, the arrangement simply was a favorable way, from a leverage standpoint, to own stock.

B. If the Basket Contracts Represent Derivatives, were the Basket Contracts Fundamentally Changed before Settlement?

The timing of gains is important under our tax system. Taxpayers must recognize income when they have "undeniable accessions to wealth, clearly realized, and over which the taxpayers have complete dominion."[18] Gain may arise either as "cash derived from the sale of an asset" or

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[17] *See* Christoffersen v. U.S. 749 F.2d 513 (8^{th} Cir. 1985) ("We cannot too often reiterate that 'taxation is not so much concerned with the refinements of title as it is with actual command over the property taxed—the actual benefit for which the tax is paid." *quoting* Griffiths v. Comm., 308 U.S. 355, 357-58 (1939)).
[18] Commissioner v. Glenshaw Glass Co. 348 U.S. 426 (1955).

as "a result of exchange of property."[19] Thus, taxpayers must realize gain "from the exchange of property for other property differing materially either in kind or in extent.[20]

In the leading authority on the modification of a non-debt contract, the IRS explained:

> "A change in contractual terms effected through an option provided in the original contract is treated as an exchange under section 1001 if there is a sufficiently fundamental or material change that the substance of the original contract is altered through the exercise of the option. Under such circumstances, the old contract is treated as if it were actually exchanged for a new one."[21]

Thus, the IRS ruled that an employer that exercised an option to change the insured under a key person insurance policy must realize gain on the contract because the change in the insured changed the "fundamental substance" of the contract ("[T]he essence of a life insurance contract is the life that is insured under the contract"). The IRS added that "the result would be the same if the employer insured a person holding a particular position and, thus, no formal substitution is made when a new person occupies that position."

Likewise, the Hedge Funds modified their options every time Renaissance, their agent, changed the Basket Contract by changing the stock in the designated account. Renaissance's modifications became material during the term of the contract—most likely daily but, at least, every three months, after the turnover of almost 90% of the basket. And the modifications were fundamental to the Basket Contract. The reference assets or indices are the essence of the arrangement (and, more generally, of a derivative contract).

The Hedge Funds might counter their investment shifts occurred automatically, pursuant to a trading algorithm. But the Hedge Funds' agent, Renaissance, controlled these shifts—not an algorithm operating unchecked. Importantly, Renaissance's highly-trained employees constantly worked on and modified the algorithm—always exploring and adding new price signals, which set the trading parameters.

Finally, each time the Hedge Fund's agent, Renaissance, sold an investment at a gain, the Hedge Funds locked-in more trading profits. And the Hedge Funds could cash out their accrued profits any time they chose to do so. As a result, the Hedge Funds acceded to wealth, clearly realized, over which they had complete dominion. The Hedge Funds should recognize their gains currently, not await the settlement of a Basket Contract.

IV. A Uniform Tax Treatment for Derivatives: Mark-to-Market

Congress established a capital gain preference to relieve the lock-in effect of holding property that accreted in value over time. Congress did not lower the rate for gains from short-

[19] Helvering v. Bruun, 309 U.S. 461 (1940).
[20] Treas. Reg. sec. 1.1001-1(a).
[21] Rev. Rul. 90-109, 1990-2 C.B. 191. In 1996, the IRS "did not alter the 'fundamental change doctrine articulated in Revenue Ruling 90-109" for non-debt instruments when it adopted regulations for modifications of debt instruments. T.D. 8675, 1996-2 C.B. 61.

term trading—or countenance wrapping a derivative around short-term strategies. So, as a matter of tax law and policy, the IRS should not allow taxpayers to transform their short-term profits into long-term gains through the alchemy of derivatives.

I believe the IRS can, under current law, challenge successfully the most extreme strategies with derivatives or purported derivatives (such as the ones in front of this Subcommittee). But the IRS has limited resources to challenge the wide variety of derivative-related strategies, which often are complicated and abstruse. So, in my view, Congress should address the taxation of derivatives comprehensively—and reflect the income from derivatives more clearly.

To do so, I believe tax accounting ought to follow financial accounting for derivatives, which requires companies to mark-to-market their derivatives at year-end (i.e., to measure the value of their derivatives at market at year-end).[22] The current taxation of derivatives is complicated and inconsistent. There are different rules for different derivatives, for different uses of the same derivative, and for different taxpayers. As a result, two derivatives that are economically the same may be taxed quite differently. For many years, investors have exploited these tax differences to manipulate the character, timing, or source of their income to reduce their tax liability.

To account for derivatives for financial reporting, companies struggled for a long time for a variety of reasons: (i) the effect of derivatives was not transparent in basic financial statements; (ii) the accounting guidance for derivative instruments and hedging activities was incomplete; (iii) the accounting guidance for derivative instruments and hedging activities was inconsistent and (iv) the accounting guidance for derivatives and hedging was difficult to apply. In 1998, to address these problems, the Financial Accounting Standards Board (the board) issued Statement of Financial Accounting Standards No. 133, *Accounting for Derivative Instruments and Hedging Activities*.[23] These rules required companies to measure all assets and liabilities on their balance sheet at "fair value," which is very similar to "fair market value" for tax. When first issued, these rules were widely considered the most complex accounting standards ever promulgated by the board. Now, more than 16 years later, these rules have been widely-implemented, are familiar to the accounting community and are working well.

Last year, Chairman Camp of the House Ways & Means Committee released a discussion draft to reform the tax of derivatives by marking them to market at year end. Earlier this year, the Chairman revised his tax reform proposals—and, again, proposed a mark-to-market to tax derivatives. I believe this step is overdue. It would greatly reduce the amount of time and energy that taxpayers and the IRS devote to the taxation of derivatives, an enterprise that has been demanding increasing effort in recent years.

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[22] I first compared the tax and financial accounting for derivatives in Rosenthal and Price, *Tax and Accounting for Derivatives: Time for Reconciliation*, Tax Notes 895 (1999).

[23] The board codified FAS 133 at Accounting Standards Codification ("ASC") 815.

United States Government Accountability Office

GAO

Testimony
Before the Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affair, U.S. Senate

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LARGE PARTNERSHIPS

Growing Population and Complexity Hinder Effective IRS Audits

Statement of James R. White,
Director, Strategic Issues

GAO Highlights

Highlights of GAO-14-746T, a testimony before the Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, U.S. Senate.

Why GAO Did This Study

Businesses organized as partnerships have increased in number in recent years while the number of C corporations (i.e. those subject to the corporate income tax) has decreased. The partnership population includes large partnerships (those GAO defined as having $100 million or more in assets and 100 or more direct and indirect partners). Their structure varies. Some large partnerships have direct partners that are partnerships and may bring many of their own partners into the structure. By tiering partnerships in this manner, very complex structures can be created with hundreds of thousands of direct and indirect partners. Tiered large partnerships are challenging for the Internal Revenue Service (IRS) to audit because of the difficulty of tracing income from its source through the tiers to the ultimate partners.

GAO was asked to study the challenges large partnerships pose for IRS. GAO describes the number of large partnerships and their assets, IRS's large partnership audit results and the challenges IRS faces in auditing these entities, and options for addressing these challenges. GAO analyzed IRS data on partnerships, reviewed IRS documentation, interviewed IRS officials, met with IRS auditors in six focus groups, and interviewed private sector lawyers knowledgeable about partnerships.

What GAO Recommends

GAO makes no recommendations but will issue a report later in 2014 assessing IRS's large partnership audit challenges. IRS provided technical comments, which were incorporated.

View GAO-14-746T. For more information, contact James R White at (202) 512-9110 or whitej@gao.gov.

July 22, 2014

LARGE PARTNERSHIPS

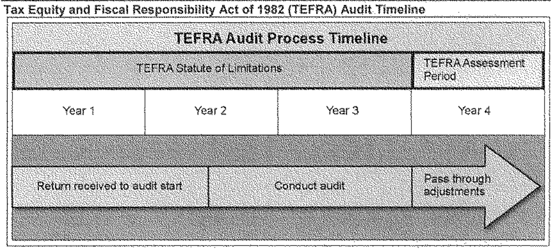
Growing Population and Complexity Hinder Effective IRS Audits

What GAO Found

Internal Revenue Service (IRS) data show, from tax years 2002 to 2011, the number of large partnerships more than tripled. According to IRS officials, many large partnerships are hedge funds or other investment funds where the investors are legally considered partners. Many others are large because they are tiered and include investment funds as indirect partners somewhere in a tiered structure. According to IRS data, there were more than 10,000 large partnerships in 2011. A majority had more than 1,000 direct and indirect partners although hundreds had more than 100,000. A majority also had six or more tiers.

IRS audits few large partnerships—0.8 percent in fiscal year 2012 compared to 27.1 percent for large corporations. Of the audits that were done, about two-thirds resulted in no change to the partnership's reported net income. The remaining one-third resulted in an average audit adjustment to net income of $1.9 million. These minimal audit results may be due to challenges hindering IRS's ability to effectively audit large partnerships. Challenges included administrative tasks required by the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) and the complexity of large partnership structures due to tiering and the large number of partners. For example, IRS auditors said that it can sometimes take months to identify the person who represents the partnership in the audit, as required by TEFRA, reducing the time available to conduct the audit. Complex large partnerships also make it difficult to pass through audit adjustments across tiers to the taxable partners.

Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) Audit Timeline



Source: GAO analysis of IRS data and documentation. | GAO-14-746T

Note: A 3-year statute of limitations governs the time IRS has to complete partnership audits, according to the audit procedures enacted in TEFRA. The first stage is the period from when a return is received until IRS begins the audit. The second stage is the period in which IRS conducts the audit. The third stage is when IRS assesses the partners their portion of the audit adjustment.

IRS cannot resolve some of the challenges because they are rooted in tax law, such as those required by TEFRA. Congress and the Administration have proposed statutory changes to the audit procedures for partnerships, such as requiring partnerships to pay taxes on net audit adjustments rather than passing them through to the taxable partners. In addition, IRS has implemented some changes to its large partnership audit process, such as understanding the complexity of large partnerships and selecting returns for audits.

The Honorable Carl Levin
Chairman
The Honorable John McCain
Ranking Member
Permanent Subcommittee on Investigations
Committee on Homeland Security and Governmental Affairs
United States Senate

Chairman Levin, Ranking Member McCain, and Members of the Subcommittee:

I am pleased to be here today to discuss the growing number and complexity of large business partnerships—those with 100 or more direct and indirect partners and $100 million or more in assets.[1] I will also discuss the Internal Revenue Service's (IRS) large partnership audit results as well as the challenges IRS faces in auditing these entities, and options for addressing these challenges.

Partnerships are pass-through entities that generally do not pay taxes themselves on income (unlike C corporations which pay corporate income tax), but instead, pass income or losses through to their partners, who must include that income or loss on their income tax returns. Large partnerships can have very complex structures. Since partnerships may be partners in other partnerships, their structures may include tiers or levels of partnerships. Some have dozens of tiers with hundreds of thousands of direct and indirect partners (partners in a lower-tier partnership are indirect partners in higher tiers). Businesses may have legitimate reasons to set up such tiered networks, such as isolating one part of a business from liabilities or losses of another part. However, partnership networks can also be used to evade taxes. IRS faces the daunting task of verifying that income is properly reported for tax purposes as it passes through the tiers and is ultimately distributed to the direct or indirect partners responsible for making tax payments.

[1]Direct partners are partners that have a direct interest in the large partnership during the tax year. Direct partners may include taxable (such as a corporation or individual) and nontaxable partners (such as a partnership) that also have direct partners. Indirect partners are partners that have an interest in a partnership through interest in another partnership or other form of pass-through entity.

My testimony today builds on a body of work on large partnerships, including an interim report we issued in March 2014 as well as a recently issued report on all partnerships.[2] We are doing broader, ongoing work on large partnerships and plan to issue a report in fall 2014 but will discuss some preliminary findings today. The fall report will provide a more in-depth analysis of IRS data on large partnerships, IRS's audit challenges, and the potential steps to mitigate them.

There is no statutory, IRS, or industry-accepted definition of a large partnership. Throughout this statement, we define a large partnership as having 100 or more direct and indirect partners and $100 million or more in assets. This definition is consistent with how IRS identifies certain partnerships based on the number of partners and asset size.[3]

A partnership has become the tax entity of choice for many businesses in recent years. IRS's strategic plan for 2014-2017 notes that businesses with U.S. tax obligations are increasingly adopting more complex structures, shifting away from C corporations and moving towards pass-through entities, such as partnerships. Between tax years 2002 and 2010, the number of businesses organized as a partnership rose 45 percent from about 2.2 million to 3.2 million. In contrast, the number of C

[2]GAO, *Large Partnerships: Characteristics of Population and IRS Audits,* GAO-14-379R (Washington, D.C.: Mar. 19, 2014) and GAO, *Partnerships and S Corporations: IRS Needs to Improve Information to Address Tax Noncompliance,* GAO-14-453 (Washington, D.C.: May 14, 2014).

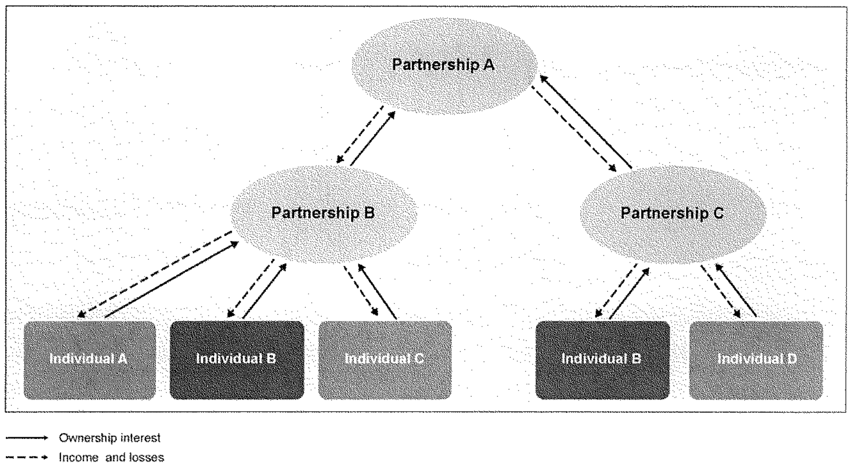
[3]For our March 2014 report, we defined a large partnership as having 100 or more direct partners and $100 million or more in assets based on IRS data available on direct partners in the Business Return Transaction File. For this testimony and our ongoing work, we expanded the partner threshold to 100 or more direct and indirect partners and $100 million or more in assets after identifying an IRS data source that captures the number of indirect partners, the Enhanced Large Partnership Indicator file. This is consistent with how IRS defines large partnerships for an ongoing improvement effort. We used the "$100 million or more in assets" threshold because it is consistent with how IRS's annual study of partnership tax returns being filed segregates partnerships by asset size. See IRS Statistics of Income, *Partnership Returns, 2011* (Washington, D.C.: Fall 2013).

corporations decreased about 14 percent from 1.9 million to 1.6 million over the same time period.[4]

Because of tiering, measuring the number of unique partners, the assets, and the income of a large partnership is complicated. For example, in figure 1, partnership B has three direct individual partners, and partnership C has two. Partnerships B and C are direct partners in partnership A, which also gives A five indirect partners of which four are unique. Adding up the income (or assets) of partnerships A, B, and C would result in double counting of income among the partnerships because income from partnership A is divided between partnerships B and C as it passes through to these unique partners.

[4]Internal Revenue Service, "Partnership Returns: Selected Balance Sheet and Income Statement Items, Tax Years 1999-2011, Historical Table 11," *Statistics of Income (SOI) Bulletin*, accessed June 3, 2014, http://www.irs.gov/uac/SOI-Tax-Stats-Historical-Table-11 and Internal Revenue Service, "Returns of Active Corporations, Form 1120 and 1120S, Tax Years 2002-2010," *Corporation Complete Book,* accessed April 4, 2014, http://www.irs.gov/uac/SOI-Tax-Stats-Corporation-Complete-Report. All estimates derived from samples have 95 percent confidence intervals that are within +/- 10 percentage points of the estimate itself, unless otherwise specified. Calculating percentage changes of numbers presented above may not equal those we present due to rounding.

Figure 1: Example of Partnership Structure with Tiers, and Direct and Indirect Partners



Source: IRS documentation. | GAO-14-746T

If a separate large partnership, call it D, with 1,000 partners, were to buy partnership C's ownership interest in A, then partnership A would itself become a large partnership. It would then have two direct partners and 1,003 indirect partners.

We analyzed data on the number and characteristics of large partnerships and what IRS knows about the cost and results of audits of large partnership returns.[5] We reviewed IRS documentation and our recent reports on partnerships. Finally, we interviewed a number of IRS officials, held six focus groups with IRS auditors that had worked on audits of large partnerships, and interviewed private sector lawyers knowledgeable about partnerships. The results of the analyses of focus group data are not generalizable to all IRS audits and do not necessarily represent the official viewpoint of IRS. Instead the results were used to identify themes in conjunction with the other forms of data we analyzed. To determine data reliability, we reviewed relevant documentation, interviewed knowledgeable IRS officials, and electronically tested the data to identify obvious errors or outliers. We determined that the data were sufficiently reliable for the purposes of this report. Our prior reports include a detailed description of our scope and methodology.

Our prior reports and ongoing work was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

[5]Data cover partnerships that filed Form 1065, U.S. Return of Partnership Income and had 100 or more direct and indirect partners and $100 million or more in assets. Our data on the number and characteristics of partnerships are from the Enhanced Large Partnership Indicator (ELPI) file and Business Return Transaction File while audit data are from the Audit Information Management System. Data in the ELPI file may be incomplete because the file is based on data from Schedule K-1s, which partnerships use to report their partners' share of the partnership's income, deductions, and other items to the partners. In general, the amounts of tiering shown represent minimums and entity counts are approximate. See GAO-14-453.

Large Partnerships Have Grown in Number, Size, and Complexity Since 2002 with Hundreds Now Having More Than 100,000 Partners

According to IRS data, between tax years 2002 to 2011, the number of large partnerships more than tripled from 2,832 to 10,099. Over the same time, total assets of large partnerships more than tripled to $7.49 trillion. However, these numbers suffer from the double-counting complexities illustrated in figure 1. For comparison, our interim report on large partnerships, which defined large partnerships as those with 100 or more direct partners and $100 million or more in assets, found that over the same time period the number of large partnerships more than tripled, from 720 in tax year 2002 to 2,226 in tax year 2011. Similarly, total assets tripled to $2.3 trillion in tax year 2011.[6]

Without an accepted definition of a large partnership, there is not necessarily a right or wrong answer of whether direct and indirect partners should be included. Direct partners do not capture the entire size and complexity of large partnership structures. Accounting for indirect partners does, but it also raises the issue of double counting discussed above. Given the size and complexity of large partnerships, IRS does not know the extent of double counting among this population.

Large partnerships, especially those in higher asset brackets, are primarily involved in the finance and insurance sector.[7] For example, in 2011, 73 percent of large partnerships reported being involved in the finance and insurance sector and the majority of large partnerships that reported $1 billion or more in assets were in this sector. IRS data also showed that almost 50 percent of large partnerships with 100,000 or more direct and indirect partners reported being in the finance and insurance sector.

According to IRS officials and data, many of these entities are investment funds, such as hedge funds and private equity funds, which are pools of assets shared by investors that are counted legally as partners of the

[6]This included a small number of large partnerships that filed a form 1065-B, U.S. Return of Income for Electing Large Partnerships. See GAO-14-379R.

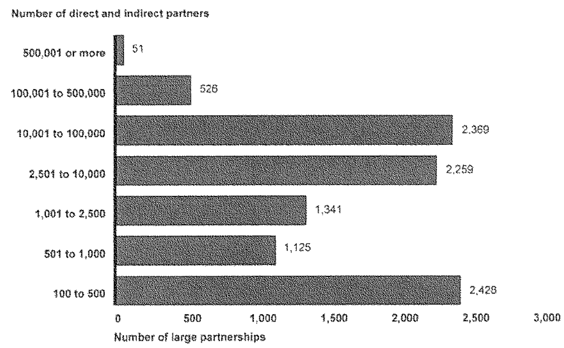
[7]Industry classifications are based on the North American Industry Classification System (NAICS). NAICS codes are self reported by businesses and judgment may be needed to determine the most appropriate NAICS code.

large partnership.[8] Being investment vehicles, these funds tend to invest in other partnerships, as well as other types of business entities. One IRS official said that these investments can affect the partner size of other partnerships based on where they choose to invest (e.g., buying an interest in other partnerships). For example, if an investment fund with a million partners chose to invest in multiple small operating partnerships, such as oil and gas companies organized as partnerships, all of those partnerships would count as having more than a million partners as well. One IRS official said the partnerships with more than a million partners increased from 17 in tax year 2011 to 1,809 in tax year 2012. The official attributed most of the increase to a small number of investments funds that expanded their interests in other partnerships. If in the future those investment funds choose to divest their interests in other partnerships, the number of large partnerships would decrease significantly. Although the reasons for the changes are not clear, from tax years 2008 to 2010, the number of large partnerships with 500,000 or more direct and indirect partners changed from 70 in 2008 to 1,088 in 2009, and decreased to 70 in 2010.

IRS data on large partnerships also show their complexity, as measured by the number of partners and extent of tiering, or levels, below the large partnership. Almost two-thirds of large partnerships in 2011 had more than 1,000 direct and indirect partners, although hundreds of large partnerships had more than 100,000. See figure 2 for more detail.

[8]Hedge funds and private equity funds are generally available only to institutions and individuals able to make investments in excess of $200,000. Aside from the fund managers, who guide the investment strategy and are general partners, the funds partners would be comprised of individual and institutional investors who contribute capital but have no say in investment or management decisions and are the limited partners. See CRS, *Taxation of Hedge Fund and Private Equity Managers*, RS22689 (Washington, D.C.: Mar. 7, 2014). We also issued a report that discussed the use of financial derivatives by these types of entities and the tax implications involved. See GAO, *Financial Derivatives: Disparate Tax Treatment and Information Gaps Create Uncertainty and Potential Abuse*, GAO-11-750 (Washington, D.C.: Sept. 10, 2012).

Figure 2: Number of Large Partnerships by Number of Direct and Indirect Partners, Tax Year 2011



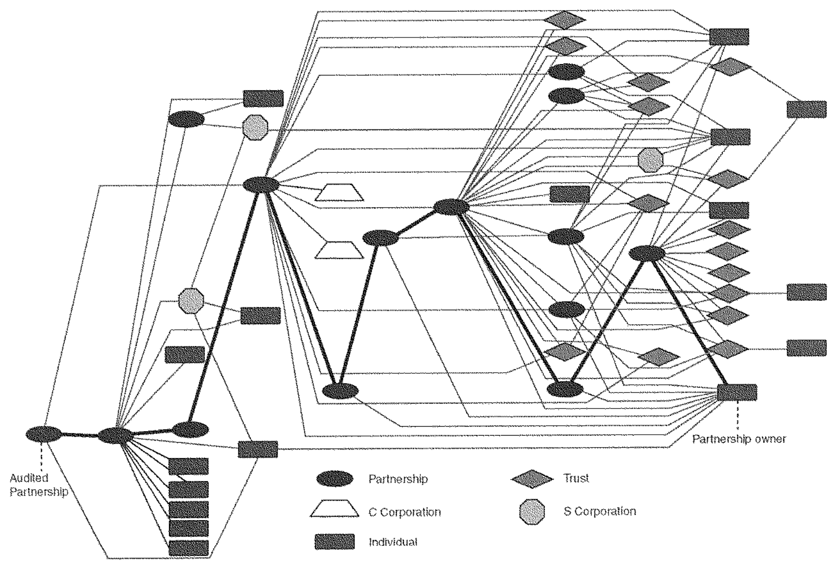
Source: GAO analysis of Enhanced Large Partnership Indicator (ELPI) file and Business Return Transaction File, Compliance Data Warehouse. | GAO-14-746T

Note: For our data set from the ELPI file, IRS traced indirect partners through the first 10 tiers. After that, it stopped if the ownership percentage in the large partnership dropped below 0.00001 percent. To the extent this ownership percentage was changed, the size and number of large partnerships may change.

In 2011, about two-thirds of large partnerships had at least 100 or more pass-through entities in the partnership structure. Because almost all large partnerships tend to be part of multitiered networks, their partners could be spread across various tiers below those partners that have a direct interest in the partnership. For example, in 2011, 78 percent of the large partnerships had six or more tiers.

Determining the relationships and how income and losses are allocated within a large partnership structure through multiple pass-through entities and tiers is complicated. For example, in figure 3, the allocation from the audited partnership on the far left side of the figure crosses eight pass-through entities along the bold path before it reaches one of its ultimate owners on the right. This path also may not be the only path from the audited partnership to the ultimate owner.

Figure 3: Example of Partnership Structure



Source: GAO analysis of IRS documentation. | GAO-14-746T

Note: Figure 3, adapted from IRS documentation, is an illustration of a hypothetical, complex partnership structure, which shows the relationship between various types of entities. In IRS's example, the allocation of income and losses from the audited partnership on the far left side of the figure crosses eight pass-through entities, all of which are partnerships themselves, along the bold line before it reaches one of its ultimate partnership owners on the right side.

While figure 3 appears complex, it has only 50 partners and 10 tiers. Large partnership structures could be much more complex. In 2011, as noted above, 17 had more than a million partners. According to one IRS official, there are several large partnerships with more than 50 tiers.

IRS Audits Few Large Partnerships Due to Challenges Presented by the Complexity of Both the Audit Procedures and the Large Partnership Structures

IRS Audits Large Partnerships at a Much Lower Rate than Large Corporations and the Audits Produce Minimal Results for Audit Time Spent

IRS audits few large, complex partnerships. According to IRS data, in fiscal year 2012, IRS closed 84 field audits of the 10,143 large partnership returns filed in calendar year 2011—or a 0.8 percent audit rate.[9] This is the same audit rate we found for fiscal year 2012 in our interim report, which defined large partnerships as having 100 or more direct partners and $100 million or more in assets.[10] The audit rate for large partnerships remains well below that of C corporations with $100 million or more in assets, which was 27.1 percent in fiscal year 2012. See table 1.

Table 1 also shows that most large partnership field audits closed from fiscal years 2007 through 2013 did not find tax noncompliance. In 2013, for example, 64.2 percent of the large partnership audits resulted in no change to the reported income or losses. In comparison, IRS audits of C

[9]IRS defines the audit rate as the number of returns audited in a fiscal year divided by the number of returns filed in the previous calendar year. In fiscal year 2013, IRS completed 95 field audits but we did not have 2012 calendar year filings at the time of our analysis to compute the audit rate. The audit rate does not include an activity known as Campus audits because they are not audits of the books and records of large partnerships. Instead, Campus audits are an administrative process in which the related partners' returns are linked, or connected, to the large partnership return being audited in the field. This linking facilitates passing through any audit adjustments as a result of the field audit to the taxable partners. Even though these steps generally do not include any audit work, IRS counts the pass-through activity as an audit of each affected partner return. For information on Campus audits, see GAO-14-379R.

[10]See GAO-14-379R.

corporations with $100 million or more in assets had much lower no change rates. For example, audits of large corporations had a no change rate of 21.4 percent in 2013.

Table 1: Audit Rate and No Change Rate for Large Partnerships and Large Corporations, Fiscal Years 2007 to 2013

	Fiscal Year						
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Large Partnerships							
Audit Rate	0.5%	0.6	0.6	1.4	0.7	0.8	N/A
No Change Rate	85.3	77.8	82.6	51.6	77.0	66.7	64.2
Large Corporations							
Audit Rate	20.6	21.4	20.8	20.6	23.1	27.1	27.4
No Change Rate	16.2	22.1	18.6	18.7	20.4	27.2	21.4

Source: GAO analysis of IRS data book and Audit Information Management System (AIMS), Compliance Data Warehouse (CDW). I GAO-14-746T

Note: For any large partnership, the number of audited returns closed in a given fiscal year may include returns from multiple tax years. Calendar year 2012 partnership filings were not available in the ELPI file when we did our analysis to compute the audit rate for fiscal year 2013. For partnerships, the no change rate means that the audits made no changes to the partnership's reported income, loss, deductions, or credits reflected on the tax return or Schedule(s) K-1 for partners. The no change rate for corporations means that the audits made no changes in the tax liability reported on the corporate tax return (e.g., tax, penalties, or refundable credits).

When the field audits of large partnership returns did result in changes, the changes to net income that the audits recommended were minimal in comparison to audits of large corporations, as shown in table 2.[11] This could be because positive changes on some audits were cancelled out by negative changes on other audits. In 3 of the 7 years, the total adjustments from the field audits were negative. That is, they favored the large partnerships being audited. This did not occur for audits of large corporations. See table 2.

[11] For pass-through entities, such as partnerships, which are nontaxable entities, audit adjustments are recommended changes to the entities' reported net income, after accounting for losses, deductions, or credits reflected on the return or Schedule(s) K-1. For taxable entities, such as corporations, audit adjustments are additional recommended tax liability in the form of taxes, penalties, or changes to refundable credits. Our recent work highlighted that partnerships' recommended audit adjustments may be double counted if they are passed through multiple tiers. See GAO-14-453.

Table 2: Total and Average Recommended Audit Adjustments to Net Income for Large Partnership and to Additional Taxes for Large Corporate Field Audits Closed by IRS, Fiscal Years 2007 to 2013 (in millions of dollars)

	Fiscal Year						
	2007	2008	2009	2010	2011	2012	2013
Large Partnerships							
Total	$ (99.2)	(46.4)	22.5	75.7	569.5	160.4	(370.4)
Average	(2.9)	(1.0)	0.5	0.6	9.3	1.9	(3.9)
Large Corporations							
Total	21,967	22,595	26,864	22,824	22,984	15,952	14,895
Average	5.2	5.0	5.6	5.1	4.7	2.8	2.4

Source: GAO analysis of IRS data book and AIMS, CDW. I GAO-14-746T

In terms of audit costs, the number of days and hours spent on the audits of large partnerships in fiscal year 2013 has increased since fiscal year 2007, but varied from year to year in the interim, as shown in table 3.[12] In contrast, the audit days and hours spent on audits of large corporation are decreasing while obtaining audit results that are noticeably better than those of large partnership audits.

Table 3: Audit Time Measures for Field Audits of Large Partnerships and Large Corporations, Fiscal Years 2007 to 2013

	Fiscal Year						
	2007	2008	2009	2010	2011	2012	2013
Large Partnerships							
Average field hours charged	139	383	164	104	255	255	409
Average days from field audit open to audit closure	467	382	381	307	341	513	555
Large Corporations							
Average field hours charged	791	724	694	694	580	521	496
Average days from field audit open to audit closure	709	658	601	585	556	536	598

Source: GAO analysis of IRS data from AIMS, CDW. I GAO-14-746T

Note: These audit time measures do not cover all of the costs of large partnership audits, such as the time IRS spends passing through audit adjustments at the Campus.

[12]The time spent on large partnership field audits includes time spent examining the books and records of the large partnership return as well as time spent following the Tax Equity and Fiscal Responsibility Act of 1982 audit procedures.

IRS does not track its audit results for large partnerships and therefore does not know what is causing the results in tables 1, 2, and 3.[13] Consequently, it is not clear whether the results are due to IRS selecting large partnerships that were tax compliant versus IRS not being able to find noncompliance that did exist.

Several Challenges Related to Complexity Hinder IRS's Audits of Large Partnerships

The high no change rates and minimal adjustment amounts for IRS audits of large partnerships may be due to a number of challenges that can cause IRS to spend audit time on administrative tasks, or waiting on action by a large partnership or IRS stakeholder rather than doing actual audit work. Under the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA),[14] the period for auditing partnerships does not expire before 3 years after the original due date of the return or date of return filing, whichever is later.[15] IRS on average takes approximately 18 months after a large partnership return is received until the audit is started, leaving on average another 18 months to conduct an audit, as illustrated in figure 4.[16]

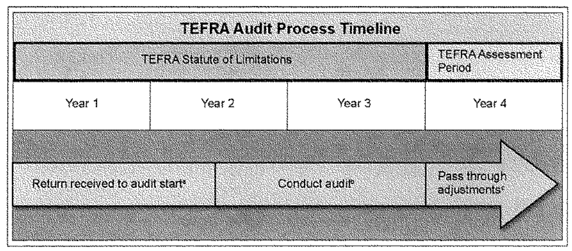
[13]According to IRS officials, IRS also does not know the reasons for variations in audit results for other types of tax entities.

[14]Pub. L. No. 97-248 , §§ 401–407, 96 Stat. 324, 648–671 (1982). TEFRA established unified audit procedures for covered partnerships and, as amended, are found generally at Internal Revenue Code sections 6221 through 6234. A partnership would fall under the TEFRA audit procedures if at any time during the year it had (1) more than 10 partners or (2) certain types of partners (e.g., another partnership, a Limited Liability Company (LLC) which files as a partnership or is treated as a single member LLC disregarded for federal tax purposes, any type of trust, a nominee, a nonresident alien individual, and a S corporation).

[15]26 U.S.C. § 6229(a). Assessments of taxpayers are generally subject to a 3-year statute of limitations. 26 U.S.C. § 6501(a). This provision of TEFRA can extend, but never shorten the statute of limitations. According to IRS officials, it does audit partnerships covered by TEFRA beyond the 3-year timeframe established in section 6229 in cases where the statute of limitations under section 6105 has yet to expire for one or more partners.

[16]Although partnerships do not pay taxes directly, they do file a Form 1065, U.S. Return of Partnership Income, and this is what IRS would audit.

Figure 4: Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) Audit Timeline



Source: GAO analysis of IRS data and documentation. | GAO-14-746T

Notes: A 3-year statute of limitations governs the time IRS has to complete partnership audits, according to the audit procedures enacted in TEFRA.

[a]In fiscal year 2013, the stage in which the large partnership return is received by IRS until it starts the large partnership audit took IRS on average 1.4 years.

[b]In fiscal year 2013, the stage in which IRS conducts a large partnership audit took IRS on average 1.5 years.

[c]The period in which partners of the large partnership are assessed their portion of the audit adjustment is generally completed by IRS within 1 year.

Once a large partnership audit has been initiated, it falls under the TEFRA audit procedures. Congress enacted the TEFRA audit procedures in response to concerns about IRS's ability to audit partnership returns. According to the congressional Joint Committee on Taxation (JCT), the complexity and fragmentation of partnership audits prior to TEFRA, especially for large partnerships with partners in many audit jurisdictions, resulted in the statute of limitations expiring for some partners while other partners were required to pay additional taxes as a result of the audits.[17] TEFRA addressed these issues by altering the statute of limitations and requiring each partner of a partnership to report certain items like income, consistent with how the partnership reports them. However, according to IRS officials and in focus groups we held with IRS auditors, using the TEFRA procedures to audit large, complex partnership structures present a number of administrative complexities for IRS. These complexities may

[17]JCT, *General Explanation of the Revenue Provisions of the Tax Equity and Fiscal Responsibility Act of 1982*, JCS-38-82, (Washington, D.C.: December 1982).

reduce the time IRS spends on actual audit work, adversely affecting IRS audit results for large partnerships. For example, one of the primary challenges for doing large partnership audits under TEFRA that IRS focus group participants reported was identifying the Tax Matters Partner (TMP). The TMP is the partnership representative who is to work with IRS to facilitate a partnership audit. The responsibilities of the TMP include (1) supplying IRS with information about each partner, (2) keeping the partners of the partnership informed and getting their input on the audit, and (3) executing a statute of limitations extension, if needed. Without being able to identify a qualified TMP in a timely manner, IRS may experience delays during large partnership audits.

IRS focus group participants cited numerous examples of difficulties in identifying the TMP. One difficulty is that the TMP can be an entity, not a person. If an entity is designated as the TMP, IRS has to track down an actual person to act as a representative for the TMP.[18] Focus group participants said that some large partnerships do not designate a TMP or designate an entity as TMP to delay the start of the audit, which would limit the audit time remaining under the statute of limitations.

Entities will often be elusive about designating the TMP. The entities will use this tactic as a first line of defense against an audit.

Source: IRS focus group participant. | GAO-14-746T

The burden for ensuring that the TMP meets the requirements of TEFRA largely falls on IRS. Time spent identifying a qualified TMP, according to IRS focus group participants, could take weeks or months. As shown in figure 4, IRS has a window of about 1.5 years to complete large partnership audits. A reduction of a few months from the 1.5 years IRS has to complete large partnership audits means that the time IRS has for the audit would be markedly reduced.

Another challenge TEFRA poses is determining the extent to which IRS passes through audit adjustments to the taxable partners in a large partnership structure. In that large partnerships are nontaxable entities, TEFRA requires that audit adjustments be passed through to the taxable partners, unless the partnership agrees to pay the related tax at the partnership level. To pass through the audit adjustments to the taxable

[18]If an entity is designated as the TMP, the partnership has the option of designating a TMP representative on Form 1065.

partners, IRS has to first link, or connect, the partners' returns to the partnership return being audited. However, IRS officials said linking a large number of partners' returns can be a significant drain on IRS's resources. If a large partnership has hundreds or thousands of partners at multiple tiers, the additional tax owed by each partner as a result of large partnership audit may not be substantial enough to be worth passing through once those partners' returns are linked.[19] If the audit adjustment is lower than a certain level, IRS will not pass it to the taxable partners; and the time and resources spent linking the partners' returns, and preparing a plan to pass through the audit adjustment to certain taxable partners' returns, becomes effectively meaningless.

Aside from the TEFRA challenges, another challenge involves the complexities arising from large partnership structures, which hinder IRS's ability to identify tax noncompliance with complex tax laws. For example, IRS officials reported having difficulty in identifying the business purpose for the large partnerships or in determining the source of income or losses within their structures (i.e. knowing which entity in a tiered structure is generating the income or losses). Without this information, it is difficult for IRS to determine if a tax shelter exists, an abusive tax transaction is being used, and if income and losses are being properly characterized.

> I think noncompliance of large partnerships is high because a lot of what we have seen in terms of complexity and tiers of partnership structures... I don't see what the driver is to create large partnership structures other than for tax purposes to make it difficult to identify income sources and tax shelters.

Source: IRS focus group participant. | GAO-14-746T

To help IRS auditors better understand the complexity of the TEFRA audit procedures and the large partnership structures, various IRS stakeholders and specialists are to provide support during the audit. However, IRS focus group participants stated that they do not have the needed level of timely support. These include TEFRA coordinators to help with the TEFRA audit procedures, IRS counsel to help navigate the TEFRA audit procedures and provide input on substantive tax issues, and specialists who have expertise in a variety of areas. The support provided

[19]As long as adjustments exceed a tolerance on a certain amount, IRS passes through the adjustments to the taxable partners. Due to the sensitive nature of the tolerance levels, IRS does not make them public.

by IRS stakeholders is important because many IRS focus group participants said that their knowledge of partnership tax law was limited and they may only work on a partnership audit once every few years.

The challenges identified by IRS are not recent occurrences but may have grown over time as the number and size of large partnerships has grown. For example, in 1990, the Department of the Treasury (Treasury) and IRS reported that applying TEFRA to large partnership audits resulted in an inefficient use of limited IRS resources.[20] They cited a number of reasons for the inefficient use of resources, such as having to collect and review information on a large number of partners and the difficulty of passing through audit adjustments to those partners.

IRS Has Limited Ability to Fully Address Challenges

IRS by itself cannot fully address the tax law and resource challenges in auditing large partnership returns. For example, IRS cannot make the structures or laws less complex and cannot change the TEFRA audit procedures in statute. In addition, IRS has recently experienced budget reductions, constraining the resources potentially available for large partnership audits.[21]

Despite these limitations, IRS has initiated efforts that may help address the challenges auditing large partnership returns. First, IRS can sometimes use a closing agreement to resolve an audit under the TEFRA audit procedures, if both IRS and the partnership agree to its terms. This agreement allows the tax owed from the net audit adjustment at the highest marginal tax rate to be collected at the partnership level, meaning IRS does not have to pass through the audit adjustments to the taxable partners. IRS does not track the number of closing agreements but IRS officials said that IRS enters into relatively few. IRS officials are encouraging audit teams to pursue closing agreements for large partnership audits. However, closing agreements come with challenges because the partnership must be willing to agree and the IRS review process can be extensive.

[20] See Treasury and IRS, *Widely Held Partnerships: Compliance and Administration Issues – A Report to Congress*, (Washington D.C.: Mar. 30, 1990).

[21] GAO, *Internal Revenue Service: Absorbing Budget Cuts Has Resulted in Significant Staffing Declines and Uneven Performance*, GAO-14-534R (Washington, D.C.: Apr. 21, 2014).

Aside from closing agreements, the IRS efforts affect steps IRS takes at the beginning of an audit—such as understanding the complexity of large partnerships and selecting returns for audits. However, IRS has not yet determined the effectiveness of these efforts.

The Chairman of the House of Representatives Committee on Ways and Means and the Administration have also put forth proposals to address some of challenges associated with the TEFRA audit procedures.[22] While the proposals differ somewhat and apply to partnerships with different numbers of partners, both would allow IRS to collect tax at the partnership level instead of having to pass audit adjustments through to the taxable partners.

In our ongoing work on large partnerships, we are assessing options for improving the large partnership audit process and, if warranted, will offer reforms for Congress to consider and recommendations to IRS.

Chairman Levin, Ranking Member McCain, and Members of the Subcommittee, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

Agency Comments

We provided a draft of this testimony to IRS for comment. IRS provided technical comments, which were incorporated, as appropriate.

[22]The Chairman of the House of Representatives Committee on Ways and Mean's proposal would apply to partnerships with more than 100 direct partners, or if any partner is itself a partnership. See Joint Committee on Taxation (JCT), Technical Explanation of the Tax Reform Act of 2014, A Discussion Draft of the Chairman of the House Committee on Ways and Means To Reform the Internal Revenue Code Title III – Business Tax Reform, JCX-14-14, (Washington, D.C.: Feb. 26, 2014). The Administration's proposal would apply to partnerships with 1,000 or more direct and indirect partners. See Department of the Treasury, *General Explanations of the Administration's Fiscal Year 2015 Revenue Proposals*, (Washington, D.C.: Mar. 2014).

Statement of Marty Malloy
Barclays Managing Director

U.S. Senate
Permanent Subcommittee on Investigations
July 22, 2014

Good Morning. I am Marty Malloy, and I currently serve as Managing Director and Head of Barclays' European Prime Services unit. From 1998 to 2008, I headed the equity finance team of Barclays' Prime Brokerage group. In this capacity, I oversaw the execution of the Colt transaction with Renaissance Technologies. In the last eighteen months, I have met with the Subcommittee staff on several occasions in an effort to assist your review and analysis of the Colt transactions, and I am here today as a further continuation of my and Barclays' cooperation.

Barclays and Renaissance first entered into the Colt transaction in the fall of 2002. Renaissance, a highly sophisticated, well-regarded, and extremely successful hedge fund, was already a customer of the Bank at that time. Renaissance proposed aspects of a structure that ultimately became Colt in connection with ongoing discussions regarding potentially expanding its business relationship with Barclays. Over the past twelve years, Barclays and Renaissance have entered into a number of Colt options.

The mechanics of the options can be summarized as follows:

- Barclays sells to a Renaissance subsidiary (Badger) a series of cash-settled options, which reference a basket of securities held by a wholly-owned subsidiary of Barclays (Palomino).

- The basket (also known as the reference portfolio) was funded by Barclays from the funds received from Renaissance as the premium for the options, plus the leverage financing provided to Palomino by Barclays.

- Renaissance determines the composition of the basket and the overall investment strategy, pursuant to an Investment Management Agreement, and subject to numerous limitations in that document.

- Renaissance employs a "statistical arbitrage" investment strategy, and utilizes the buying and selling of both long and short positions.
- Any income derived from the investment activity in the reference portfolio accrued to Palomino.
- Each time Renaissance elected to exercise an option, the value was determined by reference to the value of the Palomino portfolio.
- Originally, these options had a maximum period of three years and more recently they have had a maximum period of eleven months.

This was a commercial transaction from which Barclays earned fees in a number of ways. On options trades like this one, the Bank realizes income from the spread on our execution of our principal trades. Additionally, Barclays benefited from being able to both pledge as collateral and lend out the securities held by Palomino.

Before putting on the first Colt option, Barclays subjected the transaction to an extensive internal review process and consulted with both internal and external regulatory and tax experts. The extensive governance and approval process employed both at the early stage of this transaction, as well as when subsequent options were considered and approved, will be discussed further by my colleague, Gerard LaRocca, in his testimony.

While Renaissance has a stellar track record and reputation as an investment manager, the Colt transaction, like any transaction, poses certain risks to the Bank. In particular, Barclays bears gap risk associated with being the holder of the basket of securities. These risks are mitigated by particular features of the transaction, including Barclays' right to unilaterally unwind the transaction if losses exceed the amount of the premium paid by Renaissance on any existing option. There is also a monitoring system to oversee performance of the reference portfolio, and certain limitations such as concentration and skew limits. For example, over a period of several days in August 2007, this portfolio, like others using a statistical arbitrage strategy, suffered higher than expected losses. While the portfolio eventually rebounded, and the losses did not exceed the limit levels that would have triggered an automatic unwind of the transaction, Barclays' resulting concern led us to impose several additional risk mitigating limitations on the transaction.

While Barclays had the risks and protections I just described, the Colt transaction was unique in at least one important way in that it was non-recourse. In other words, unlike other transactions in which the Bank provides financing, with the Colt transaction we cannot pursue legal remedies from Renaissance in the event the portfolio suffers losses in excess of the amount of premium paid. So the risk of loss on the portfolio once the option premium is exhausted remains entirely with Barclays.

It is my understanding that the fundamental question raised by this Subcommittee is whether, historically, Renaissance has applied the correct tax rate to its earnings from the Colt options. It is also my understanding that this question has not yet been decided by the IRS. Although the IRS issued generic legal advice in 2010, it is my understanding that this type of legal advice does not set out official rulings or positions of the IRS and may not be referenced in other documents as precedent. Since the issuance of the advice, the IRS has issued no further guidance or decision on these transactions. Although Barclays feels strongly that this transaction was subject to sufficient and significant internal and external review to ensure it complied with applicable tax laws and regulations, ultimately the question of, "what tax rate should Renaissance pay?," is a matter to be resolved between Renaissance, as the taxpayer, and the IRS. It is not uncommon for taxpayers, large and small, to have occasional disputes regarding the amount of tax that they owe, and a fulsome process exists, both at the IRS and in the courts, to resolve such disputes.

I hope my testimony has been helpful, and I will do my best to answer the Subcommittee's questions. I should note, however, that although I have been involved with many aspects of this transaction over the course of its execution at Barclays, I have not been responsible for the deal's day-to-day operations since May 2008, more than six years ago. Nonetheless, to assist the Subcommittee, the Bank has done its best to collect as much information related to this transaction as possible and therefore, at times, my testimony and answers will reflect not my personal knowledge, but what I have been informed of by others working for the Bank.

Statement of Gerard LaRocca
Barclays Chief Administrative Officer, Americas

U.S. Senate
Permanent Subcommittee on Investigations
July 22, 2014

I am Gerard LaRocca, and I serve as the Americas Chief Administrative Officer of Barclays Bank PLC. Along with my colleague, Marty Malloy, you have asked us to assist the Subcommittee in its review of certain issues related to the Colt transaction, entered into between Barclays and our customer, Renaissance.

As with all other complex transactions, from the outset of Colt, the Bank undertook a comprehensive transaction review and approvals process to ensure that the transaction was subject to proper scrutiny. This included review by the Bank's internal governance functions, including our regulatory, tax, risk and legal departments. In addition, the Bank conferred with and sought review from a prominent law firm with significant tax expertise, and that firm issued a tax opinion to both Renaissance and the Bank. This tax opinion was later reaffirmed by separate law firms for both the Bank and Renaissance. Further, with respect to questions related to the Bank itself, we obtained separate regulatory and tax opinions. Finally, Barclays disclosed its participation in the transaction to our auditors and our regulators, both here in the United States and in the UK.

As you can see, we did not take this matter lightly and were ultimately comfortable engaging in the transaction. Significantly, this was a transaction with a highly sophisticated and highly regarded counterparty. Renaissance's successful track record is well known.

As I understand it, the question raised by the Subcommittee concerning this transaction seems to be: "What is the proper tax rate to apply to profits earned by Renaissance through the exercise of its options?" Fundamentally, this is a matter to be handled between Renaissance, as a taxpayer, and the IRS. And as we sit here today, it is my understanding that the IRS has yet to answer that question.

While the IRS has not decided the appropriate tax treatment for these transactions, eighteen months ago Barclays elected—voluntarily and proactively—to change an element of the option contracts central to the tax analysis. Beginning in 2012, Barclays embarked on an extensive, bank-wide internal review known as TRANSFORM, on which I will provide more details in a moment. As a result of that review, early last year we informed Renaissance that any future option would only be for a period not to exceed eleven months. Historically, Colt options were for a period of three years, and Renaissance exercised those options at different times—some less than one year, some more than one year. By modifying the options to expire if not exercised within eleven months, Barclays eliminated any uncertainty that may have existed regarding the applicable tax rate. Since Barclays made this decision, Renaissance has entered into an option with this shorter term.

You have asked me to discuss the impact of a 2010 IRS advisory memorandum known to tax lawyers as a GLAM, including the Bank's decision last year to change the tenor of the options going forward. Before addressing these developments, I want to first state that all of this did not occur in a vacuum. Like other financial institutions, Barclays has faced numerous challenges in recent years. Our Bank has endeavored to meet these challenges head on, and at times resolving them has resulted in significant changes, both in process and in personnel at the Bank. Today, we have new leadership and feel strongly we are moving in the right direction, transforming the way we do business.

The Bank began its transformative process with a series of bank-wide reviews. First, Barclays launched Project Mango, an internal review of our investment banking operations. Next, Barclays commissioned Sir Anthony Salz, an outside consultant, to conduct an independent review of Barclays' business lines, culminating with the publication of the Salz Report. Finally, Barclays embarked on the TRANSFORM program, an internal review aimed at establishing the conditions necessary for the Bank's long-term success, including the implementation of the thirty-four point roadmap for change detailed in the Salz Report.

As part of TRANSFORM, the Bank adopted five overarching tax principles that now apply to all tax transactions. It is against this backdrop that we considered what impact, if any, the GLAM should have on our participation in the Colt transaction.

In December 2010, Renaissance made what had become a routine request to enter into a new option. In light of the GLAM's recent publication and prior to moving forward, we specifically consulted with Renaissance, their legal advisors and our own legal advisors regarding the impact of the GLAM on the transaction. After extensive internal consideration and consultation with external advisors, Barclays approved the issuance of a new option. In so doing, we agreed to continue to monitor relevant IRS announcements going forward, and to revisit the decision from time-to-time if Renaissance sought to put on new options.

In February 2013, the Bank issued its new tax principles and undertook a review of existing tax transactions, including Colt. Central to our discussion here, one of the principles provides that Barclays will not structure transactions of a type different than tax authorities would expect. The end result of our review was a decision that, going forward, we would limit the tenor of any new Colt options to a period of eleven months. Of course, the IRS had not made any final determination as to the appropriate tax treatment. In fact, it is my understanding that the GLAM does not set out official rules or positions of the IRS and may not be referenced as precedent. However, the Bank made a proactive and voluntary choice to shorten the terms of these options so as to ensure we met the tax authorities' expectations. This was a decision that, in our view, brought the transaction into conformity with our newly adopted tax principles. By doing this, the Bank committed not only to following specifically applicable laws, but also to refrain from engaging in any transactions that, while legal, might not meet the expectations of the relevant taxing authorities.

We understand that taking this stance may mean that, going forward, we will have to decline certain transactions that are both commercially attractive and legal, causing us to possibly lose out on business. But we believe cultivating exemplary culture at the Bank, and instilling the highest sense of Purpose, Value and Behavior, are fundamentally necessary to help us achieve our goal of becoming the "Go-To" Bank in the years to come.

Therefore, any questions the Subcommittee may have about these transactions do not relate to the Barclays of today, or the Barclays of the future. These are transactions from the past, about which we are still awaiting a decision by the IRS.

Thank you for the opportunity to provide this testimony. I am prepared to offer my assistance, but note that I was not personally involved in a number of the topics that you have raised; therefore, my knowledge may be limited, and my testimony here reflects not only my firsthand knowledge, but also what I have learned from my colleagues at the Bank. I look forward to answering the Subcommittee's questions.

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July 22, 2014

TESTIMONY OF BARRY BAUSANO, PRESIDENT, DEUTSCHE BANK SECURITIES INC. AND SATISH RAMAKRISHNA, GLOBAL HEAD RISK & PRICING FOR GLOBAL PRIME FINANCE, DEUTSCHE BANK SECURITIES INC. BEFORE THE U.S. SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

Chairman Levin, Ranking Member McCain, and Members of the Subcommittee:

On behalf of Deutsche Bank Securities Inc., we respectfully submit the following joint written statement by Barry Bausano and Satish Ramakrishna.

Barry Bausano is currently the President of Deutsche Bank Securities Inc. and Co-Head of Deutsche Bank's Global Prime Finance Business. Mr. Bausano is based in the New York office of Deutsche Bank and has worked at Deutsche Bank for approximately twelve years.

Satish Ramakrishna is currently Managing Director and Global Head, Risk & Pricing for Global Prime Finance, Deutsche Bank Securities Inc. Mr. Ramakrishna is based in the New York office of Deutsche Bank and has worked at Deutsche Bank for approximately sixteen years.

This testimony is submitted in response to the Subcommittee's invitation to provide a written statement regarding barrier option contracts, which Deutsche Bank called MAPS, an acronym for Managed Account Products. MAPS was an option with the advantages of providing clients with increased leverage, limitations on downside risk, and market anonymity. Derivative financial instruments are a critical component of global finance as they allow participants to alter risk and the distribution of returns relative to holding the underlying investments. For the reasons discussed below, Deutsche Bank strongly believes that it acted at all times responsibly, indeed proactively, in its ongoing consideration of MAPS in the light of evolving views regarding the regulatory landscape surrounding derivative products, and that its conduct demonstrates the Bank's strong commitment to be well within the bounds of the law.

We further understand, however, that the IRS has expressed concerns with a particular type of barrier option contract and the potential for associated long-term capital gain treatment as set forth in an IRS Generic Legal Advice Memorandum, or GLAM, issued November 12, 2010. Importantly, in 2010, Deutsche Bank was not entering into barrier option contracts as described in the GLAM. Indeed, Deutsche Bank had ceased offering a product based on agreements similar to the ones described in the GLAM in 2008, when Deutsche Bank, in consultation with outside counsel, independently restructured its MAPS product. Despite having no knowledge of any IRS intention to release the GLAM, or that the IRS was even auditing barrier option contracts, Deutsche Bank proactively addressed virtually every factor considered in the GLAM approximately two years before the issuance of the GLAM. The restructured Deutsche Bank product is referred to in this testimony as New MAPS.

It is important to note the limited scope of the use of New MAPS at Deutsche Bank. From 2008 through today, Deutsche Bank has entered into New MAPS options with only one client, Mosel LP, a Renaissance Technologies LLC affiliate. And even with that one client, Deutsche Bank has entered into only one long-term option since the IRS's issuance of the GLAM. That option was negotiated prior to the GLAM and entered into on the business day following the GLAM's issuance—and only after Deutsche Bank conferred with outside counsel to confirm that New MAPS was not the same structure as the product described in the GLAM. Indeed, and importantly, shortly after issuance of the GLAM, Deutsche Bank reassessed its participation in barrier option contracts. Despite its belief that New MAPS was in compliance with applicable laws and regulations, Deutsche Bank decided that it did not wish to risk being associated with any controversy over the tax treatment of MAPS. Therefore, it decided to cease entering into any New MAPS transactions with a duration of more than one year.

We believe that Deutsche Bank acted appropriately at all times with respect to the barrier option contracts it offered. Deutsche Bank affirmatively and proactively undertook steps to ensure compliance with applicable tax and securities laws and regulations. While we understand the Subcommittee is studying tax policy in this area, and such issues are worthy of discussion, there should be no question that Deutsche Bank did its best to ensure compliance with the laws and regulations as written and understood by the subject matter experts at the time. We do note, however, that it is a widely accepted principle that tax consequences differ among various financial instruments. New MAPS, which was an option, was treated by Deutsche Bank in accordance with the tax rules relating to financial derivatives at all times.

The following is a more detailed description of Deutsche Bank's participation in MAPS.

The MAPS Product

In 1998, Deutsche Bank acquired certain business lines of National Westminster Bank, or NatWest. One such acquired business line offered MAPS to certain hedge fund clients of NatWest. MAPS continued as an important but limited offering of Deutsche Bank after the 1998 acquisition, as it safely met the demand for increased leverage for a limited set of clients whose trading strategy was suitable for such a product. In MAPS, a client holds an option over a basket of securities, long and short, held by Deutsche Bank. The basket is traded by an affiliate of the option holder using the option holder's own trading strategy, but within strict parameters set by Deutsche Bank. Accordingly, MAPS was offered to and executed with only a limited group of institutional clients that followed balanced trading strategies that consistently fit within those parameters. Unlike many of its peers at that time, Deutsche Bank did not have a well-developed prime brokerage offering that met client need for increased leverage. MAPS allowed Deutsche Bank to compete for the business of those clients that wanted increased leverage and had trading strategies suitable for such a product.

Significantly, MAPS was not marketed by Deutsche Bank as a means of helping clients avoid or minimize taxes. In fact, when Deutsche Bank initially sought legal advice in connection with offering MAPS as a product, it did so to ensure that the structure was an option under the securities laws, and not because of any questions about the tax treatment of the option.

As noted above, MAPS itself was fundamentally an option on a trading strategy. The option buyer and holder, a hedge fund, paid a premium to Deutsche Bank to purchase the option. If the strategy did not generate gains in excess of the initial premium, the buyer simply paid for the cost of the option and use of Deutsche Bank's capital and received the remaining value in the option at maturity. However, if the strategy generated positive returns, the buyer received the amount of those returns, less the costs and fees for the option paid to Deutsche Bank. The Bank engaged an investment advisor affiliated with the option holder to run the trading strategy within strict parameters and to purchase in the Bank's own account the securities or positions that comprised the strategy as a hedge to the option.

While Deutsche Bank's exposure under the option was hedged, MAPS was not without risk to the Bank, particularly absent the controls we put in place. If the value of the securities held in the proprietary account fell below the barrier price of the option, the Bank bore all losses.

<u>New MAPS</u>

In August 2007, hedge funds employing a statistical-arbitrage, market-neutral strategy experienced what has come to be known as the "quant quake." The quant quake occurred over four days when it is believed the liquidation of a single quantitatively constructed portfolio triggered a domino effect across numerous "quant funds" running similar leveraged, market-neutral strategies. Many of those funds suffered enormous losses, with some incurring double-digit losses within a single day. Deutsche Bank clients utilizing the MAPS product in August 2007 (a total of six clients at the time) largely employed a leveraged, statistical-arbitrage, market-neutral strategy and were among the affected funds. Historically, these funds – because of sophisticated algorithms to balance long and short positions – had not experienced significant swings in performance. Therefore, they were viewed as low risk. The quant quake demonstrated that such funds were riskier than believed because of the high correlation in positions held by the different funds employing similar strategies.

As a result, in late 2007, the Bank's risk managers began to consider ways to provide the Bank with better protection if the value of the portfolio of securities the Bank was holding relating to MAPS suddenly dropped. At the same time, those in the

Bank's control functions, including legal, tax, and compliance, were assessing MAPS in light of ongoing dialogue and observations concerning the regulatory landscape surrounding derivatives products. Those efforts were merged together as Deutsche Bank worked to restructure MAPS and develop "New MAPS" in 2007 and 2008.

The MAPS restructuring included the following changes:

- First, New MAPS included key risk-reduction terms that provided the Bank with certain rights at declining levels of account value—first to require the investment advisor to reduce its leverage, second to take over the management of the portfolio, and third to assume control and liquidate the positions being traded by the investment advisor in Deutsche Bank's proprietary account.
- Second, the New MAPS agreements further provided that the securities traded for each option would be held in separate sub-accounts, and the options staggered. This reduced the risk that a loss in value in one account would de-value options in other subaccounts.
- Third, New MAPS was changed from an American to a European-style option, which could not be terminated early without forfeiting a significant portion of the premium.
- Fourth, the investment advisor's duties to the Bank, which were set forth in an Investment Advisory Agreement, were clarified under New MAPS, and the fee paid to the advisor was changed to conform to standard market practices for investment advisors.

- Fifth, in New MAPS, Deutsche Bank ensured that it expressly retained important rights relating to the underlying securities, including distribution rights and voting rights.

In addition to these changes to the product, the Bank took steps to improve internal controls and limit the Bank's risk under New MAPS. Performance of the securities traded in the subaccounts was monitored on an intra-day basis, allowing for almost immediate detection of subaccount changes in value. Such monitoring enabled Deutsche Bank to assume complete control of the relevant portfolio in the event of an applicable threshold breach.

Deutsche Bank also ensured that the revised option price calculation accurately compensated the Bank for its risks and costs, including the costs of utilizing the Bank's capital. Pricing was done through the use of traditional option-pricing methods and the strike price was adjusted so that the cost of the option and the financing cost of the portfolio were reflected in the strike price of the option. Specifically, the option was priced based on an analysis of the risk that the Bank was assuming by entering into the option, as well as the time value of the capital the Bank was using to purchase the securities that comprised the portfolio.

In sum, Deutsche Bank priced the MAPS option as an option, managed it as an option, and documented it as an option. It did so because MAPS was an option and the Bank was compensated, and managed its risk, accordingly.

Precisely because it was an option, MAPS offered a number of unique advantages to clients. As the Subcommittee is aware, one of those advantages is that gains on options with durations of more than one year are treated as long-term capital gains. In this respect, MAPS was not different from any other long-dated option. However, the MAPS product offered many economic and other significant non-tax advantages for the option buyer.[1] Structuring financial products to meet client needs for risk and return is a necessary function of capital markets.

We identify the following three non-tax advantages of New MAPS that we consider most significant for purposes of this statement. First, as discussed above, Deutsche Bank was comfortable providing the option buyer with greater leverage at the fund level than it would have allowed in a traditional prime brokerage relationship. This was because the Bank had greater visibility, control, and protections in place relating to the underlying trading activity than it did in a prime brokerage account. Indeed, MAPS provided the option holder with leverage of up to eighteen times the premium compared with what the Bank could safely provide in the closest prime brokerage alternative, enhanced prime brokerage. Second, the MAPS option limited the client's downside risk to the premium it paid to purchase the option. Third, the client could pursue its trading strategy anonymously, because any market transactions associated with the trading strategy were made by Deutsche Bank, in Deutsche Bank's own name.

On the leverage point, it is important to emphasize that, while MAPS permitted clients to obtain leverage greater than other products offered by the Bank, the risk associated with such increased leverage was managed pursuant to the transactional terms. As discussed above, those terms were revised in connection with the 2008

1 Indeed, there were clients of Deutsche Bank that entered into MAPS trades that did not seek the long-term capital gain treatment of the option discussed in the GLAM, as those clients never traded a MAPS option with a tenor of more than one year.

restructuring to allow for improved management of the risk. MAPS, therefore, did not expose the Bank to excessive risk. In addition, unlike a traditional prime brokerage account, in MAPS the securities are owned and held by the Bank, providing the Bank with transparency into the portfolio and the ability to control the account's holdings, as well as the right to vote the securities. Moreover, New MAPS was entered into with only one hedge fund customer, Renaissance, a fund that pursued a market neutral investment strategy and that had historically consistent returns, thus reducing, albeit not eliminating, market risks.

DB Responds to the GLAM, and Discusses MAPS with its Regulators

Although discussed earlier in this statement, Deutsche Bank's actions after IRS's issuance of the GLAM on November 12, 2010, merit separate discussion and specific consideration.[2] Following the release of the GLAM, the Bank discussed the GLAM with its outside tax counsel, and counsel affirmed that the GLAM did not change their prior views on the New MAPS product. Nevertheless, and despite the Bank's view that New MAPS was outside the scope of the GLAM, the Bank decided it would no longer enter New MAPS options with its one remaining New MAPS client. It did so out of a desire to avoid being associated with any controversy over the tax treatment of MAPS that might result from the GLAM.[3] The Bank made this decision even though New MAPS was

[2] It bears noting that a GLAM, by its terms, is not to be cited or relied on as precedent.

[3] Renaissance subsequently expressed a desire to engage in New MAPS trades having a tenor of less than one year. Deutsche Bank agreed because such trades do not present the opportunity for the counterparty to claim long-term capital gains treatment for any gains and therefore do not present the same reputational risk. In addition, following the GLAM, Deutsche Bank briefly discussed with Renaissance an alternative to MAPS in the form of an option linked to the amount a trading strategy outperformed

entirely consistent with the requirements of the Bank's Non-Prosecution Agreement with the U.S. Department of Justice.[4]

Conclusion

In sum, with respect to MAPS, Deutsche Bank affirmatively took steps, on its own initiative, to ensure that its conduct was well within the boundaries set by applicable legal requirements. Deutsche Bank: (1) ceased entering into the transaction described in the 2010 IRS GLAM two years before the GLAM was issued; (2) entered into New MAPS with only one client from the end of 2008 through the 2010 GLAM; and (3) completely stopped entering into New MAPS transactions with a duration of more than one year shortly after issuance of the GLAM. This is so, even though, as of today, neither the IRS nor any court or regulator has found that a New MAPS option (or indeed, any Deutsche Bank MAPS option) did not qualify as a derivative for tax, securities, or any other purposes. Deutsche Bank believes strongly that it acted appropriately in

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the S&P 500 Index. Although this concept was discussed in good faith with Renaissance, it was widely recognized within Deutsche Bank that it was highly unlikely the revised structure would overcome the reputational risks that caused the Bank to cease entering New MAPS. In any case, the project was abandoned well before it reached a stage where the potential reputational impact would have been reviewed by the Bank's tax and legal functions.

4 New MAPS was consistent with the requirements of the Non-Prosecution Agreement because it was supported by an appropriate legal opinion and because the transaction, to this day, does not appear as a listed transaction or in any category that is prohibited by the NPA or DB's internal policies. In addition, it bears noting that the Bank discussed the MAPS product with certain regulators as early as 2007, and it discussed the MAPS product with the Department of Justice, the IRS, the SEC, and the Independent Expert Deutsche Bank retained as part of the NPA. All of these discussions took place well before this Committee began its investigation. Indeed, the Bank communicated with the Independent Expert about MAPS at a meeting on February 3, 2011, and discussed the MAPS product with the Department of Justice and the IRS at several meetings in 2012 and 2013.

entering the New MAPS options when it did, and that it acted conservatively and responsibly when it decided to stop entering them for reputational reasons after the issuance of the GLAM.

Thank you for this opportunity to submit this written testimony, and we will be prepared at the hearing to address the topics raised in your letter of July 9, 2014.

Renaissance

HEARING BEFORE THE SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

July 22, 2014

Joint Statement of Dr. Peter F. Brown, Co-Chief Executive Officer and Co-President, Mr. Mark Silber, Chief Financial Officer and Chief Legal Officer, and Mr. Jonathan Mayers, Counsel on Behalf of Renaissance Technologies LLC

Chairman Levin, Ranking Member McCain, and members of the Subcommittee, we appreciate the opportunity to be here today to speak with you and to answer your questions on behalf of Renaissance Technologies LLC ("Renaissance"). We will do our best to explain to you who we are as a firm, what our approach to investing entails, and why we believe that our activities were and are appropriate under current law.

Below we discuss the topics you have asked us to address. As you know, we have also supplied your staff with information that further addresses these topics in document responses and in interviews over the last year and a half. We appreciate having had the opportunity to meet with your staff on a number of occasions to discuss this matter, and we hope that you have found our engagement cooperative and responsive.

We want to be clear: Renaissance's Medallion fund entered into barrier options with Deutsche Bank and Barclays, both large and sophisticated counterparties, for substantial non-tax business purposes. When we exercised an option held for more than a year, we reported any resulting gains as long-term capital gains, in accordance with current tax law. We reported gains on options held for less than a year as short-term capital gains. If the law changes in the future, we will of course comply. We also understand that there are questions about the level of leverage allowed in arrangements with our counterparties. Under current law, derivative instruments permit higher leverage than many other forms of investment. Again, if the rules concerning leverage change, we will comply.

The IRS has been reviewing these options for over six years now. Renaissance has been cooperating fully with that review and is working through this issue within the IRS's process. Ultimately, we expect to prevail. However, if it is determined that Renaissance's view is incorrect, we will fully comply with that determination. We recognize as well the responsibility and authority of Congress to take a careful look at this matter and to consider any related policy matters. We have been transparent with our regulators and hope we can also answer your questions today.

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Renaissance – Background and Business Model

Renaissance was established for the purpose of producing superior financial results for our investors by adhering to mathematical and statistical methods in the design and execution of trading strategies. We were founded and are principally owned by scientists and we generally hire physicists, mathematicians, astronomers, and computer scientists.

Renaissance's equity trading and advisory activities bring added liquidity to the equities markets, reduce inefficiencies, and improve capital formation. We collect all the publicly available data we can find that we believe might bear on the movement of the prices of tradable instruments—news stories, analysts' reports, energy reports, crop reports, weather reports, regulatory filings, accounting data, and, of course, quotes and trades from markets around the world. Our models use this data to make predictions about future price changes. Although we use different strategies in managing our different funds, all of our strategies depend on the output of our data-driven models. Of particular note for today's discussion is the fact that our models do not factor in tax rates when making trading recommendations.

Medallion has achieved exceptional returns over the years, but we are mindful that past success is no guarantee of future performance. We also understand the need for thoughtful regulation and laws to govern the operations of the financial system as a whole, and we are committed to being a constructive participant in the dialogue about what those regulations and laws should be.

The Use of Barrier Options by Medallion

Deutsche Bank proposed a barrier option transaction to Renaissance in the late 1990s. It did not do so with a focus on tax benefits. The barrier options that Deutsche Bank proposed allowed Medallion to obtain leverage on a non-recourse basis that could not be obtained through any other product. Medallion entered into its first barrier option with Deutsche Bank in September 2000 and later entered into similar options with Barclays so as to diversify its counterparty risk.

The model developed by Renaissance for Medallion makes predictions that are profitable only slightly more often than not. Moreover, the predicted price movements can be easily overwhelmed by external events. To compensate for these factors, the model generates a large number of recommendations, so that by virtue of the mathematical principle known as the law of large numbers, the variability of the returns produced by the model is greatly reduced.

However, because the model's recommendations are expected to be profitable only slightly more often than not, the rate of return obtained by applying the recommendations to an unleveraged portfolio would be very small. Leverage magnifies the effect of positive changes in the overall value of the portfolio on the rate of return, and this effect is greater the higher the level of leverage employed. Medallion's barrier options with Barclays and Deutsche Bank provide the high leverage necessary to take optimal advantage of the predictions made by Medallion's model. This leverage is entirely permissible and appropriate under current law. As the Joint Committee on Taxation has recognized, "[d]erivatives are critically important tools in the risk management process," and "[o]ne commercial reason for the popularity of derivatives is that derivative contracts typically afford a party much higher leverage than would be commercially possible (or permitted by relevant margin regulations) if the party were to establish a position in the underlying physical."[1]

In addition to leverage, a key benefit of these barrier options is that they provide Medallion with protection against losses that might occur when trading at high leverage. Models often work well, but the markets have many times taught participants the lesson of humility. Long Term Capital Management in 1998 and numerous banks and hedge funds caught up in the sub-prime crisis in 2008, for example, put too much trust in their models and were not wary enough of what we have come to call Black Swan risk. This is the risk of an event that lies far enough outside previous experience that it cannot be anticipated by existing models. Black Swan events can have catastrophic outcomes. For a model-based high-leverage strategy like Medallion's, mitigating Black Swan risk through loss protection is therefore crucial. We witnessed the importance of this in 1998 when Long Term Capital failed, and again when the dot-com bubble burst in 2000.

The barrier options offered by Barclays and Deutsche Bank are non-recourse, which means that Medallion's downside risk is limited to the premium paid when the option is first purchased. No other investment structure of which we are aware provides both high leverage and loss protection. As noted above, the options were not marketed to Renaissance for their tax benefits, and Medallion's decision to purchase the options was driven by a desire to obtain the leverage and the loss protection that they offered. In fact, Medallion currently enters into loss protection barrier options with terms of less than one year, even though these can only produce short-term capital gains.

Our decisions to exercise the barrier options were driven by business imperatives. For example, the average holding period of the Deutsche Bank options from 2000 to 2009 was 455 days, not the 366 days that might be expected if the holding periods were purely tax-driven.[2] After the August 2007 "Quant Quake," we exercised a Barclays option after only a few months and reported the profit as short-term capital gain; in early 2009, we exercised another Barclays option after only a few months during the market turmoil surrounding the financial crisis and again reported the profit as short-term capital gain. It is true that when new tax rates were enacted in 2012, we, like many other investors, sought to recognize gains inherent in our options before the new rates took effect. But this is simply the sort of prudent planning that our investors would justifiably expect us to undertake.

We are prepared to discuss issues of tax policy during the hearing in more detail. The Supreme Court recognized over 30 years ago that when a taxpayer enters into a transaction for real business purposes, with real economic substance, to manage real risks, the form of that transaction should be respected for tax purposes.[3] In our case, our primary business purposes for purchasing these options were, and continue to be, leverage and loss protection.

[1] Joint Committee on Taxation, *Present Law and Analysis Relating to the Tax Treatment of Derivatives* (JCX-21-08), March 4, 2008, *available at* http://www.jct.gov/x-21-08.pdf.
[2] The first Deutsche Bank barrier option, which was an operational test trade in 2000, is excluded from this calculation.
[3] *Frank Lyon Co. v. United States*, 435 U.S. 561 (1978).

How the Barrier Options Work

Each barrier option references the performance of a notional basket of securities, called the reference portfolio, generated by Medallion's trading model. There are other, publicly available options today that reference changing baskets of securities, such as options on the "Dogs of the Dow" or the S&P 500. When our model performs well, the fund profits, aided by the superior leverage available through these options. Upon exercise of the option, Medallion is entitled to a cash settlement payment generally equal to the net positive performance of the reference portfolio. If the model performs poorly, the option limits Medallion's downside risk, because Medallion's maximum possible loss is the amount of premium paid to purchase the option. We know of no other way to obtain this combination of leverage and loss protection.

Each option contains a barrier provision, pursuant to which the option automatically terminates if the value of the reference portfolio falls below a specified level, even momentarily. Thus, the barrier provision prevents Medallion from benefiting from a rebound in the value of the reference portfolio after such a decline. The barrier feature of the options helps the banks manage their risk; without this feature, the banks likely would not enter into the options. The U.S. Tax Court has specifically said that options with barrier provisions, such as ours, are taxed as options.[4]

The barrier options provide Medallion with critical loss protection and superior leverage, but these benefits come with a price. Because Medallion does not own the underlying instruments that make up the reference portfolio, it would have no claim to any of the assets its counterparty might hold to hedge an option should that counterparty suffer a Lehman Brothers-like collapse or default on the transaction. Instead, Medallion would be in line as just another of the counterparty's general creditors, with no guarantee of recovering any portion of the value of the option. Stated more directly, choosing the option form for our transaction meant we gave up the meaningful ownership rights, including bankruptcy protections, that we would have had in a prime brokerage relationship.

It is common for banks that enter into derivatives contracts to hedge against risk of loss by taking offsetting positions in the referenced instruments. Although nothing in the option agreements with either Deutsche Bank or Barclays required either to maintain hedge accounts, it is not surprising that each bank would choose to hedge its risk by actually holding the positions in the reference portfolio in bank-owned accounts. Renaissance was hired by the banks as an investment adviser to help facilitate the hedging process. At the banks' request, Renaissance executed the hedging trades on the banks' behalf, but it had no control over the positions thereafter; the banks had the power subsequently to lend out or even to sell the positions thus acquired.

How the Barclays and Deutsche Bank Barrier Options Changed Over Time

Although the details of the barrier options have been modified slightly over the years to adapt to the unique demands of each bank, the Barclays and Deutsche Bank barrier options held by Medallion today are essentially identical in many important respects to the first barrier options Medallion purchased from these banks. Each option has required a single up-front premium

[4] *Garcia v. Commissioner*, 101 T.C.M. (CCH) 1388, 1390-1 (2011).

payment. Each option has provided for cash settlement generally equal to the net positive performance of the reference portfolio at the valuation date, and each option has included a barrier provision. The underlying reference portfolio for each option was generated by Renaissance's trading algorithm. Neither bank was required to maintain a hedge against the reference portfolio for any option. Each bank explicitly preserved its unrestricted ownership of any positions in its hedge for each option.

The 2007 "Quant Quake" demonstrated convincingly that the strategies of different quantitative funds were correlated, and thus that the risk faced by even the best-run funds was significantly greater than previously thought. In particular, a forced liquidation by any fund could have cascading effects on other funds, resulting in greater losses for all. Newly sensitized to these concerns about risk, from 2007 until late 2008, Deutsche Bank and Renaissance renegotiated some of the terms of their barrier options prospectively. We negotiated for changes clarifying the parties' responsibilities in the event that an option hit a barrier and needed to be unwound. Deutsche Bank negotiated for, among other things, a change to a European-style option, which meant Medallion had no right to exercise an option prior to its stated maturity date, and for a non-refundable component of the premium that locked in a portion of Deutsche Bank's profits up front. These changes had real economic effects. Both we and Deutsche Bank exercised sensible business diligence, including discussions with our outside advisors, to understand the implications of all aspects of the changes, including those potentially related to tax.

In the wake of the "Quant Quake," we also modified prospectively our barrier options with Barclays. The relatively modest changes made to the Barclays barrier options addressed risk issues. We also are aware that in 2009 Barclays amended the articles of association of Palomino, the company through which it held its hedges to the options. We understand that this was done by Barclays for UK accounting purposes, but that it did not affect Barclays' status as the owner of the hedge positions for bank regulatory and other purposes. We entered into a letter agreement with Barclays in 2009 confirming our understanding that the Palomino changes did not affect the parties' rights and obligations under the option documents.

Tax Treatment of the Options

You have also asked more broadly about the tax treatment of barrier options. Renaissance has historically consulted with outside advisors on the tax treatment of the options at issue here and is comfortable that its tax treatment of the options is correct under current law. As noted above, the IRS has been reviewing these options for over six years. Renaissance has been cooperating fully with that review, and ultimately we expect to prevail. We hope you understand that we are unable to discuss the legal advice we received in more detail today without risking waiver of legal rights to which we are entitled in connection with this ongoing IRS proceeding. We hope also that the proceeding will move quickly as we and the IRS have a shared interest in obtaining a final determination of this matter.

It is common for parties to an agreement to allocate between themselves the burdens of various risks, including tax risk. Medallion's agreements with Barclays provide that Medallion bears the risk that the IRS will determine that Barclays should have reported the options differently. Medallion's agreements with Deutsche Bank do not contain a similar provision.

In 2010, the IRS issued Generic Legal Advice Memorandum ("GLAM") 2010-005, a non-precedential internal analysis of the tax treatment of a barrier option based on summary facts set forth in the GLAM. Renaissance carefully reviewed the GLAM when it was released and did not believe that its description of the facts accurately reflected Medallion's barrier option transactions—particularly as to the risks associated with the transactions. We continue to believe that today. Should the IRS wish to change the tax treatment for barrier options, it could promulgate new rules to this effect—something that it has not done to date.

Conclusion

Medallion enters into barrier options to address the business imperatives discussed above. We believe we have reported the income from these options in accordance with current law, and are eager for a speedy resolution of the matter now before the IRS. We look forward to studying your report and will be pleased to address questions you may have.

United States Senate
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
Committee on Homeland Security and Governmental Affairs
Carl Levin, Chairman
John McCain, Ranking Minority Member

ABUSE OF STRUCTURED FINANCIAL PRODUCTS: Misusing Basket Options to Avoid Taxes and Leverage Limits

MAJORITY AND MINORITY STAFF REPORT

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

UNITED STATES SENATE

RELEASED IN CONJUNCTION WITH THE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS JULY 22, 2014 HEARING

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ABUSE OF STRUCTURED FINANCIAL PRODUCTS: Misusing Basket Options to Avoid Taxes and Leverage Limits

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ABUSE OF STRUCTURED FINANCIAL PRODUCTS: Misusing Basket Options to Avoid Taxes and Leverage Limits

I. EXECUTIVE SUMMARY

For the last decade, the U.S. Senate Permanent Subcommittee on Investigations has presented case histories showing how financial institutions, law firms, accountants, and others have designed and implemented complex financial structures to take advantage of and, at times, abuse or violate U.S. tax statutes, securities regulations, and accounting rules.[1] This investigation offers yet another detailed case study of how two financial institutions – Deutsche Bank AG and Barclays Bank PLC – developed structured financial products called MAPS and COLT, two types of basket options, and sold them to one or more hedge funds, including Renaissance Technologies LLC and George Weiss Associates, that used them to avoid federal taxes and leverage limits on buying securities with borrowed funds. While that type of option product was identified as abusive in a public memorandum by the Internal Revenue Service (IRS) in 2010, taxes have yet to be collected on many of the basket option transactions and its use to circumvent federal leverage limits has yet to be analyzed or halted.

The basket option contracts examined by the Subcommittee investigation were used by at least 13 hedge funds to conduct over $100 billion in securities trades, most of which were short-term transactions and some of which lasted only seconds. Yet the resulting short-term profits were frequently cast as long-term capital gains subject to a 20% tax rate (previously 15%) rather than the ordinary income tax rate (currently as high as 39%) that would otherwise apply to investors in hedge funds engaged in daily trading. While the banks styled the trading arrangement as an "option" under which profits from short-term trades would be treated as long- term capital gains, in essence, the banks loaned the hedge funds money to finance their trading and allowed them to trade for themselves in highly leveraged positions in the banks' proprietary accounts and reap the resulting profits. The banks offering the "options" benefited from the financing, trading, and other fees charged to the hedge funds initiating the trades. In the end, the trading conducted by the hedge funds using the basket option accounts was

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[1] See, e.g., U.S. Senate Permanent Subcommittee on Investigations reports and hearings, "Fishtail, Bacchus, Sundance, and Slapshot: Four Enron Transactions Funded and Facilitated by U.S. Financial Institutions," S. Prt. 107-82 (1/2/2003); "U.S. Tax Shelter Industry: The Role of Accountants, Lawyers, and Financial Professionals," S. Hrg. 108-473 (11/18 and 20/2003); "Tax Haven Abuses: The Enablers, The Tools and Secrecy," S. Hrg 109-797 (8/1/2006); "Repatriating Offshore Funds: 2004 Tax Windfall for Select Multinationals," S. Prt. 112-27 (10/11/2011); "Offshore Profit Shifting and the U.S. Tax Code – Part 1 (Microsoft and Hewlett-Packard)," S. Hrg. 112-781 (9/20/2012); and "Offshore Profit Shifting and the U.S. Tax Code - Part 2 (Apple Inc.)," S. Hrg. 113-90 (5/13/2013).

virtually indistinguishable from the trading conducted by hedge funds using their own brokerage accounts, and provided no justification for treating the resulting short-term trading profits as long-term capital gains.

The facts indicate that the basket option structures examined in this investigation were devised by sophisticated financial firms to allow clients to circumvent federal taxes and leverage limits. The structures rested on two fictions. The first was that the bank, rather than the hedge fund, owned the assets being traded in the designated option accounts, even though the hedge fund bought and sold the assets, was exposed to all significant risks and rewards, and profited from the trading, with little input from the bank serving as the nominal owner of the assets. In effect, the structure purported to enable the hedge fund to purchase an "option" on its own trading activity, an arrangement that makes no economic sense outside of an effort to bypass federal taxes and leverage limits. The second fiction was that the profits from the trades controlled by the hedge fund could be treated as long-term capital gains, even for trades lasting seconds. That fiction depended upon the hedge fund claiming that the profits came from exercising the "option" rather than from executing the underlying trades. In fact, the "option" functioned as little more than a fictional derivative, permitting the hedge fund to cast short-term capital gains as long-term gains and authorizing financing at levels otherwise legally barred for a customer's U.S. brokerage account.

The basket options sold by Deutsche Bank AG starting in 1998, and by Barclays Bank PLC since 2002, produced a total of more than $35 billion in trading profits, of which at least $34 billion came from options exercised after more than one year. Most of those profits came from assets which were held for less than one year but which were treated by the hedge funds holding the options as having produced long-term capital gains taxable at the lower long-term capital gains rate. The options were also used by the participating hedge funds to trade on borrowed funds using a leverage ratio of as much as 20:1, versus the much lower federal leverage limit of 2:1 that normally applies to brokerage accounts held by U.S. broker-dealers for their clients. These financially engineered products – which relied on high volume trading, leveraged funds, and artificially lowered tax rates to produce their profits – warrant greater attention from federal tax, securities, and banking regulators to prevent their continued misuse.

A. Subcommittee Investigation

To conduct this investigation, the Subcommittee subpoenaed, collected, and reviewed over 1.5 million pages of documents from Deutsche Bank AG (Deutsche Bank), Barclays Bank PLC (Barclays), Renaissance Technologies Corporation LLC (RenTec), George Weiss

Associates (George Weiss), and BDO Seidman, RenTec's accountant. The Subcommittee obtained additional information from these entities through information requests and a review of publicly available information. The Subcommittee also participated in 23 interviews and briefings involving current and former employees from those financial institutions. In addition, the Subcommittee gathered documents, obtained information, and received briefings from a number of federal agencies and related parties. The Subcommittee also spoke with academic and other tax experts concerning the tax treatment of basket options. Deutsche Bank, Barclays, RenTec, George Weiss, and the agencies all cooperated with Subcommittee requests for information.

B. Investigation Overview

The Subcommittee investigation examined the basket option financial products designed and promoted by Deutsche Bank and Barclays. It also examined how the hedge funds that entered into basket option contracts with those two banks actually used those contracts to make investments, looking in particular at the two largest participants, RenTec and George Weiss.

Purchasing a Basket Option. The basket option contracts were designed and issued by the sponsoring bank and held by the option holder. In the cases examined by the Subcommittee, the option holder was always a hedge fund. Typically, to initiate the transaction, the hedge fund client entered into a contract with the bank to purchase an "option" on the performance of an unspecified basket of assets placed in a designated account. The referenced account was opened in the name of the bank and operated as the bank's own proprietary trading account. All assets were purchased in the name of the bank.

To reduce trading risk, the option contract normally set a few basic parameters for the assets that could be purchased for the account, but otherwise provided wide discretion over the assets to be selected. The hedge fund was required to deposit into the account a cash "premium," which typically consisted of funds representing about 10% of the total capital to be invested in the account and functioned as collateral for the account. The sponsoring bank financed the other 90% of the capital to be invested, and the hedge fund paid financing fees on that financed amount. The designated account then used the funds from the premium and credit extension to conduct trades until the option holder exercised the option. If at the time the option was exercised, the securities in the referenced account had produced a profit, the bank had to pay those profits to the hedge fund holding the option, after subtracting fees for certain trading, financing, and other expenses.

In the basket option contracts examined by the Subcommittee, the bank always appointed the general partner of the hedge fund client to act as the investment advisor for the trading account holding the referenced assets during the duration of the option. Once appointed, the investment adviser exercised complete control over the securities included in the option account, designing its own trading strategy and using the bank's own facilities to execute the trades. In some cases reviewed by the Subcommittee, the investment advisor used algorithms to engage in a high volume of trading, executing more than 100,000 transactions per day. Many of those trading positions lasted minutes, and the overall composition of the securities basket changed on a second-to-second basis. One basket option account later reviewed by the U.S. Securities and Exchange Commission (SEC) was found to have experienced 129 million orders in a year. In other cases, the investment adviser purchased securities whose positions remained unchanged for weeks, but all of the basket option accounts reviewed by the Subcommittee were dominated by short-term trading involving assets held less than one year.

By acting as the investment adviser, the hedge fund – the option holder – became the party that actually controlled the trading strategy, the timing of trades, and what assets were selected for the referenced account. The hedge fund was also exposed to all significant rewards and risks associated with the trading. The banks claimed that the hedge funds did not bear 100% of the risk of loss, because the banks provided so-called "gap" protection in the event of a catastrophic market failure. That risk was so small, however, that despite, for example, hundreds of millions of trades that took place in the more than 60 basket options held by RenTec over a decade, including during the worst financial crisis in a generation, neither bank was ever required to satisfy a loss due to a market failure.

To further minimize the gap risk, the option contract contained several provisions designed to limit trading losses in the account to the 10% premium provided by the hedge fund. The key provision accomplished that objective by specifying a loss threshold – sometimes called a "barrier" or "knockout" amount – which if reached would cause the option to cease to exist, or "knockout," and trigger the ability of the bank to liquidate the account assets.

During the period of the option, the securities transactions were executed in the name of the bank and the resulting securities were held in the bank's proprietary trading account. The accompanying profits or losses also remained within the account until the option was exercised. The hedge fund chose when to exercise the option. Although the options reviewed by the Subcommittee often had three-year terms and the hedge funds claimed they wanted longer-term financing arrangements, the hedge funds often exercised the options shortly after 12 months. In all cases examined by the Subcommittee, the option accounts paid the profits to the hedge fund option holder.

Deutsche Bank developed its basket option product in 1998, naming it the Managed Account Product Structure (MAPS). Over the next 15 years, Deutsche Bank sold 156 MAPS options, of which 96 had terms greater than one year. At their peak, those 96 options had assets with a total initial notional value of about $60 billion. Deutsche Bank sold the MAPS options to 13 hedge funds, including 36 to RenTec. Of those 36 option contracts, the first 29 had terms greater than one year. The MAPS options sold to RenTec produced profits for that hedge fund totaling about $17 billion. The MAPS options sold to all 13 hedge funds produced revenues for Deutsche Bank totaling about $570 million. The Barclays' basket options product was developed in 2002, at the request of RenTec, and was named COLT. Barclays sold 43 COLT options to RenTec, of which 31 had terms greater than one year. At their peak, those 31 COLT options had assets with a total initial notional value of about $62 billion. The COLT options produced trading profits for RenTec totaling about $18.5 billion. They also produced revenues for Barclays totaling about $655 million.

Claiming Long-Term Capital Gains. With respect to basket options that were exercised more than one year after the option was created, the hedge funds holding those options claimed that any short-term trading profits earned within the option period could be recast as long-term capital gains for U.S. tax purposes after the option was exercised. They claimed that even trades that had lasted a few seconds or were executed the day before the option was exercised could be treated as long-term capital gains, although the lower capital gains tax rate was explicitly intended to reward holding a security for more than one year.

The basket option contracts administered by Deutsche Bank and Barclays over the last ten years produced profits utilizing hundreds of millions of trades, with 97% of the assets held for less than 6 months, yet the trading profits were treated by the hedge funds as long-term gains. In one SEC examination report that reviewed some of those options, the SEC estimated that, during a four-year period from April 2003 through October 2007, five hedge funds utilizing MAPS options, including RenTec, had "saved a total of $779 million in taxes by exercising the option after one year."[2] Another SEC examination report on the COLT option, used by RenTec over a five-year period from 2002 to 2007, found that the hedge fund had used it to "defer $140 million of

[2] 4/2008 "Examination Report for Deutsche Bank," prepared by New York Regional Office of the Securities and Exchange Commission, SEC_RT13_002020-074, at 074 [Sealed Exhibit].

taxes."[3] The resulting total of $919 million does not take into account other taxes avoided or deferred by hedge funds using basket options from 1999 through March 2003, or from November 2007 to the present.

Although the Subcommittee does not have the information needed to estimate the total amount of taxes avoided through use of the basket options examined during this investigation, specific data supplied by the banks with respect to RenTec, the largest basket option user, suggests that the basket options may have been used to treat short-term capital gains as long-term capital gains, resulting in estimated tax avoidance of more than $6 billion. This chart provides the data used to arrive at that estimate.

RenTec Basket Options Held for More than One Year 2000-2013

Bank	Number of Options	Cash Payments to Settle Options*	Premiums Paid by RenTec	Cash Payments Less Premiums	Estimated Tax Difference Between LTCG Rate and STCG Rate[1]
Barclays[2]	31	$24.5	$6.2	$18.3	$3.6
Deutsche Bank	29	$20.8	$4.8	$15.9	$3.2
Total	60	$45.3	$11.0	$34.2	$6.8[3]

*All dollar figures in billions of dollars.

1. LTCG stands for Long-Term Capital Gains (rate was 15% until 2013, 20% thereafter); STCG stands for Short-Term Capital Gains (used rate of 35%). The difference between the two was calculated at 20% for options exercised prior to 2013, and at 15% thereafter.
2. Table excludes three RenTec options at Barclays, despite being in effect for over one year, because they are unexercised.
3. Total does not reflect any other income, deductions, credits, or other tax matters that might affect RenTec's tax liability.

Source: Tables produced by Deutsche Bank (DB-PSI 00052588) and Barclays (BARCLAYS-PSI-748604).
Prepared by U.S. Senate Permanent Subcommittee on Investigations, July 2014.

Disallowing Abusive Basket Options. In 2010, the IRS issued a Generic Legal Advice Memorandum (GLAM) which found that basket options referencing accounts with ever-changing assets did not function as true option contracts, and that investors had to recognize the trading gains and losses in the designated accounts when they occurred, rather than at the time the alleged "option" was finally exercised. The IRS advised that investors could not use the basket option contracts to justify applying the long-term capital gains tax rate to what were really short-term gains.

Despite learning of the GLAM when it was issued in 2010, and interpreting it as applying to the COLT basket options it offered, Barclays continued to sell COLT options to RenTec for the next two

[3] 9/2007 "Examination Report for Barclays," prepared by New York Regional Office of the Securities and Exchange Commission, SEC_RT13_001994-2019, at 2013 [Sealed Exhibit].

years. In contrast, after the GLAM was issued, Deutsche Bank suspended issuing new MAPS basket options, although it continued to administer multiple option accounts already trading assets. In 2012, Deutsche Bank began offering them again, but only with options whose terms lasted less than one year and contractually required all profits to be reported as short-term capital gains. In 2013, Barclays revised its basket option contract so that it, too, offered only basket options with terms that lasted less than one year and could not be used to claim long-term capital gains.

According to information provided by RenTec to the Subcommittee, the IRS notified the hedge fund in 2012, that the IRS had reviewed some of its basket option trading activity and intended to disallow long-term capital gains treatment of basket option profits from trades lasting less than 12 months. The IRS also proposed an assessment of additional taxes for certain tax years. RenTec submitted a letter in opposition, and the matter is apparently now awaiting review by the IRS' internal Office of Appeals.

Circumventing Federal Leverage Limits. In addition to using basket options to reduce taxes on their short-term capital gains, the hedge funds used them to obtain financing for securities trades far in excess of what federal leverage limits allow. Federal leverage limits were established in response to the stock market crash of 1929, when securities purchased on borrowed funds magnified stock market losses and caused failures of, not only the stock speculators, but also the banks and broker-dealers that lent them money. Federal "margin rules" were enacted to impose a leverage limit of 2:1 on brokerage accounts opened by U.S. broker-dealers for their customers. In contrast, because the participating banks seemingly lent money to their own accounts, the basket option accounts examined by the Subcommittee provided the hedge fund option holders with leverage ratios as high as 20:1. RenTec indicated in one document that it had been unable to attain such high leverage levels in any other setting. While federal financial regulators are aware of ongoing efforts to bypass federal leverage limits through derivative and structured financial products, including basket options, they have not taken the steps necessary to obtain meaningful data on the extent of the leverage problem, gauge the resulting systemic risks, or develop ways to curb abuses.

C. Findings of Fact

Based upon the Subcommittee investigation, this Report makes the following findings of fact.

1. **Profiting from Basket Options.** Between 1998 and 2013, Deutsche Bank AG sold basket option products to 13 hedge

funds, while Barclays Bank PLC sold them to one hedge fund, together leading to over $100 billion in securities trades and tens of billions of dollars in profits, most of which came from trades that lasted less than 12 months in duration, but were treated by the hedge funds as producing long-term capital gains. The basket options also produced financing, trading, and other fee revenue for the banks totaling $570 million for Deutsche Bank and $655 million for Barclays.

2. **Turning a Blind Eye.** Deutsche Bank AG and Barclays Bank PLC were aware of the questionable tax status of their basket option structures for many years prior to the issuance of the 2010 IRS advisory memorandum, but continued to sell the product.

3. **Claiming Short-Term Trading Profits as Long-Term Capital Gains.** Over a fourteen-year period from 1999 to 2013, one hedge fund, Renaissance Technologies LLC, held 60 basket option contracts for more than one year, used them to carry out an investment strategy utilizing hundreds of millions of trades, virtually all of which lasted less than 12 months, and characterized the vast majority of the resulting $34 billion in trading profits as long-term capital gains.

4. **Ceding Control.** Although the investments in the basket option trading accounts were held in the name of the banks, Deutsche Bank and Barclays routinely hired the option holder – the hedge fund – as the investment adviser for the accounts and ceded control of their accounts to the option holder, which traded the account for its own benefit.

5. **Assessing Risk.** Although Deutsche Bank and Barclays claimed the basket option structure was a valid derivative in part because it carried financial risk for the bank, Barclays downplayed that risk both internally and in reports to its U.K. regulator when it benefited the banks' interests.

6. **Avoiding Leverage Limits.** By opening the basket option accounts in their own names and supplying their own funds to those accounts as financing for the trades controlled by their hedge fund clients, Deutsche Bank and Barclays enabled the hedge funds to attain a leverage ratio of as high as 20:1, despite the much lower federal leverage limit of 2:1 intended to prevent systemic risk.

7. **Producing a Low Audit Rate.** While, in 2010, the IRS determined that basket options were being misused and, in

2012, proposed additional tax liability for one hedge fund, the Government Accountability Office has determined that 99% of the tax returns filed by large partnerships with assets exceeding $100 million have not been audited by the IRS. This extremely low auditing rate may embolden large partnerships such as hedge funds to employ abusive tax structures.

8. **Failing to Enforce Leverage Limits.** Although federal financial regulators have long been aware that derivative and structured financial products, including basket options, are being used to circumvent federal leverage limits, they have taken little or no action to limit those practices and enforce the statutory limits on purchasing securities with borrowed funds.

D. Recommendations

Based upon the Subcommittee investigation and findings of fact, the Report makes the following recommendations.

1. **Collect Additional Taxes Owed on Basket Option Profits.** The IRS should audit the hedge funds that used Deutsche Bank or Barclays basket option products, disallow any characterization of profits from trades lasting less than 12 months as long-term capital gains, and collect from those hedge funds any unpaid taxes.

2. **Stop Bank Participation in Abusive Tax Structures.** To end bank involvement with abusive tax structures, federal financial regulators, as well as Treasury and the IRS, should intensify their warnings against, scrutiny of, and legal actions to penalize bank participation in tax-motivated transactions.

3. **Revamp TEFRA.** Treasury and the IRS should revamp the Tax Equity and Fiscal Responsibility Act (TEFRA) regulations to reduce impediments to audits of large partnerships like hedge funds, and Congress should consider amendments to TEFRA to facilitate those audits.

4. **Stop Circumvention of Leverage Limits.** The Financial Stability Oversight Council, working with other agencies, should establish new reporting and data collection mechanisms to enable financial regulators to analyze the use of derivative and structured financial products to circumvent federal leverage limits on purchasing securities with borrowed funds, gauge the systemic risks, and develop preventative measures.

II. BACKGROUND

This chapter provides an overview of the nature, mechanics, and tax and securities implications of derivatives, options, and basket options. It also reviews key tax principles and provisions, a 1999 statutory change that attempted to stop option abuses, and the IRS' decision making related to basket options.

A. General Description of Derivatives

A financial "derivative" is a broad term covering a variety of different financial instruments, all of which share the common property that their value is dependent upon an underlying asset.[4] Derivatives can take numerous forms, including options, swaps, futures, forwards, structured debt obligations, and others.[5] Derivatives can also be traded in two different ways: some are traded through standardized instruments over exchanges, while others are traded privately through individualized contracts, also called "over-the-counter," "bilateral," or "bespoke" derivatives.[6]

Derivatives can be used to trade for profit, alter the risk-reward profile of some other asset, or make risky and sometimes leveraged bets on the future value of equities, options, bonds, interest rates, companies, or even financial markets as a whole.[7] Also, they are often used by large banks to hedge or reduce financial risks related to a variety of complex transactions.[8] Derivatives can also be designed to operate in tandem, and combinations of options, forwards, swaps, or more esoteric transactions can be used to engineer economic returns equivalent to any single derivative or to ownership of the underlying positions.[9]

(1) Taxes, Leverage Limits, and Transparency Problems

A derivative is, in essence, a financial bet. In many cases, it allows the derivative holder to obtain the same economic effect as if the holder owned the relevant financial instrument, such as a bond or shares of

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[4] 12/2/2011 "Present Law and Issues Related to the Taxation of Financial Instruments and Products," prepared by the Joint Committee on Taxation, JCX-56-11, at 7, https://www.jct.gov/publications.html?func=startdown&id=4372.
[5] 1/1/1997 "Risk Management of Financial Derivatives," Comptroller's Handbook, at 1, http://www.occ.gov/publications/publications-by-type/comptrollers-handbook/deriv.pdf.
[6] Id.
[7] 12/2/2011 "Present Law and Issues Related to the Taxation of Financial Instruments and Products," prepared by the Joint Committee on Taxation, JCX-56-11, at 7-8, https://www.jct.gov/publications.html?func=startdown&id=4372.
[8] 1/1/1997 "Risk Management of Financial Derivatives," Comptroller's Handbook, at 1, http://www.occ.gov/publications/publications-by-type/comptrollers-handbook/deriv.pdf.
[9] 12/2/2011 "Present Law and Issues Related to the Taxation of Financial Instruments and Products," prepared by the Joint Committee on Taxation, JCX-56-11, at 44, https://www.jct.gov/publications.html?func= startdown&id=4372.

stock. However, instead of owning the instrument, the derivative holder can derive value by referencing the instrument and bet that it will go up or down in value.

Economically identical positions may sometimes be treated differently for tax purposes depending upon the nature of the financial instrument at issue. Derivatives can enable a taxpayer to elect a form of ownership that defers payment of taxes and characterizes income in the form most advantageous to the taxpayer.[10] Differences in the tax treatment of derivatives versus other types of financial instruments can also lead to market inefficiencies. First, resources may be wasted paying for tax planning on two economically equivalent positions.[11] Second, using derivatives to minimize the payment of tax may result in needlessly complex financial arrangements, and inefficient taxes in other areas to make up for the lost revenues.[12] Despite those problems, derivatives continue in some cases to receive more favorable tax treatment than other financial instruments.[13]

Derivatives have been used by taxpayers in the past to take advantage of "economic imperfections in the tax law" and lower their taxes.[14] In 2008, for example, the Subcommittee identified a situation in which U.S. financial institutions were using derivatives to assist hedge funds in avoiding taxes owed on U.S. stock dividends. The Subcommittee found that the banks were designing and engaging in swap transactions with those hedge funds to disguise stock dividend payments and avoid paying millions of dollars in dividend taxes each year.[15]

Derivative instruments may also be used to circumvent federal leverage limits.[16] Federal securities laws and financial regulations currently impose restrictions on the use of credit to purchase securities.[17] Those restrictions were developed after highly leveraged securities transactions contributed to the stock market crash of 1929, and imposed

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[10] Id. at 46.
[11] Id. at 47.
[12] Id.
[13] See, e.g., 26 U.S.C. § 865 (IRS source rule which treats derivative income as non-U.S. source income if it is paid to a recipient outside of the United States). The derivatives source rule means that, even if a U.S. bank makes the derivative payment from the United States, so long as the payment is sent to an offshore recipient, it would not be treated as U.S. source income and any taxes on that income could be deferred until the funds were returned to the United States.
[14] David M. Schizer, "Stick and Snakes: Derivatives and Curtailing Aggressive Tax Planning," 73 S. Cal. L. Rev. 1339, 1341 n.4 (2000).
[15] See "Dividend Tax Abuse: How Offshore Entities Dodge Taxes on U.S. Stock Dividends," U.S. Senate Permanent Subcommittee on Investigations, S. Hrg. 110-778 (Sept. 11, 2008).
[16] Leverage involves "the use of credit to enhance one's ability to speculate financially." See definition of leverage, Merriam Webster Dictionary, http://www.merriam-webster.com/dictionary/leverage.
[17] See, e.g., 15 U.S.C. § 78(g) (Section 7 of the Securities Exchange Act of 1934); Regulations T, U, and X, which are commonly referred to as the "margin rules." 12 C.F.R. § 220 (Regulation T); 12 C.F.R. § 221 (Regulation U); 12 C.F.R. § 224 (Regulation X).

losses, not only on stock speculators, but also on the banks and broker-dealers responsible for lending them funds.[18] Today, derivatives can be used to create more highly leveraged trading positions than otherwise permitted under current law, including by putting up significantly less collateral for a derivative trade than permitted for a direct purchase of a security.[19]

The extension of credit for securities transactions between customers and broker-dealers is governed by Regulation T.[20] Regulation T applies to customer accounts of U.S. broker-dealers and sets the margin requirements for stocks bought by customers on credit and used as collateral for the loan. Margin refers to the portion of the purchase price that the customer must deposit in cash as initial equity in the customer's securities trading account.[21] Those funds serve as collateral for the broker-dealer executing securities trades for the customer.[22] Under Regulation T, U.S. broker-dealers offering a U.S. prime brokerage account[23] to a client may lend that client up to 50% of the total price for stock purchases, but no more.[24]

Some market participants use various arrangements, including derivatives and structured financial products, to establish leveraged securities positions that far exceed Regulation T's margin limits. For example, in the case of a hedge fund with a basket option account in

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[18] See 9/2000 "Margin Requirements, Margin Loans, and Margin Rates: Practice and Principles," New England Economic Review, Peter Fortune, at 25.
[19] 3/4/2008 "Present-Law and Analysis Relating to the Tax Treatment of Derivatives" prepared by the Joint Committee on Taxation, JCX-21-08, at 4, https://www.jct.gov/publications.html?func=startdown&id=1319.
[20] Credit by Brokers and Dealers (Regulation T), 12 C.F.R. § 220.1(a).
[21] See "Purchasing on Margin, Risks Involved With Trading in a Margin Account," prepared by Financial Industry Regulatory Authority (FINRA) http://www.finra.org/Investors/SmartInvesting/AdvancedInvesting/MarginInformation/P005927.
[22] Id.
[23] A "prime broker" is a large financial institution that offers a set of services to hedge funds and large institutional clients. The services are typically bundled together and include execution of trades, settlement, financing, and custody services. Money managers typically use the services to trade with multiple brokerage houses while maintaining cash and assets in a master account at the prime broker, referred to as a "prime brokerage account." See "Financial Glossary: Prime Broker," prepared by NASDAQ, http://www.nasdaq.com/investing/glossary/p/prime-broker; Wikipedia definition of "prime brokerage," http://en.wikipedia.org/wiki/Prime_brokerage.
[24] Credit by Brokers and Dealers (Regulation T), 12 C.F.R. § 220.12(a). The leverage limit may also be set by the regulatory authority where the trade occurs. Id. "Joint Back Office" (JBO) and international prime brokerage accounts offer two alternatives for hedge funds seeking higher leverage. JBO arrangements have been given an exemption from Regulation T and are permitted leverage of 7.6 times. JBO arrangements require the margin lender and margin borrower to form a joint venture, creating a closer association than is typical for a prime brokerage relationship. The SEC also requires JBO accounts to be placed with a registered prime broker. See "Information Memo 00-8," prepared by the New York Stock Exchange, http://www.nyse.com/nysenotices/nyse/rule-changes/detail;jsessionid= 074AD9FCCC9CA438C8130FB91BE50B48?memo_id=00-8; Subcommittee interview of Mark Silber, RenTec (6/10/2014). In addition, after 1998, much higher margins could be "arranged" by U.S. banks and broker-dealers between a borrower and a lender based outside of the United States in a jurisdiction allowing higher leverage. See Credit by Brokers and Dealers (Regulation T), 12 C.F.R. § 220.1(a).

which a bank has agreed to lend 90% of the funds to be invested, the hedge fund could pay a premium of $1,000 to the bank and gain access to $10,000 for trading in the market. Because the bank supposedly owns the securities in the option account, it is supposedly supplying funds to that account for its own trading, rather than lending money to the hedge fund, even though the hedge fund is conducting the trading and taking all of the profits. By using this "option" account rather than a regular prime brokerage account, the hedge fund and the bank claim they can circumvent the leverage limits in Regulation T.[25]

Some derivative transactions may also create transparency problems. For example, a derivative may provide an opportunity for a purchaser to avoid the ownership reporting requirements under the securities laws. Schedule 13D requires any person with a beneficial ownership interest of more than 5% of any class of publicly traded securities in a company to report that interest in a filing to the SEC.[26] A purchaser who wants to acquire more than 5% of a company may delay reporting the transaction to the SEC by using a swap transaction to achieve the economic equivalent of owning that portion of the shares.[27]

These leverage and transparency problems have been known for many years, but neither the SEC, bank regulators, nor the new Financial Stability Oversight Council have obtained the data needed to fully analyze the extent of leverage in the U.S. financial system, gauged the nature and extent of the systemic risks, or taken action to address the impact of derivatives and structured financial products on federal leverage limits and disclosure obligations.

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[25] See "Purchasing on Margin, Risks Involved With Trading in a Margin Account," prepared by Financial Industry Regulatory Authority, http://www.finra.org/Investors/SmartInvesting/AdvancedInvesting/MarginInformation/ P005927.

[26] "Schedule 13D," U.S. Securities and Exchange Commission, https://www.sec.gov/answers/sched13.htm, (last visited June 26, 2014).

[27] 7/1/2006 "What Every Investor Should Know Before Acquiring a Large Stake in a Public Company," prepared by Davis Polk & Wardwell, at 2, http://www.davispolk.com/files/07_13_06_PrivateEquityNews_jul_06.pdf ("[I]t is broadly accepted on [Wall] Street that an investor may increase its economic interest in an issuer's securities beyond 4.9 percent without the need to make a 13D ... filing if it does so via a derivative contract that is both by its terms and in fact cash-settled."). In a 2013 Guidance Update, the SEC addressed concerns that funds inadequately disclose derivative interests. The SEC has encouraged mutual funds, through Form N-1A, and closed-end funds, through Form N-2, to provide specifically tailored disclosures for any principal investment strategies related to derivatives. To combat the transparency issue, the SEC has called on funds to continually assess the completeness and accuracy of their derivatives-related disclosures in their registration statements to ensure they are consistent with actual operations. 8/1/2013, "Guidance Update Disclosure and Compliance Matters for Investment Company Registrants That Invest in Commodity Interests," prepared by the SEC Division of Investment Management, No. 2013-05, at 2-3, http://www.sec.gov/divisions/investment/guidance/im-guidance-2013-05.pdf.

(2) Options

An option is a form of derivative transaction. In general terms, an option is a "contract between two parties that gives the holder of the option the right but not the obligation to buy from (in the case of a call option) or sell to (in the case of a put option) the issuer of the option a specified amount of property ... at a fixed price and specified time."[28] In the case of options on stock or other types of equity, an option on the underlying equity is a "contract that gives the holder of the option the right, but not the obligation, to buy from or to sell to the counterparty to the contract ... a specified number of shares of [an underlying] equity security, at a fixed price."[29]

The forms and terms of options can vary greatly. A "European style" option, for example, can be exercised by the buyer only on a specified date, while an "American style" option can be exercised by the buyer any time prior to the final date on which the option expires.[30] The option buyer pays the option seller a "premium" for the option, which can vary with the terms of the option.[31] This premium is usually paid at the start of the option and is the potential profit for the option seller.[32] Options also have a "strike price," which is the price specified in the option contract at which the buyer may purchase the underlying property when exercising the option.[33] The final day on which an option may be exercised is generally called the "exercise date" or "maturity date."[34] Options are often priced using the Black-Scholes model, which takes into account several factors including the volatility of the price of the underlying assets, the duration of the option, and the strike price as compared to the market price of the underlying assets.[35]

Options and other derivatives can be used as tools to manage risk, especially in the prices of raw materials or in financial transactions that

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[28] 12/2/2011 "Present Law and Issues Related to the Taxation of Financial Instruments and Products," prepared by the Joint Committee on Taxation, JCX-56-11, at 1, https://www.jct.gov/publications.html?func=startdown&id=4372.
[29] 3/4/2008 "Present Law and Analysis Relating to the Tax Treatment of Derivatives," prepared by the Joint Committee on Taxation, JCX-21-08, at 32, https://www.jct.gov/publications.html?func=startdown&id=1319.
[30] 5/1973 "The Pricing of Options and Corporate Liabilities," Journal of Political Economy, volume 81, No. 3, Fischer Black and Myron Scholes, at 637, http://www.jstor.org/stable/1831029.
[31] 3/4/2008 "Present Law and Analysis Relating to the Tax Treatment of Derivatives," prepared by the Joint Committee on Taxation, JCX-21-08, at 5, https://www.jct.gov/publications.html?func=startdown&id=1319.
[32] Id.
[33] Id.
[34] "The Pricing of Options and Corporate Liabilities," Journal of Political Economy, volume 81, No. 3, (May-June 1973), at 637, http://www.jstor.org/stable/1831029.
[35] Id.

must be hedged to avoid losses.[36] Options can also be used speculatively to profit from securities transactions and even obtain leverage beyond the amount permitted by federal margin regulations.[37] For example, an option may have a premium of only $5 on a stock that costs $100 a share. A purchaser with $1,000 could then buy 10 shares of the stock or options on 200 shares of the same stock.

(3) Basket Options On a Basket of Securities

A basket option is typically an over-the-counter or negotiated derivative transaction between an option seller and buyer on an underlying set of assets. The structure investigated by the Subcommittee involved cash-settled basket options on a designated account containing an ever-changing basket of securities. When exercised, the option was settled with a cash payment to the option holder rather than providing the option holder with the assets in the basket. The amount of the cash payment reflected the profits earned on the basket as of the date the option was exercised.

The option buyer – which in the cases examined by the Subcommittee was always a hedge fund – purchased the option on the performance of the basket of securities which were held in a proprietary trading account– called a "managed account" – belonging to the option seller, the bank.[38] Although the account is opened in the name of the bank, the hedge fund served as the investment advisor to the managed account through an investment advisory agreement with the bank. In that role, the hedge fund had the exclusive right and discretion to determine what assets were purchased for and sold from the bank's account, subject to basic guidelines to reduce risk specified in the investment advisory agreement.[39] In the confirmation stating the terms

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[36] 12/2/2011 "Present Law and Issues Related to the Taxation of Financial Instruments and Products," prepared by the Joint Committee on Taxation, JCX-56-11, at 7, https://www.jct.gov/publications.html?func=startdown&id=4372.
[37] Id. at 8.
[38] A "managed account" is "an investment portfolio one or more clients entrusted to a manager who decides how to invest it." "Financial Glossary: Managed Account," prepared by NASDAQ, http://www.nasdaq.com/investing/glossary/m/managed-account. In this case, the managed account opened to carry out the basket option contract is called a "proprietary" account, because it is formally set up in the name of the bank, rather than in the name of a client, such as the option holder.
[39] For example, the Investment Advisory Agreement between Deutsche Bank and RenTec gave RenTec "discretion and without prior consultation" to execute trades in the managed account. It also contained certain limits and guidelines on what assets could be selected for the account. For example, RenTec agreed with Deutsche Bank not to own more than 4% of the shares of any one issuer, not to acquire more than 5% or more of any class of voting security, and not to trade equities on the bank's restricted list. 12/15/2008, "Master Investment Advisory Agreement: Execution Copy," Deutsche Bank and RenTec, DB-PSI 00000001-047, at 022-025. Otherwise, RenTec had complete discretion to identify assets to be acquired for the managed account. "[T]he Advisor shall … have full power, authority and right to … supervise and direct the investment and reinvestment of all assets in the Accounts, and engage in such transactions on

of the option, the managed account was defined to include all of the assets and only the assets selected by the hedge fund, subject to the investment advisory agreement guidelines.[40]

For each basket option, the managed account served dual roles. In its first role, the account was described as serving as the reference for the option, so that the performance of the assets in the account determined the amount of gain or loss that the hedge fund realized when it exercised the option. In its second role, the managed account was described as serving as a "hedge" for the bank that sold the option, with the profits from the trades made in the account available to pay what was owed to the hedge fund when the hedge fund exercised the option.[41]

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behalf of the Client's Account, in the Advisor's discretion and without prior consultation with the Client, subject only to the terms of this agreement." Id. at DB-PSI 00000001-002.

[40] For example, to ensure that the investment advisor had complete control over the account, the Investment Advisory Agreement between Deutsche Bank and RenTec specified that, if an order placed by RenTec was not executed, or was subsequently undone without orders from RenTec, the assets that were supposed to have been purchased would still be considered to be part of the reference account for purposes of calculating the option's gain or loss. See, e.g., 10/8/2009 "Barrier Option Transaction No. 941-50310 Pursuant to the 1992 ISDA Master Agreement as supplemented in December 15, 2008," DB-PSI 001130213-241 at 222 (defining the basket as consisting of "positions that (i) actually result from transactions specified by the Investment Advisor ... or (ii) are Designated Positions (as such term is defined in the Master Investment Advisory Agreement ...)"; 12/15/2008 "Master Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank and RenTec, DB-PSI 00000001-047, at 002 (defining a designated position as any position "rejected," "unwound," or "liquidated" by the Client "without the direction of the Advisor").

[41] In interviews with the Subcommittee and in some documents presented to the IRS, copies of which were provided by RenTec to the Subcommittee, RenTec insisted that, rather than one account with dual roles, the basket option structure actually created two distinct accounts: a reference account and a hedge account. Subcommittee interviews of Jonathan Mayers, RenTec (5/28/2014), Peter Brown, RenTec (6/3/2014); and Mark Silber, RenTec (6/10/2014). RenTec told the Subcommittee that the hedge account consisted of physical stocks that the bank actually held, and claimed that RenTec had no idea what physical assets were actually in that hedge account. RenTec claimed it was familiar with and had control over only the reference account, which was a "synthetic" account with no actual assets.

Despite RenTec's insistence on the existence of two accounts, the legal documents governing the basket option structures used by RenTec and the banks make no mention of two accounts. All of the investment advisory agreements mention only a single account made up of a combination of effected (actually held) and designated (hypothetical) positions. See, e.g., 12/15/2008, "Master Investment Advisory Agreement," signed by Deutsche Bank and RenTec, DB-PSI 00000001-047; 12/6/2006 "Amended and Restated Investment Management Agreement," signed by Barclays and RenTec, RT-PSI-00134963. In addition, as a practical matter, in each of the basket option trades examined by the Subcommittee, all trades were accounted for and executed through a single, designated account which was managed at the direction of the investment advisor. The basket option participants provided no documentation or paperwork suggesting the existence of two distinct accounts operating in tandem.

Deutsche Bank also informed the Subcommittee that in the entire course of over a decade of MAPS transactions, it had never created even a single synthetic "designated position." See Deutsche Bank responses to Subcommittee supplemental questions (6/20/2014). In other words, all trades ordered by the hedge funds in conformance with the investment guidelines in the Investment Management Advisory Agreement had been executed and the resulting assets held in the trading accounts. Barclays documents similarly indicated that, as a matter of standard practice, all of the referenced trades had been fully hedged through physical trades in the designated option account, with "no leakage." 5/19/2010 email from Edward Sherwood to Brett Beldner of Barclays, "COLT XIX – Draft SCM Approvals Notification," BARCLAYS-PSI-010082. In a presentation on the restructuring of MAPS transactions, Deutsche Bank stated that

Since the hedge fund's gain or loss under the option was determined by the gain or loss in the managed account, as long as the bank executed all of the trade orders made by the hedge fund as the Investment Advisor, the value of the holdings in the managed account would match and cover the cost of any gain due to the hedge fund when the option was exercised.[42] Both Deutsche Bank and Barclays told the Subcommittee that they always executed the trades directed by the hedge fund acting as the Investment Advisor to ensure sufficient funds to pay off the option when exercised and to ensure the banks remained economically neutral with respect to the trading activity conducted by the hedge fund, acting as both Investment Advisor and option holder.[43]

In addition, in many of the basket options examined by the Subcommittee, the option buyer, the hedge fund, paid a cash premium equal to about 10% of the funds intended to be invested from the managed account and the bank then provided financing for the remaining 90%, charging interest on the funds provided by the bank. In other words, if the hedge fund paid a $1 million premium into the basket option account, the bank could deposit another $9 million into the account, giving the hedge fund, as Investment Advisor, a total of $10 million to invest, while charging interest on the $9 million loaned to the account. This financing arrangement greatly increased the amount of funds that the hedge fund, as Investment Advisor, had available to invest. It also magnified the potential investment profits or losses from the managed account.

Upon exercise, the hedge fund benefited from the option if the value of the securities in the managed account increased during the option period, while its risk of loss was limited to the amount of the premium it had paid to the bank. In other words, to continue the earlier example, if the account began experiencing losses, the hedge fund's

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it had "rejected [designated positions'] execution or liquidated the holding for various business (i.e., hedging) reasons." See "Renaissance Technologies: MAPS Restructuring Highlights," prepared by Deutsche Bank, RT-PSI-00068592-599, at 594. When asked about the trades, RenTec Co-CEO Peter Brown told the Subcommittee that, "as a first order" he assumed that "they [the banks] hedged every single transaction." Subcommittee interview of Peter Brown, RenTec (6/3/2014).

[42] According to RenTec Co-CEO Peter Brown, the option was a "delta 1" option, meaning that its value perfectly tracked the value of the underlying assets. Subcommittee interview of Peter Brown, RenTec (6/3/2014). Barclays risk management personnel also confirmed that this was a "delta 1 option" and explained to the Subcommittee that basket options did not pose either "market risk" or "credit risk" for the bank. Subcommittee interview of Lansford Dyer, Barclays (4/3/2014). In addition, Barclays represented to its regulator, the Financial Services Authority, that the COLT structure "does not give rise to market risk within Palomino Limited. As such it is equivalent to a forward sale." 9/5/2002 letter from Barclays to the Financial Services Authority, "Project COLT," BARCLAYS-PSI-005260-261.

[43] See "Renaissance Technologies: MAPS Restructuring Highlights," prepared by Deutsche Bank, RT-PSI-00068592-599, at 594; Subcommittee interviews of Eamon McCooey, Deutsche Bank (5/2/2014) and Martin Malloy, Barclays (5/1/2014). See also Subcommittee interview of Jonathan Mayers, RenTec (5/28/2014).

losses would be limited to the $1 million premium it had deposited into the account. In contrast to the hedge fund which conducted the trades and benefited from the resulting profits or losses, the bank benefited from the option transaction primarily from fee revenues generated from the financing and trading fees it charged to the option holder for the trading activity in the managed account. The bank also benefitted from the revenues generated from its ability to lend out securities contained in the managed account.

The hedge fund also supposedly benefited from a certain amount of compensation paid by the bank for performing investment advisory services for the managed account. That compensation in at least one case was substantially below the standard hedge fund fees charged in the market for years, presumably because the hedge fund was investing on behalf of itself and not for the bank. For example, for years, RenTec was paid a minimal fixed fee by both Deutsche Bank and Barclays for acting as an Investment Advisor to basket options accounts at those institutions. Moreover, the banks did not pay the fee separately. Instead, the fee was subtracted from the option account's trading profits that would otherwise have been paid to the hedge fund upon exercise of the option. In 2008, Deutsche Bank increased the fee to give it the appearance of being in the range of a standard fee, but continued to deduct it from the trading profits in the option account. By agreeing to subtract the investment advisory fee from the trading profits otherwise owed to the hedge fund investors upon exercise of the option, the hedge fund's compensation was essentially limited to the total amount of profits produced by the trading strategy it directed.

Basket Option Advantages. A basket option constructed according to the terms just described are alleged to create several advantages for the buyer and the seller. First, because the option purports to act as a synthetic derivative product rather than as the direct trading of a portfolio of real assets, the option buyer pays only a small premium to participate in the trading of the assets. Second, the option enables the option buyer to gain financing for its securities investments far in excess of the Regulation T limits on leverage that would apply if it had purchased the securities directly through a prime brokerage account.[44] Essentially, Regulation T limits the leverage in a margin account to a ratio of 2:1, while the basket options arrangements reviewed by the Subcommittee generated a leverage ratio of as much as 20:1.

Third, the banks claimed that the basket options shifted the risk of short-term catastrophic market events from the option buyer to the option seller. Normally, the owner of a brokerage account bears the

[44] See Credit by Brokers and Dealers (Regulation T), 12 C.F.R. § 220.1(a).

entire risk of losses on its holdings and can be forced to satisfy margin calls on its account or go into default. In a basket option structure, however, the option buyer's loss is limited under the basket options contracts to the amount of its premium. For example, if a hedge fund paid a $1 million premium, and the bank supplied $9 million in additional financing, even if the account losses exceeded $1 million, the hedge fund's loss would be capped at that amount. At the same time, the basket option contracts included provisions that permitted the banks to terminate any option in which substantial losses began to accumulate prior to exhausting the entire premium, thereby minimizing the risk of loss to the bank.[45] If the securities in the managed account dropped in value by more than the premium, despite provisions included in the option contract to preclude such additional losses, the option ceased to exist ("knocked out") and the option holder received nothing, while the option seller, in this case a major bank, bore the remainder of any additional loss.

The option seller benefits from the basket option arrangement through receipt of the premium and, in the case where the seller also provides financing for the purposes of leverage, from fees paid in exchange for the loans.[46] It also earns fees from executing transactions for the managed account which, in the case of high volume trading, can be substantial. In addition, the option seller can protect against any financial loss by hedging the option through the managed account and using the profits from the transactions in that account to cover any gains owed to the option buyer.

Potential Tax, Leverage, and Transparency Abuses. Basket options are vulnerable to the same tax, leverage, and transparency abuses identified above for derivatives generally. Of particular concern in the Subcommittee's investigation is abuse of basket options to avoid tax. Option buyers have used the basket option structure to characterize short-term trading profits from the daily trading activity in the managed account as long-term capital gains for tax purposes. Option buyers have claimed that those profits were entitled to long-term capital gains treatment, because the option itself was held open for more than one year and thereby lowered the tax rate an investor had to pay on the gains paid out upon the exercise of the option. Option buyers have also

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[45] The Deutsche Bank MAPS options authorized the bank to take over the account and liquidate the assets when the losses hit a threshold level equal to a specified portion of the premium, while the Barclays COLT options authorized the bank to take over the account and liquidate the assets when the losses extinguished the entire premium. Subcommittee interview of Satish Ramakrishna, Deutsche Bank (5/16/2014); 12/6/2006 "Amended and Restated Investment Management Agreement," signed by Barclays and RenTec, RT-PSI-00134963-5013, at 4973.

[46] The seller of the option used part of the premium to fund the initial purchase of the referenced assets that were held in the basket portfolio. The remainder of the premium – generally 20% - 25% of the total premium – was taken by the option seller as a financing fee for the leverage that it was providing to the hedge fund.

claimed that they were not required to recognize any taxable gain from dividends paid on securities in the managed account until the option is exercised, despite the fact that the option buyer was credited with the gains from those dividends prior to any exercise of the option. In addition to those tax abuses, basket options can be used to circumvent the leverage limits in Regulation T and the reporting requirements in Schedule 13D, as indicated earlier.

B. Overview of Tax Principles

To understand the tax issues raised by basket options, it is useful to review key tax principles involving the taxation of capital gains and stock dividends; an existing tax code section, Section 1260, that sought to stop the use of abusive derivatives, including options; and the judicial doctrine warning taxpayers against elevating form over substance to avoid taxation. Also relevant is a 2010 IRS advisory memorandum determining that basket option arrangements did not entitle the option holders to treat their short-term trading profits as long-term capital gains.

(1) Short and Long-Term Capital Gains Tax Treatment

Because basket options involve the trading of securities, one key tax issue involves the taxation of capital gains, and whether those gains should be taxed at the short or long-term rate. A related issue is when the gains are realized.

The profit realized from the sale of a capital asset is known as a capital gain.[47] Capital assets include stocks, options, bonds, precious metals, and real property held for investment.[48] When such an asset is sold, the difference between the amount paid for the asset and the amount for which it is sold is a capital gain.[49] When an asset is owned by a taxpayer for one year or less and sold, the gain is considered a "short-term" capital gain, and when the asset is held for more than a year at the time of sale, the gain is classified as a "long-term" capital gain.[50]

Long-term and short-term capital gains have long been taxed at different rates for individuals under the Internal Revenue Code.[51] To encourage long-term investments in the economy, the tax code has applied more favorable tax rates to longer term investments held by individuals, while short-term capital gains have been taxed at the

[47] 2/27/2014 "Topic 409-Capital Gains and Losses," prepared by IRS, http://www.irs.gov/taxtopics/tc409.html.
[48] Id.
[49] Id.
[50] Id.
[51] Id.

taxpayer's ordinary income tax rate.[52] For example, if a taxpayer's ordinary income were taxed at a marginal rate of 35%, the taxpayer would pay that same tax rate on any short-term capital gains. In contrast, any long-term capital gains reported by the individual would currently be taxed at a rate of 20%. The level of the reduced rate for long-term capital gains has fluctuated since the introduction of personal income taxes in 1913.[53] During the period 2008 to 2012, for example, the long-term capital gains tax rate was 15%.[54]

Timing of Income. For federal income tax purposes, a "realization" event – an event in which a taxpayer realizes income – is required to determine the amount of taxable income from a capital asset that must be reported on a tax return. The Supreme Court described realization events as "undeniable accessions to wealth, clearly realized, and over which the taxpayers have complete dominion."[55] A taxpayer generally may not choose the timing of income to minimize the taxpayer's tax burden.[56] In other words, a taxpayer has realized and must report taxable income whenever the taxpayer sells a financial instrument, such as shares of stock, and experiences a financial gain.

In the case of derivatives, realization events under I.R.C. §1001 can occur at several different times. Often derivatives, such as options, are considered open transactions, which are not taxed during their life, but are instead taxed at a realization event, usually when the option is exercised or sold.[57] Other sections of the tax code mandate realization events, such as requirements that certain financial instruments be assigned a market value ("marked to market") on a regular or annual basis.[58] Additionally, even if the realization of income from a capital asset could otherwise be deferred, events that represent material or fundamental changes to that asset can result in an immediate realization event that requires the taxpayer to report the gain or loss on the taxpayer's tax return.[59]

Taxation of Hedge Fund Investors. Hedge funds are often organized as limited partnerships. Typically, the general partner of the hedge fund acts as the investment advisor and administers the fund,

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[52] Id.
[53] 4/11/2007 "Individual Capital Gains Income: Legislative History," prepared by Congressional Research Service, http://congressionalresearch.com/98-473/document.php?study=Individual+Capital+Gains+Income+Legislative+History.
[54] 6/13/2013 "Federal Capital Gains Tax Rates, 1988-2013," prepared by the Tax Foundation, http://taxfoundation.org/article/federal-capital-gains-tax-rates-1988-2013.
[55] Comm'r of Internal Revenue v. Glenshaw Glass Co., 348 U.S. 426, 431 (1955).
[56] 12/2/2011 "Present Law and Issues Related to the Taxation of Financial Instruments and Products," prepared by the Joint Committee on Taxation, JCX-56-11, at 16, https://www.jct.gov/publications.html?func=startdown&id=4372; see 26 U.S.C. § 1001.
[57] Id. at 34.
[58] Id. at 17.
[59] See 26 U.S.C. § 1001.

while investors provide the capital for the fund and hold limited partnership interests. Because the funds are taxed as partnerships, they are not taxed at the entity level, like a corporation, and are instead treated as pass-through entities for tax purposes. In other words, taxes owed by the partnership are not paid by the partnership, but are instead passed on to each individual partner who becomes responsible for paying any taxes owed. Because hedge funds are not taxed at the entity or fund level, the fund distributes to its investors their proportionate share of the fund's gains and losses for tax purposes. Investors are required to report the gains or losses on their individual tax returns based upon the character of the income or gain earned by the fund. Investors pay taxes on the gains or losses at the short-term capital gains rate if the investment was held by the fund for a year or less, and taxes at the long-term capital gains rate if the fund held the investment for more than one year.

(2) Taxation of Stock Dividends

Because basket options involve the trading of securities, another key tax issue involves the taxation of stock dividends.

Dividends Generally. A dividend is a distribution by a corporation of a portion of its earnings to its stockholders, with the amount to be distributed based upon the number of shares held by each stockholder. If the dividend recipient is a U.S. person, at the end of the calendar year, the recipient must report all dividends received on the recipient's tax return as part of that taxpayer's taxable income.[60] Under the tax code, U.S. stock dividends are treated as ordinary income and taxed at the ordinary income tax rate, unless they fall into a special category of "qualified dividends" in which case they are taxed at a 0%, 15%, or 20% rate depending on the tax bracket of the taxpayer.

Dividend Withholding. Different rules apply to stock dividends paid by U.S. corporations to nonresident alien individuals or non-U.S. corporations, partnerships, or other entities ("non-U.S. persons"). Dividends paid to non-U.S. persons that are not connected with a U.S. business are subject to a tax rate of 30%, absent a tax treaty between United States and the non-U.S. person's country of residence setting a lower rate.[61]

U.S. tax law also requires the 30% tax to be "deducted and withheld at the source" of the dividend payment being made to the non-U.S. person.[62] The purpose of this requirement is to ensure that the tax

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[60] Id.
[61] See 26 U.S.C. §§ 871(a)(1)(A) and 881(a)(1); 3/27/2014 "United States Income Tax Treaties - A to Z," prepared by IRS, http://www.irs.gov/Businesses/International-Businesses/United-States-Income-Tax-Treaties---A-to-Z.
[62] 26 U.S.C. §§§ 1441(a), 1441(b), and 1442(a).

owed on the dividend payment is withheld and remitted to the IRS, before the dividend payment leaves the United States, since the United States is generally without authority to compel collection of U.S. taxes outside of its borders.[63]

The tax code's tax withholding regime for U.S. stock dividends has been in place for decades.[64] The law requires the U.S. withholding agent to withhold the appropriate amount of tax from the dividend payment and remit the withheld amount to the IRS, before sending the rest of the dividend payment to the non-U.S. recipient.

Dividends and Basket Options. The dividend and capital gains tax requirements apply to all transactions involving securities. In the case of the basket options examined in this investigation, if a stock held in an options trading account were to pay a dividend, that dividend was typically paid to the bank in whose name the stock was held. The bank then credited the dividend amount to the appropriate options account, increasing the total amount of trading profits in that account.

Some basket options proponents claim, as explained earlier, that the basket option arrangement enables the option holder to treat those stock dividends as incorporated into the option's overall gains, which can qualify as long-term capital gains if the option is exercised more than one year from inception. Some also claim that including the dividends in the option's overall gains could enable the hedge fund's investors to defer paying tax on the dividends to a year later than the year in which the dividends were paid, depending upon when the option is exercised. In addition, some might claim that the option arrangement could enable a non-U.S. hedge fund to claim a lower tax rate than the 30% withholding rate that applies to some dividends paid to non-U.S. persons. Each of those claims depends upon the validity of the option structure, and whether or not preferential tax treatment should be given to dividends that are paid into an option account compared to dividends that are paid into a regular brokerage account without a basket option structure.

If the IRS were to disregard the option structure, treat the hedge funds as owning the underlying securities, and take note of the dividends paid by the hedge funds to their non-U.S. partners, the IRS might determine that the banks or the hedge funds failed to meet their withholding obligations and seek to collect the taxes that should have been withheld, plus interest and penalties.

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[63] See id.

[64] The first federal withholding statute was enacted in 1913; the first comprehensive set of IRS withholding regulations for nonresident aliens was issued in 1956. See 12/1/2007, "Tax Compliance: Qualified Intermediary Program Provides Some Assurance That Taxes on Foreign Investors are Withheld and Reported, but Can Be Improved," prepared by Government Accountability Office, GAO-08-99, at 6, http://www.gao.gov/new.items/d0899.pdf.

(3) Section 1260

During the 1990s, after some investors attempted to use derivatives, including options on hedge funds, to convert short-term trading profits into long-term capital gains subject to a lower tax rate, Congress enacted a new tax code provision, Section 1260, to stop the practice.[65] While that tax code provision demonstrated Congressional intent to stop abusive derivatives, including abusive options, its provisions were drawn narrowly to stop the problematic tax schemes then under scrutiny and have not since been expanded by regulation to capture similarly abusive structures. Nevertheless, Section 1260 provides historical context in analyzing the use of basket options to avoid taxes on short-term capital gains.

The abusive derivatives used prior to enactment of Section 1260 often involved an investment bank and hedge fund.[66] The goal of the strategy was to permit an investor in a hedge fund to convert their short-term gains from the hedge fund into long-term gains. The investment bank designed the derivative so that it functioned like an ownership interest in the hedge fund, with its value linked to the hedge fund's investment performance. The bank marketed the derivative to clients as an alternative to investing directly in the hedge fund.[67] To "hedge" its derivative, the investment bank became the partner in the hedge fund.[68] The strategy sought to allow the investment bank's clients to take advantage of the hedge fund's high pre-tax returns from short-term trading activity (which would normally be treated as short-term capital gains) using a derivative that would be held for over a year, contending that after the derivative was cashed out, the short-term trading profits could be treated as long-term capital gains.[69] At the time, the strategy was estimated to produce an 8% tax savings on the investment activity.[70]

In 1999, to stop the abuses, Congress enacted Section 1260. Section 1260 treats the profits from the "constructive ownership" of specified "financial assets" as ordinary income, not long-term capital gains.[71] The conference report from the House of Representatives explained that, without Section 1260: "[i]nvestors may enter into forward contracts, notional principal contracts, and other similar arrangements with respect to property that provides the investor with the same or similar economic benefits as owning the property directly but

[65] See, e.g., "Tax-Advantaged Hedge Fund Returns Under Code Sec. 1260," 3 J. Taxation of Financial Products 19, David M. Schizer (2002), http://heinonline.org/HOL/Page?handle=hein.journals/jrlfin3&div=18&g_sent=1&collection=journals#68.
[66] Id.
[67] Id. at 19.
[68] Id. at 20.
[69] Id.
[70] Id. at 19.
[71] 26 U.S.C. §1260 (a).

with potentially different tax consequences."[72] The conference report also explained that Section 1260 would limit "the amount of long-term capital gain a taxpayer could recognize from certain derivative contracts ('constructive ownership transactions') … to the amount of such gain the taxpayer would have recognized if the taxpayer held the financial asset directly during the term of the derivative contract."[73]

Section 1260 defined "constructive ownership" as applying to one of four types of transactions in which the taxpayer:

> "(A) holds a long position under a notional principal contract with respect to the financial asset,
>
> (B) enters into a forward or futures contract to acquire the financial asset,
>
> (C) is the holder of a call option, and is the grantor of a put option, with respect to the financial asset and such options have substantially equal strike prices and substantially contemporaneous maturity dates, or
>
> (D) to the extent provided in regulations prescribed by the Secretary, enters into one or more other transactions (or acquires one or more positions) that have substantially the same effect as a transaction described in any of the preceding subparagraphs."[74]

The statute also defined "financial asset" as an equity interest in any pass-thru entity (like an interest in a partnership), and authorized the IRS to write regulations to expand the definition of "financial asset" to cover stocks and bonds. Despite the statute's broad intent to stop taxpayers from misusing derivatives, including options, to treat short-term trading profits as long-term capital gains, the IRS has not used the regulatory authority granted in Section 1260 to capture transactions that are substantially similar to, but distinct from, those specified in the provision. So for example, while basket options mirror the abusive schemes prohibited by Section 1260, Treasury has not issued regulations that clearly capture basket options as one of the abusive structures prohibited by the provision.

According to some experts, it was understood at the time that option structures could continue to get around this section of the tax code by using a variety of strategies.[75] Despite the enactment of Section

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[72] H.R. Rep. No. 106-478, at 159 (1999) (Conf. Rep.).
[73] Id.
[74] 26 U.S.C. § 1260 (d)(1)(A-D). No regulations have been promulgated under section D.
[75] See, e.g., "Tax-Advantaged Hedge Fund Returns Under Code Sec. 1260," 3 J. Taxation of Financial Products 19, David M. Schizer (2002), http://heinonline.org/HOL/Page?handle=hein.journals/jrlfin3&div=18&g_sent=1&collection=journals#68.

1260, some financial institutions and hedge funds continued to market derivative strategies, including options, to transform short-term trading profits into long-term capital gains.

(4) Substance Over Form Doctrine

It has long been a principle of federal tax law that the substance of a transaction, and not its form, will determine the federal income tax consequences of the transaction.[76] In 1924, in one of its earliest articulations of the substance over form doctrine, the Supreme Court said: "Questions of taxation must be determined by viewing what was actually done, rather than the declared purpose of the participants. ... [W]hen applying ... income [tax] laws ... we must regard matters of substance and not mere form."[77]

According to the Joint Committee on Taxation of the U.S. Congress, while a taxpayer's legal right "to decrease the amount of what otherwise would be his taxes, or altogether avoid them, by means which the law permits cannot be doubted," the court "applied the sham transaction doctrine to deny the tax benefits" when the taxpayer's activity circumvents the purpose of the tax code.[78] One of the judicial doctrines used to deny such tax advantaged transactions designed to circumvent the Internal Revenue Code is the substance over form doctrine.[79] Again, according to the Joint Committee on Taxation: "The concept of the substance over form doctrine is that the tax results of an arrangement are better determined based on the underlying substance rather than an evaluation of the mere formal steps by which the arrangement was undertaken."[80]

The substance over form judicial doctrine permits the IRS to re-characterize a transaction according to its actual substance.[81] According to a leading tax expert, "to permit the true nature of a transaction to be disguised by mere formalisms which exist solely to alter tax liabilities would seriously impair the effective administration of the tax policies of Congress."[82] Under rulings of the Supreme Court, the substance over form doctrine allows the IRS and the courts to look holistically at a

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[76] See, e.g., Comm'r of Internal Revenue v. Court Holding Co., 324 U.S. 331, 334 (1945); Gregory v. Helvering, 293 U.S. 465, 470 (1935).
[77] Weiss v. Stearn, 265 U.S. 242, 254 (1924); "When Substance-over-Form Argument is Available to the Taxpayer," 48 Marq. L. Rev. 41, 42, J. Bruce Donaldson (1964).
[78] 11/10/1999 "Description and Analysis of Present-Law Tax Rules and Recent Proposals Relating to Corporate Tax Shelters," prepared by the Joint Committee on Taxation, JCX-84-99, at 7, https://www.jct.gov/publications.html?func=showdown&id=2846 (citing Gregory v. Helvering, 293 U.S. 465, 469 (1935)).
[79] Id. at 7.
[80] Id. at 18.
[81] Id. at 19.
[82] J. Bruce Donaldson, "When Substance-over-Form Argument is Available to the Taxpayer," 48 Marq. L. Rev. 41, 41 (1964).

transaction to understand its nature and bypass any titles or formalities used to disguise the transaction for tax purposes.[83] For example, the IRS may apply the substance over form doctrine in analyzing whether a derivative, such as an option, should more properly be analyzed as a direct investment in the underlying or referenced assets through the use of "a disguised agency arrangement" with a counterparty, since the derivative can be used to achieve economic returns indistinguishable from the direct investment in the underlying physical security.[84]

Step Transaction Doctrine. The step transaction doctrine is a corollary of the substance over form doctrine. It treats a series of separate transactions as a single transaction if the separate transactions were, in substance, steps that were intended to be "integrated" and "focused" toward a result to avoid taxation.[85] According to the Joint Committee on Taxation: "In determining whether to invoke the step transaction doctrine, the courts have looked to two primary factors: (1) the intent of the taxpayer, and (2) the temporal proximity of the separate steps."[86] Courts have held that the doctrine should not apply if the taxpayer can show that at the time the first of a series of steps was undertaken, the taxpayer did not intend to affect the other steps.[87] Courts have also held that the step transaction doctrine may apply even if a taxpayer can identify a valid business purpose. As one appeals court stated: "'[A] legitimate business goal does not grant [a] taxpayer carte blanche to subvert Congressionally mandated tax patterns.'"[88]

(5) 2010 IRS Basket Options Memorandum

On November 12, 2010, the IRS issued Generic Legal Advice Memorandum (GLAM) No. AM2010-005, determining that an option used to purchase a basket of securities that is essentially managed by the taxpayer holding the option should not be treated as an option for tax purposes.[89] Instead, the taxpayer should be treated as owning the

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[83] See Comm'r of Internal Revenue v. Court Holding Co., 324 U.S. 331, 334 (1945).
[84] 3/4/2008 "Present Law and Analysis Relating to the Tax Treatment of Derivatives," prepared by the Joint Committee on Taxation, JCX-21-08, at 13-14, https://www.jct.gov/publications.html?func=startdown&id=1319.
[85] 11/10/1999 "Description and Analysis of Present-Law Tax Rules and Recent Proposals Relating to Corporate Tax Shelters," prepared by the Joint Committee on Taxation, JCX-84-99, at 19-20, https://www.jct.gov/publications.html?func=showdown&id=2846 (citing Penrod v. Comm'r, 88 T.C. 1415, 1428 (1987)).
[86] Id. at 20.
[87] Id. (citing McDonalds Restaurants of Ill. v. Comm'r, 688 F.2d 520 (7th Cir. 1982)).
[88] AeroQuip-Vickers, Inc. v. Comm'r, 347 F.3d 173 (6th Cir. 2003) (citing Associated Wholesale Grocers, Inc. v. U.S., 927 F.2d 1517, 1526 (10th Cir. 1991) and quoting Kuper v. Comm'r, 533 F.2d 152, 158 (5th Cir. 1976)). See also Jacobs Eng'g Grp., Inc. v. U.S., No. CV 96-2662, 1997 WL 314167 (C.D. Cal. Mar. 5, 1997) (*aff'd,* without public opinion, No. 97-55647, 1999 WL 89057 (9th Cir. 1999) (ruling against the taxpayer, the court found that twelve short-term loans from CFC really functioned as a long-term loan lasting over two years)).
[89] 11/12/10 "Hedge Fund Basket Option Contracts," prepared by IRS Office of Chief Counsel Memorandum, at 2, http://www.irs.gov/pub/irs-utl/am2010005.pdf.

securities underlying the alleged option and pay the taxes owed on any capital gains.

GLAMs are issued by the Associate Chief Counsel of the IRS to provide authoritative legal opinions to IRS personnel on matters relevant to administering the federal tax code. While the IRS does not use or cite GLAMs as legal precedent in court, they provide authoritative information on the agency's views of key tax issues.[90]

The 2010 GLAM addressed an options structure involving a foreign bank and a hedge fund whose general partner had been made the investment advisor in charge of creating and trading the basket of securities that was the focus of the option. In the fact pattern set out in the GLAM, the hedge fund entered into an options contract with the foreign bank, with the option payoff equal to the gains produced by a "dynamic" basket of securities, also called the "Reference Basket."[91] The fact pattern described in the GLAM was analogous to the basket option structures at Deutsche Bank and Barclays examined in this investigation.

In the GLAM, the IRS concluded: (1) the contract did not function like an option, and should not be treated as an option; and (2) the taxpayer should be treated as the owner of the underlying securities, because it had control over the securities, had the full opportunity for gain, and bore the substantial risk of loss.[92] Refusing to elevate form over substance, the IRS rejected the contract's formalistic invocation of an option and determined instead that the hedge fund, in substance, owned the securities underlying the Reference Basket.[93] The GLAM observed that, to determine ownership of stock, the most relevant factors courts have considered are the ability to sell shares, the power to vote, the right to receive dividends, and the opportunity for gain and risk of loss.[94] The IRS concluded that the hedge fund had most of those attributes and should be treated as the tax owner of the securities in the basket, because the hedge fund had the opportunity for full gain, bore the substantial risk of loss, and had complete control over the securities

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[90] See 6/13/2014, "Legal Advice Issued by Associate Chief Counsel," prepared by IRS, http://www.irs.gov/uac/Legal-Advice-Issued-by-Associate-Chief-Counsel (GLAMs "are legal advice, signed by executives in the National Office of the Office of Chief Counsel and issued to Internal Revenue Service personnel who are national program executives and managers. They are issued to assist Service personnel in administering their programs by providing authoritative legal opinions on certain matters, such as industry-wide issues.").

[91] 11/12/2010 "Hedge Fund Basket Option Contracts," prepared by IRS Office of Chief Counsel Memorandum, at 2, http://www.irs.gov/pub/irs-utl/am2010005.pdf.

[92] Id. at 1.

[93] Id. at 9.

[94] Id. at 8. See also two 2010 Tax Court opinions consistent with this method of analysis. Anschutz v. Comm'r, 135 T.C. No. 5 (July 22, 2010); Calloway v. Comm'r, 135 T.C. No. 3 (July 8, 2010). The Court of Appeals for the Eighth Circuit has focused on the same factors in determining the ownership of mutual fund shares. See Christoffersen v. U.S., 749 F.2d 513 (8th Cir. 1984).

in the basket.[95] It also noted that the hedge fund bore the risk of loss up to its entire premium.[96] Even though the securities were held in the name of the foreign bank, the GLAM determined that the foreign bank did not bear substantial risk for the basket of securities, because it had rights to liquidate the securities or force risk-reducing trades.[97]

In essence, like this Report, the IRS determined that the basket option contracts had created fictional derivatives that should be disregarded for tax purposes.

[95] 11/12/2010 "Hedge Fund Basket Option Contracts," prepared by IRS Office of Chief Counsel Memorandum, at 9, http://www.irs.gov/pub/irs-utl/am2010005.pdf.
[96] Id.
[97] Id. at 10.

III. BASKET OPTION CASE STUDIES

The financial institutions that most extensively promoted and used the basket option structure from 1998 to 2013, were Deutsche Bank, Barclays, and hedge funds RenTec and George Weiss. The Subcommittee's case studies involving their actions illustrate how basket options have been used to circumvent taxes and federal leverage limits.

A. Basket Option Participants

(1) Deutsche Bank

Deutsche Bank AG (Deutsche Bank) was founded in 1870 and is headquartered in Frankfurt, Germany.[98] Deutsche Bank is the largest bank in Germany and one of the largest financial institutions in the world.[99] It had total assets of over $2.2 trillion as of December 31, 2013.[100] As of December 31, 2012, Deutsche Bank employed about 100,000 people on a full-time basis and operated over 3,000 branches worldwide in 72 countries, with nearly 50% of its employees located in Germany.[101] Deutsche Bank is a global investment bank and offers a wide variety of investment, financial, and related products and services to private individuals, corporate entities, and institutional clients around the world.

Deutsche Bank has offices in major centers including London and New York City.[102] It has eight major entities in the United States.[103] Deutsche Bank AG New York Branch deals with derivatives trading and standard deposit and currency transactions; the New York Branch, along with almost all other U.S. entities, is Deutsche Bank AG's subsidiary.[104] Other subsidiaries include Deutsche Bank Securities Inc., a SEC-registered broker dealer and investment advisor, and Deutsche Bank Trust Corporation, a bank holding company.[105]

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[98] "Chronicle - from 1870 until today," prepared by Deutsche Bank, at 2, 8, https://www.db.com/en/media/Deutsche-Bank-History - Chronicle-from-1870-until-today.pdf. See also "Addresses," prepared by Deutsche Bank, https://www.db.com/en/content/Addresses.htm.
[99] "Annual Financial Statements and Management Report of Deutsche Bank AG 2012," prepared by Deutsche Bank, at 2, https://agm.db.com/en/docs/Annual_Financial_Statements_and_Management_Report_Deutsche_Bank_ AG_2012.pdf.
[100] "Deutsche Bank AG (DB) Balance Sheet," Yahoo Finance, http://finance.yahoo.com/q/bs?s=DB&annual.
[101] 5/2013 "Deutsche Bank at a Glance," prepared by Deutsche Bank, at 9, 12, https://www.db.com/medien/en/downloads/Deutsche_Bank_at_a_glance.pdf.
[102] 10/31/2013 "Deutsche Bank Resolution Plan," prepared by Deutsche Bank, at 20, http://www.fdic.gov/regulations/reform/resplans/plans/deutschebank-165-1310.pdf.
[103] Id. at 5-9.
[104] Id.
[105] Id. at 5-6.

Deutsche Bank offers financial products and services for corporate and institutional clients along with business and high net worth clients.[106] Services include global banking; corporate finance; sales, trading and structuring of financial products; mergers and acquisitions; and investment and wealth management.[107]

Jürgen Fitschen and Anshu Jain are the current co-Chief Executive Officers of Deutsche Bank and were appointed to those positions in 2011.[108] Mr. Jain was previously head of Deutsche Bank's investment banking group.[109] In the United States, Jacques Brand has been the Chief Executive Officer of Deutsche Bank in North America since 2012.[110] He was previously the Global Head of Investment Banking Coverage and Advisory in Deutsche Bank's Corporate Banking and Securities division.[111]

Deutsche Bank Non-Prosecution Agreement. About ten years ago, Deutsche Bank became the subject of a series of investigations focused on its participation in abusive tax shelters from 1996 through 2002, which aided and abetted evasion of an estimated $5.9 billion in U.S. income taxes.[112] On December 21, 2010, Deutsche Bank and the U.S. Attorney for the Southern District of New York executed a non-prosecution agreement (NPA) related to the bank's involvement with the abusive tax shelters.[113] Under the agreement, the bank paid more than $550 million to the United States,[114] and the U.S. Attorney and the U.S. Department of Justice (DOJ) agreed not to prosecute Deutsche Bank

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[106] 5/2013 "Deutsche Bank at a Glance," prepared by Deutsche Bank, at 4, 8, https://www.db.com/medien/en/downloads/Deutsche_Bank_at_a_glance.pdf.
[107] Id.
[108] "Deutsche Bank Names Co-C.E.O.'s to Succeed Ackermann," The New York Times, Jack Ewing (7/25/2011), http://dealbook.nytimes.com/2011/07/25/deutsche-bank-taps-co-ceos-to-replace-ackermann/.
[109] Id.
[110] 11/1/2012 "Deutsche Bank appoints Jacques Brand and Bill Woodley as CEO and Deputy CEO of North America," prepared by Deutsche Bank, https://www.db.com/medien/en/content/3862_4221.htm.
[111] Id.
[112] 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York, to Deutsche Bank's counsel, "Deutsche Bank AG – Non-Prosecution Agreement," at 1, http://lib.law.virginia.edu/Garrett/prosecution_agreements/sites/default/files/pdf/deutschebank.pdf. See also "U.S Tax Shelter Industry: The Role of Accountants, Lawyers, and Financial Professionals," U.S. Senate Permanent Subcommittee on Investigations, S. Hrg. 108-473 (Nov. 18 and 20, 2003).
[113] 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York, to Deutsche Bank's counsel, "Deutsche Bank AG – Non-Prosecution Agreement," at 1, http://lib.law.virginia.edu/ Garrett/prosecution_agreements/sites/default/files/pdf/deutschebank.pdf.
[114] The $553,633,153 payment represented the fees Deutsche Bank earned from its participation in the tax shelter activity, the amount of taxes and interest the IRS was unable to collect from the taxpayers because of Deutsche Bank's activity, and a civil penalty of more than $149 million. 12/21/2010 "Deutsche Bank to Pay More Than $550 Million to Resolve Federal Tax Shelter Fraud Investigation," U.S. Attorney for the Southern District of New York Press Release, at 1, http://www.justice.gov/tax/usaopress/2010/deutschebankpr.pdf.

criminally for participating in abusive tax shelters benefiting its clients from 1997 to 2005, provided the bank met certain requirements.[115]

Those requirements included Deutsche Bank's continued cooperation with the DOJ in its tax shelter prosecutions, and appointment of an independent expert to oversee bank reforms to ensure the bank stopped participating in transactions used to defraud the IRS.[116] The NPA also banned Deutsche Bank's involvement with any pre-packaged tax products, which were the type of tax shelters that led to the criminal proceedings.[117] Bart Schwartz was selected to serve as the independent expert to monitor Deutsche Bank's actions.[118] In that position, Mr. Schwartz was responsible for evaluating the implementation and effectiveness of the bank's compliance measures.[119] Under the terms of the NPA, the government was also authorized to prosecute the bank for a violation of the NPA or to extend the tenure of the independent expert.[120]

During the multiple years in which the NPA was negotiated, the bank apparently made no mention of the MAPS product. As explained later, after a Federal Reserve Bank examination identified concerns with the MAPS product in 2012, Deutsche Bank, at the insistence of the Federal Reserve, brought the product to the attention of the U.S. Attorney for the Southern District of New York in connection with the NPA.[121] The bank contacted the U.S. Attorney's Office in August 2012, and engaged in several followup discussions and meetings.[122] Aside from those contacts, the Subcommittee is unaware of what, if any, actions were taken by the U.S. Attorney's Office in response. The NPA is still in effect.[123]

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[115] 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York, to Deutsche Bank's counsel, "Deutsche Bank AG – Non-Prosecution Agreement," at 1-6, http://lib.law.virginia.edu/ Garrett/prosecution_agreements/sites/default/files/pdf/ deutschebank.pdf.
[116] 12/21/2010 "Deutsche Bank to Pay More Than $550 Million to Resolve Federal Tax Shelter Fraud Investigation," U.S. Attorney for the Southern District of New York Press Release, at 1, http://www.justice.gov/tax/usaopress/2010/deutschebankpr.pdf.
[117] Id.
[118] Id. at 2.
[119] Id.
[120] 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York, to Deutsche Bank's counsel, "Deutsche Bank AG – Non-Prosecution Agreement," at 2-3, Exhibit B 8, http://lib.law.virginia.edu/Garrett/prosecution_agreements/sites/default/files/ pdf/deutschebank.pdf.
[121] Information provided by the Federal Reserve Bank of New York, (6/17 and 6/18/2014).
[122] Subcommittee briefing by Deutsche Bank counsel (6/2/2014 and 6/30/2014).
[123] A 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York ("SDNY"), to Deutsche Bank's counsel, entitled "Deutsche Bank AG – Non-Prosecution Agreement," contained the following language: "Unless otherwise stated in this Agreement, Deutsche Bank's obligations under this Agreement will continue until the later of (1) a period of two years from the date of the signing of this Agreement, or (2) the expiration of the tenure of the Independent Expert, as that term is defined in here." [Emphasis added.] However, under the following section of the letter (entitled "Continuing Obligation to Cooperate"),

(2) Barclays

Barclays Public Limited Company (BPLC) was founded in 1690, and is a public limited company based in London.[124] Barclays is one of the largest banks in the United Kingdom. It has total assets of nearly \$2.2 trillion as of December 31, 2013.[125] Barclays provides financial services in over 50 countries and employs approximately 140,000 people.[126] Since the closure of the U.K. Financial Services Authority (FSA) in 2013, Barclays is now regulated by the United Kingdom's Prudential Regulation Authority and Financial Conduct Authority.[127] In the United States, BPLC is a bank holding company that possesses nearly £1.5 trillion in consolidated assets and owns multiple U.S. entities, including Barclays Bank PLC New York Branch (BBPLC) and Barclays Capital Inc. (BCI), which is a registered broker-dealer.[128] Its five core lines of business are: (1) fixed income securities products such as mortgage-backed securities, (2) fixed income rates, (3) liquid equities products, (4) prime services such as margin and securities lending, and (5) fixed income credit.[129]

BCI is the market access point for customers for all Barclays' U.S. secured financing.[130] It provides secured financing through its prime services business, which includes both a fixed income repurchase

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detailing Deutsche Bank's obligations to cooperate on an ongoing basis with the SDNY, the IRS, the civil branch of the Department of Justice ("DOJ") tax and any other law enforcement agency designated by the SDNY, the SDNY writes that: "Deutsche Bank's obligations under this paragraph will continue until the later of (1) a period of two years from the date of the signing of this Agreement, or (2) the date upon which all prosecutions and appeals arising out of, or relating in any way to, the conduct described in the Statement of Facts are finally concluded, or (3) the date when all IRS and DOJ Tax civil proceedings and appeals relating to the tax shelter activity described in the Agreement are finally concluded." 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York, to Deutsche Bank's counsel, "Deutsche Bank AG – Non-Prosecution Agreement," at 2-3, http://lib.law.virginia.edu/Garrett/prosecution_agreements/sites/default/files/pdf/deutschebank.pdf. According to the Department of Justice, the NPA is still in effect because IRS and DOJ Tax civil proceedings relating to the tax shelter activity described in the NPA are not yet finally concluded. Report on the status of Deutsche Bank's Non-Prosecution Agreement, provided by the Department of Justice to the Subcommittee on 2/19/2014 and 9/27/2014.

[124] "Barclays Timeline," prepared by Barclays, http://www.timeline.barclays.com/timeline.html; "Lombard Street," prepared by Barclays, http://www.barclays.com/about-barclays/history/lombard-street.html; 7/2012 "Resolution Plan Section 1: Public Section," prepared by Barclays, at 2, http://www.fdic.gov/regulations/reform/resplans/ plans/barclays-1207.pdf.

[125] 3/3/2014, Barclays "Annual Report 2013," at 277, http://reports.barclays.com/ar13/#highlights.

[126] 10/2013 "Barclays Resolution Plan: Public Section, October 2013," prepared by Barclays, at 17, http://www.fdic.gov/regulations/reform/resplans/plans/barclays-165-1310.pdf.

[127] See "UK financial regulation overhauled," BBC, (3/31/13), http://www.bbc.com/news/business-21987829.

[128] 10/2013 "Barclays Resolution Plan: Public Section, October 2013," prepared by Barclays, at 3, 6, http://www.fdic.gov/regulations/reform/resplans/plans/barclays-165-1310.pdf.

[129] Id. at 9.

[130] Id. at 14.

agreement desk and an equity financing desk within BCI.[131] BBPLC serves as the consolidation point within the Barclays group for all funding in U.S. dollars.[132] It has access to the discount window at the Federal Reserve Bank of New York, and it is funded through external, unsecured financing from BPLC.[133]

Sir David Walker has been the Barclays Group Chairman since 2012.[134] He was previously the Chief Executive Officer of Morgan Stanley.[135] In addition, Antony Jenkins replaced Bob Diamond as the bank's Chief Executive Officer after the bank became the subject of a number of investigations into its business practices.[136] Some of those investigations examined the bank's participation in tax avoidance schemes.[137] In February 2012, for example, the U.K. Treasury stopped a "high-street bank," understood to be Barclays, from implementing what they called "highly abusive" tax avoidance schemes that could have resulted in the loss of some £500 million in public revenue.[138]

Salz Review. In response to the multiple investigations and negative public reaction, in July 2012, Barclays' leadership commissioned what it called the Salz Review, named after Sir Anthony Salz, a prominent British solicitor who headed the effort.[139] The stated objective of the effort was to get an independent review of Barclays' business practices and determine "what went wrong."[140] The reviewers reported to a non-executive committee at Barclays.[141] The Salz Review described the bank culture as one of "winning at all costs" and prizing the "cleverness" of employees who took "robust positions with regulators ... [and followed] the letter rather than the spirit of the rules."[142] Among other findings, the Salz Review stated that "a culture developed within Barclays, quite possibly derived originally from the investment bank, which came across to some as being … arrogant and aggressive."[143]

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131 Id.
132 Id.
133 Id.
134 "Leadership: Sir David Walker," prepared by Barclays, http://www.barclays.com/about-barclays/leadership-team/sir-david-walker.html.
135 Id.
136 See "Barclays to close 'tax avoidance' unit," BBC, (2/10/2013), http://www.bbc.com/news/business-21397844.
137 Id.
138 "Barclays £500m tax loophole closed by Treasury in rare retrospective action," The Guardian, Jill Treanor (2/27/2012), http://www.theguardian.com/business/2012/feb/28/treasury-closes-barclays-tax-schemes?guni=Article:in%20body%20link.
139 See 4/2013 "Salz Review: An Independent Review of Barclays' Business Practices," prepared by Anthony Salz et al., at 2, http://online.wsj.com/public/resources/documents/SalzReview04032013.pdf.
140 See id. at opening letter from Anthony Salz.
141 Id. at Disclaimer.
142 Id. at 82.
143 Id. at 70.

The bank drew particular criticism for abusive tax structures that were deemed "insensitive to changing political and public expectations around tax."[144] When confronted by regulators about tax avoidance issues, the bank's Structured Capital Markets (SCM) Group and the bank at large were "more willing than its peers to challenge outsiders and less willing to cede ground."[145] Among other tax products, SCM devised and administered the COLT options structure under examination by the Subcommittee.[146]

In 2013, Barclays responded to the Salz Review by instituting "Project Transform," a project that sought to review and implement changes in many of the bank's divisions to steer away from future regulatory violations.[147] Many of the changes instituted through the project were a direct result of the recommendations of the Salz Review, including an overhaul of Barclays' corporate values and the implementation of risk-reduction strategies in its business transactions.[148]

In addition, in another response to the Salz Review, Barclays terminated the SCM group in February 2013.[149] CEO Antony Jenkins' speech to the news media at the time explained "[t]here are some areas [at SCM] that relied on sophisticated and complex structures, where transactions were carried out with the primary objective of accessing the tax benefits. Although this was legal, going forward such activity is incompatible with our purpose. We will not engage in it again."[150]

(3) Renaissance Technologies Corporation LLC

Founded in 1982, Renaissance Technologies Corporation LLC (RenTec), a Delaware limited liability corporation, is a SEC-registered

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[144] Id. at 74.
[145] Id. at 82.
[146] See 11/2002 "Project COLT Renaissance Technologies Corp User Guide," prepared by Barclays, BARCLAYS-PSI-213567-585.
[147] See 2/11/14 "2013 Transform Highlights," prepared by Barclays, http://www.barclays.com/content/dam/barclayspublic/docs/Microsites/Transform/TransformUpdates/full-year-results-Transform-110213.pdf.
[148] See "Barclays' response to the Salz Review," prepared by Barclays, at 2, 3, http://www.barclays.com/content/dam/barclayspublic/documents/news/471-392-250413-salz-response.pdf; 2/11/14 "2013 Transform Highlights," prepared by Barclays, at 5, 8 http://www.barclays.com/content/dam/barclayspublic/docs/Microsites/Transform/TransformUpdates/full-year-results-Transform-110213.pdf.
[149] See 2/12/2013 "Barclays Strategic Review," Barclays Press Release, http://www.newsroom.barclays.com/Press-releases/Barclays-Strategic-Review-9db.aspx; "Barclays to close 'tax avoidance' unit," BBC, (2/10/2013), http://www.bbc.com/news/business-21397844.
[150] "Barclays to close 'tax avoidance' unit," BBC, (2/10/2013), http://www.bbc.com/news/business-21397844.

investment adviser.[151] Its main headquarters is in East Setauket, New York, while its administrative offices are in New York City.[152] As of March 31, 2014, its combined holdings exceeded $41 billion.[153]

RenTec was founded by James Simons who had previously served as a code breaker for the United States military and then headed the mathematics department at SUNY-Stony Brook.[154] The current co-CEOs are Peter Brown and Bob Mercer.[155] The current Chief Financial Officer, Chief Compliance Officer, and Chief Legal Officer is Mark Silber.[156] The current Chief Operating Officer is James Rowen.

RenTec is a closely held corporation. Presently, all of RenTec shareholders are current or former employees of the firm.[157] In addition, currently, 70% of RenTec shares are held by the five members of RenTec's Executive Committee and their respective family trusts.[158]

RenTec makes use of mathematical and statistical methods to create its investment programs.[159] It generally employs an overall strategy referred to as statistical arbitrage (StatArb) to identify market inefficiencies and take advantage of them.[160] In practice, this investment strategy often involves engaging in a very high volume of trading in

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[151] 5/26/2010 letter from SEC to RenTec, "Examination of Renaissance Technologies LLC ('RenTec')," SEC_RT13_001965-993, at 989 [Sealed Exhibit]; Subcommittee interview of Mark Silber, RenTec (6/10/2014).
[152] "Renaissance Locations," prepared by RenTec, https://www.rentec.com/vm/locations.vm; Subcommittee interview of Peter Brown, RenTec (6/3/2014).
[153] 3/31/14 "Form 13F," prepared by RenTec, http://www.sec.gov/Archives/edgar/data/1037389/000103738914000071/xslForm13F_X01/primary_doc.xml.
[154] See "The World's Billionaires #94 James Simons," Forbes, (7/11/2014), http://www.forbes.com/profile/james-simons/.
[155] Subcommittee interview of Peter Brown, RenTec (6/3/2014).
[156] Subcommittee interview of Mark Silber, RenTec (6/10/2014).
[157] Subcommittee briefing by RenTec counsel (6/20/2014). RenTec was initially formed as an S-Corporation owned directly by a number of employee stockholders and their related trusts. On June 30, 2007, RenTec was reorganized and converted into a limited liability company called Renaissance Technologies Corporation LLC (RTC). At that time stockholders of the S-Corporation received shares in a new entity known as Renaissance Technology Holdings Corporation (RTHC). RTHC then acquired the same number of class A member interests in RTC. In addition, another entity was created at that time called RCT II Holdings LLC (RCT II), which became the sole holder of Class B interests in RTC. Class A and B interests are identical and have the same voting and economic rights. RTC II was created to permit newer employees to hold an ownership interest in Renaissance Technologies LLC. Current ownership of RTC is split, with 85.7% held by RTHC and the remaining 14.3% held by RTC II. Id.
[158] Id. The five members of the RenTec's Executive Committee are James Simons, Mark Silber, Henry Laufer, Peter Brown, and Robert Mercer. Id.
[159] Subcommittee interview of Peter Brown, RenTec (6/3/2014).
[160] StatArb analyzes historical relationships between related securities and trades when those relationships are determined to be unbalanced. See 7/11/2008 "Statistical Arbitrage in the U.S. Equities Market," prepared by Marco Avellaneda and Jeong-Hyun Lee, at 1-2, http://math.nyu.edu/faculty/avellane/AvellanedaLeeStatArb071108.pdf.

order to take advantage of small differences in prices between related stocks.[161]

In order to be able to constantly adjust its trading model and implement its strategy, RenTec employs a large number of employees with doctorates and training in advanced mathematics, physics, and computer science.[162] According to RenTec, over 90 members of RenTec's staff hold doctorates in mathematics and other scientific disciplines.

RenTec currently controls four funds. They are the Medallion Fund (Medallion), Renaissance Institutional Equities Fund (RIEF), Renaissance Institutional Futures Fund (RIFF), and Renaissance Institutional Diversified Alpha Funds (RIDA).[163]

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[161] See, e.g., "Schneiderman (and Einstein) Pressure High-Speed Trading," Bloomberg, Michael P. Regan and Sam Mamudi, (3/21/2014), http://www.bloomberg.com/news/2014-03-21/schneiderman-joins-einstein-in-pressuring-high-frequency-trading.html.

[162] "Renaissance suffers rare disappointment," Financial Times, Sam Jones (2/17/2010), http://www.ft.com/intl/cms/s/0/66970a64-1b2e-11df-953f-00144feab49a.html#axzz31FwLlNs5; 7/23/2013 "Quants: the math geniuses running Wall Street," The Telegraph, Sarfraz Manzoor, http://www.telegraph.co.uk/finance/10188335/Quants-the-maths-geniuses-running-Wall-Street.html. RenTec alumni include several prominent mathematicians and statisticians who directly contributed to developing what is known as the "Medallion Algorithm." Mr. Ax worked on "model theory," which is the study of classes of mathematical structures and founded Axcom Trading Solutions, which was purchased by RenTec in the early 1990s. See 1965 "Diophantine problems over local fields," American Journal of Mathematics, vol. 87, James B. Ax and Simon B. Kochen, 605-630; "Business and Finance Biography," prepared by Elwyn Berlekamp, http://math.berkeley.edu/~berlek/bus.html; "The Code Breaker," Bloomberg, http://www.bloomberg.com/apps/news?pid=nw&pname=mm_0108_story1.html. Elwyn Berlekamp is another mathematician who worked for RenTec and was known for his work on coding theory and combinational game theory, including the study of sequential games with perfect information. See "Faculty Publications-Elwyn R. Berlekamp," prepared by UC Berkeley College of Engineering, http://www.eecs.berkeley.edu/Pubs/Faculty/berlekamp.html. See also Elwyn Berlekamp's Home page, prepared by Elwyn Berlekamp, http://math.berkeley.edu/~berlek/; "Business and Finance Biography," prepared by Elwyn Berlekamp, http://math.berkeley.edu/~berlek/bus.html. From 1988 to 1989, Mr. Berlekamp purchased the largest interest in a trading company named Axcom Trading Advisors. "Financial Engineering," prepared by Elwyn Berlekamp, http://math.berkeley.edu/~berlek/fineng.html.

[163] The Medallion Fund is discussed further below. The RIEF fund was started in 2005, with the objective to achieve superior rates of return with low volatility. The minimum initial investment in RIEF was $20 million. 4/7/2008 Confidential Private Placement Memorandum, prepared by RenTec, "Renaissance Institutional Equities Fund LLC," RT-PSI-00386514-741, at 522, 531 [Sealed Exhibit]. At the end of 2013, RIEF had $7.9 billion of assets under management; 50% of those assets were from RenTec employees. Subcommittee interview of James Rowen, RenTec (5/20/2014). The RIFF fund was started in 2007, with the objective of receiving target returns of 15% per annum. 2/6/2008 Confidential Private Placement Memorandum, prepared by RenTec, "Renaissance Institutional Equities Fund LLC," RT-PSI-00385993-6124, at 6001 [Sealed Exhibit]. The minimum initial investment in RIFF was $20 million. 4/15/2008 Confidential Private Placement Memorandum, prepared by RenTec, "Renaissance Institutional Futures Fund SICAV P.L.C.," RT-PSI-00386466-513, at 470 [Sealed Exhibit]. At the end of 2013, RIFF had $645 million of assets under management; 75% of those assets were from RenTec employees. Subcommittee interview of James Rowen, RenTec (5/20/2014). The RIDA fund was started in 2012, with the objective to maximize long-term return while attempting to meet a standard deviation selected by the company. The minimum initial investment in RIDA was $5 million. 12/31/2012 Confidential Private Placement Memorandum, prepared by RenTec, "Renaissance Institutional Diversified Alpha Fund SICAV P.L.C.," RT-PSI-00387786-921, at 791, 793

Renaissance Medallion Fund. Of the four RenTec funds, only the Medallion Fund made use of the basket option structure. The Medallion Fund is the name given to a collection of related master and feeder funds, as well as a number of subsidiaries, established by RenTec to implement a proprietary algorithmic investment strategy.[164] The fund was started in 1988.[165]

The Medallion Fund consists of five domestic and two foreign feeder funds, all of which are controlled by RenTec in its role as general partner of each fund.[166] These separate feeder funds were used to accommodate different types of investors: RenTec employees, non-RenTec employees, accredited and non-accredited investors, and foreign investors who do not pay taxes as U.S. persons, among other types.[167] Outside of the basket option structures, the Medallion feeder funds invest through six subsidiaries, structured to gain access to certain markets.[168]

The Medallion feeder funds hold ownership interests as limited partners in five Medallion master funds which RenTec controls as either the general partner or designated investment advisor.[169] One of those master funds, Medallion Holdings Ltd., is the holding company for nine trading subsidiaries.[170] Those subsidiaries "were formed to trade in

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[Sealed Exhibit]. At the end of 2013, the RIDA fund had $4.2 billion in assets under management. 4/1/2014 "Renaissance Institutional Diversified Alpha Fund SICAV P.L.C.," RT-PSI-00384778 [Sealed Exhibit]. Between 50% and 75% of those assets under management were from RenTec employees. Subcommittee interview of James Rowen, RenTec (5/20/2014).

164 Subcommittee interview of Mark Silber, RenTec (6/10/2014). According to RenTec, "master and feeder funds" refer to two tiers of related entities, in which the master funds invest directly in a financial product and then pass the earnings to feeder funds which, in turn, distribute them to individual investors. Subcommittee briefing by RenTec counsel (6/20/2014).

165 See 2/26/2013 Power Point Presentation, "Renaissance Technologies LLC," PSI-Renaissance-06-000004.

166 The five domestic feeder funds were established in Delaware: Medallion Associates LP, Medallion Fund LP, Medallion USA LP, Medallion RF LP, and Medallion RMP Fund LP. The two foreign feeder funds, Medallion International LTD and Medallion Capital Investment LTD, were incorporated in Bermuda. See 5/21/2008 email from Thomas Kerns to Mark Silber of RenTec, "Legal Entity Org Chart Powerpoint," RT-PSI-00363679-717, at 681. See also undated spreadsheet, "Confidential Treatment Requested by Renaissance Technologies LLC," prepared by RenTec, RT-PSI-00390362 [Sealed Exhibit].

167 See 5/21/2008 email from Thomas Kerns to Mark Silber of RenTec, "Legal Entity Org Chart Powerpoint," RT-PSI-00363679-717, at 682.

168 The six Medallion feeder fund subsidiaries are [Redacted] Trading Ltd (Bermuda), [Redacted] Trading S.A. (Uruguay), [Redacted] Holdings LLC (Delaware), [Redacted] Trading Ltd (Bermuda), [Redacted] Trading LLC (Delaware), and [Redacted] LLC (Delaware). See id. at 691.

169 The five Medallion master funds are Mosel Equities LP (Delaware), Badger Holdings LP (Delaware), Medallion Holdings LTD (Bermuda), Medallion Trading (Bermuda), and Nova Fund LP (Delaware). See id. at 694.

170 The nine trading subsidiaries include seven formed in Bermuda: Baden Equities Ltd, Bass Equities Ltd, Franconia Equities Ltd., [Redacted] Equities Ltd., [Redacted] Trading Ltd., St. Veran Equities Ltd., and [Redacted] Equities Ltd. One trading subsidiary, [Redacted] Trading LLC, was formed in Delaware. The final trading subsidiary, [Redacted] Investment Ltd., was formed in Mauritius. See id. at 696.

various markets around the world."[171] Three of the subsidiaries are no longer active.[172]

The Medallion funds were initially open to outside investors, but by 1993, RenTec management began to remove all outside investors and limit interest holders in the fund to only employees and family members.[173] As of March 31, 2009, over 99% of the funds in the Medallion master and feeder funds were composed of firm capital and capital provided by current and former RenTec employees.[174]

(4) George Weiss Associates

George Weiss Associates, Inc. was founded in 1978, by its namesake George Weiss.[175] It served as the manager of a George Weiss proprietary capital fund until 1997, as an investment advisor to that fund from 1997 to 2005, and then as a provider of office space to the new advisor, Weiss Multi-Strategy Advisers LLC, from 2006 to the present.[176] In 1996, the holding company GWA, LLC was founded to provide key George Weiss Associates employees with investment opportunities in the firm's proprietary portfolio.[177]

GWA, LLC held direct or indirect ownership interests in five entities: Weiss Multi-Strategy Advisers LLC, Weiss Special Operations LLC, Weiss Transportation Services LLC, Weiss Investment Management Services LLC, and OGI Associates LLC.[178] Four of those entities are organized in Connecticut, and the fifth, Weiss Investment Management Services LLC, is organized in New York.[179] Of those entities, OGI Associates LLC executes direct proprietary trading under the management of Weiss Multi-Strategy Advisers.[180] The company initially began by investing in utility bonds with the objective of identifying electricity utilities that had been mispriced relative to their returns.[181] Through the 1990s, the Weiss funds expanded to include

[171] Id. at 697.
[172] The three subsidiaries no longer active are Bass Equities Ltd., [Redacted] Trading Ltd., and [Redacted] Equities Ltd. Id.
[173] Subcommittee interview of Peter Brown, RenTec (6/3/2014). See also "Simons Strategy to Shield Profit From Taxes Draws IRS Ire," Bloomberg, Zachary R. Mider and Jesse Drucker, (7/1/2013), http://www.bloomberg.com/news/2013-07-01/simons-strategy-to-shield-profit-from-taxes-draws-irs-ire.html.
[174] See 5/26/2010 letter from SEC to RenTec, "Re: Examination of Renaissance Technologies LLC ('RenTec')," SEC_RT13_001965-993, at 979, n.6 [Sealed Exhibit].
[175] 5/23/2012 "Weiss Enterprise Audit Organizational Overview," prepared by George Weiss, GWALLC-PSI-0002164, at 167.
[176] Id. at 172.
[177] Id. at 177.
[178] Id. at 178.
[179] Id.
[180] Id. at 183.
[181] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).

management of corporate funds and a variety of internationally traded instruments such as sovereign debt and various currencies.[182]

Because their trading strategy involved identifying market inefficiencies, the Weiss strategies sought and engaged in leveraged trading in order to magnify their returns.[183] When George Weiss became involved with basket options at Deutsche Bank in 2003, it purchased them for GWA, LLC directly and organized a separate entity run by GWA personnel, Quaker Partners LLC, to take on the role of the investment advisor in the basket options transactions.[184]

During the period reviewed by the Subcommittee, the head of George Weiss Associates was George Weiss. The Chief Operating Officer (COO) was Frederick Doucette.

B. Evolution of Basket Options

As explained earlier, during the 1990s, several banks and hedge funds began exploring ways in which options could be written on a hedge fund's own trading strategy, while also avoiding Section 1260's 1999 prohibition on abusive derivatives, including options. At that time, a number of hedge funds were also using trading strategies that benefited from high leverage levels. The banks and hedge funds went through several different structures before settling on the basket options examined in this investigation.

Initial RBC Structure. The first basket option structure appears to have been designed between 1996-1997, by the Royal Bank of Canada (RBC). That year, according to George Weiss employees, RBC marketed a basket option structure using a derivative option on a managed trading account to circumvent the leverage restrictions in Regulation T.[185] The option enabled a hedge fund, who was the option holder, to act as the investment advisor to the account set up by the bank. The bank also provided financing to add funds to the trading account, charged a high financing rate, and required the hedge fund to pay financing on the maximum possible leverage, regardless of the amount actually used.[186]

Introduction of Deutsche Bank MAPS. A few years later, Deutsche Bank developed and marketed a less costly structure it named Managed Account Product Structure (MAPS). The MAPS basket option product at Deutsche Bank evolved from a similar product called

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[182] Id.
[183] Id.
[184] See Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582, at 579.
[185] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
[186] Id.

MAIDS, which was initially designed by National Westminster Bank (NatWest).[187] In 1998 - 1999, Deutsche Bank acquired NatWest Securities, including the team that had worked on the MAIDS transaction and brought over almost the entire group to help Deutsche Bank establish its Global Prime Services business.[188] At Deutsche Bank, the team continued to refine the MAPS structure, using Deutsche Bank's trading platform to create effective monitoring and risk mitigation systems that would allow a basket option holder to place orders and execute trades directly through Deutsche Bank's proprietary trading accounts.[189]

George Weiss Participation in Basket Options. The Weiss funds became involved with MAPS basket options as a result of their focus on low-volatility utility stocks.[190] According to George Weiss, the funds noticed that they had very consistent, but very low positive returns, generally in the range of only a few percentage points.[191] As a result, the Weiss funds sought out ways to obtain leverage in order to magnify the gains from their strategy.[192] While the funds realized that leverage would also lead to increased losses in bad years, they viewed the overall successful performance and general stability of their funds as justification for the use of high leverage.[193]

Beginning in the early 1990s, the Weiss funds sought various financing mechanisms to increase their trading leverage. Initially, the funds became a specialist market maker in stocks traded at the Philadelphia Stock Exchange.[194] That structure allowed the funds to obtain leverage in the realm of twenty times on certain equities: ten times long and ten times short.[195] However, those leverage levels were limited to certain types of equities and did not extend to any over-the-counter (OTC) trades.[196]

According to George Weiss, sometime during 1996 to 1997, RBC approached the George Weiss funds with its basket option strategy, which George Weiss readily accepted.[197] George Weiss told the Subcommittee that the RBC structure enabled George Weiss to act as the

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[187] Subcommittee interview of James Rowen, RenTec (5/20/2014). Morgan Stanley was also developing a similar product around the same time, with the goal of selling an option that would allow a hedge fund to engage in its own trading activity by managing a proprietary account held at an investment bank. Id.
[188] Id.
[189] Subcommittee interviews of Mark Silber, RenTec (6/10/2014) and Satish Ramakrishna, Deutsche Bank (5/16/2014).
[190] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
[191] Id.
[192] Id.
[193] Id.
[194] Id.
[195] Id.
[196] Id.
[197] Id.

investment advisor to the bank's proprietary account, and obtain leverage up to twenty times the premium that George Weiss paid into the account. However, as noted above, the bank charged a very high financing fee.[198] George Weiss continued using the RBC arrangement until 2003.[199]

In 2003, according to George Weiss, the company was approached by representatives of Deutsche Bank with a new basket option structure that Deutsche Bank had developed.[200] This structure was the same MAPS structure that Deutsche Bank was offering to other hedge funds, and George Weiss became interested because it offered high leverage at a much lower financing rate than RBC.[201] Ultimately, between the years 2003 and 2006, George Weiss purchased from Deutsche Bank a total of ten MAPS basket options with terms exceeding one year involving trading assets with an initial total notional value of about $2.8 billion.[202] The last six options were exercised by George Weiss in May 2010.[203]

RenTec Participation in Basket Options. RenTec became interested in the basket option structure due to its development of a computer-based trading strategy using complex algorithms, which required high volume trading and benefited from leverage to amplify its returns. That trading strategy led RenTec to search for a financing arrangement that could accommodate both high volume trading and significant leverage.

During the 1990s, RenTec used a joint back office (JBO) arrangement with Bear Stearns to increase its leverage beyond Regulation T margin restrictions permitting a maximum leverage level of 2:1.[204] Under federal rules, JBO arrangements were allowed leverage levels up to 7.6:1.[205] In 1999, Deutsche Bank approached RenTec with the MAPS product.[206] According to RenTec, Deutsche Bank marketed it as a product that offered superior leverage as well as loss protection at a relatively low cost.[207]

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198 Id.
199 Id.
200 See George Weiss response to an IRS Information Document Request, (8/8/2012), GWALLC-PSI-0000745-844, at 745 [Sealed Exhibit].
201 Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
202 George Weiss response to an IRS Information Document Request, (8/8/2012), GWALLC-PSI-0000745-844, at 745 [Sealed Exhibit]; Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582, at 579.
203 Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582, at 579.
204 Subcommittee interview of Peter Brown, RenTec (6/3/2014).
205 Subcommittee interview of Mark Silber, RenTec (6/10/2014).
206 Id.
207 Subcommittee interview of Peter Brown, RenTec (6/3/2014).

RenTec purchased its first MAPS option in 2000, followed by additional options in 2002.[208] Later, several Deutsche Bank employees who worked with RenTec on the basket option structure moved over to RenTec, including operations personnel, management, and legal counsel.[209] Since 2000, RenTec has purchased from Deutsche Bank a total of 29 basket options with terms exceeding one year, involving trading assets with a total initial notional value of about $46 billion and profits totaling about $15.9 billion.[210] All of the basket options were utilized by RenTec's Medallion funds employing their proprietary algorithmic strategy.

Barclays COLT Options. In 2002, RenTec introduced the basket option concept to Barclays.[211] According to RenTec, Barclays initially approached them to expand Barclays' U.S based business. RenTec told the Subcommittee that, because RenTec wanted to spread its counterparty credit risk with multiple banks,[212] it agreed to do business with Barclays, but only if the bank could develop a basket options type structure.[213] Contemporaneous internal Barclays communications indicate that RenTec pushed Barclays to create its own basket options structure, informing the bank that it would move its accounts elsewhere if Barclays did not provide it with a basket options structure.[214] To accommodate RenTec, Barclays created the COLT structure, which used a separate Barclays entity, Palomino Ltd., and a two-tiered options structure to execute trades for RenTec.[215] Since 2002, RenTec has purchased from Barclays a total of 31 basket options with terms

[208] Chart produced by Deutsche Bank, 6/27/2014, DB-PSI 00052583-585.
[209] The Deutsche Bank personnel who moved to RenTec included Peter Brophy who worked with Deutsche Bank clients and later handled fund accounting at RenTec; Thomas Kerns, who became head of Fund Accounting and Operations at RenTec and is now retired; James Rowen who became RenTec's Chief Operations Officer; and Jonathan Mayers who became RenTec's Counsel. Subcommittee interviews of James Rowen, RenTec (5/20/2014), Thomas Kerns, RenTec (5/6/2014), Peter Brophy, Deutsche Bank (5/13/2014 and 5/19/2014), and Jonathan Mayers, RenTec (5/28/2014).
[210] See Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582, at 577-578; Utitled chart produced by Deutsche Bank, 7/17/2014, DB-PSI 00052588-590. Profit calculated by subtracting premium from settlement mount.
[211] 7/31/2002 "Confidential: Project COLT," new product proposal, product sponsors Jonathan Zenios, Jerry Smith, Martin Malloy, and Mark D'Andrea, BARCLAYS-PSI-212559-566.
[212] The counterparty credit risk in this circumstance was the risk that the bank would be unable to pay its obligation to the hedge fund.
[213] Subcommittee interview of Mark Silber, RenTec (6/10/2014).
[214] See, e.g., 7/31/2002 "Confidential: Project COLT," prepared by Barclays product sponsors Jonathan Zenios, Jerry Smith, Martin Malloy, and Mark D'Andrea, BARCLAYS-PSI-212559-566, at 561.
[215] As detailed below, the options involved three Barclays entities, Palomino, BBPLC, and the New York branch of Barclays PLC, as well as a RenTec subsidiary, Bass Equities Ltd. Later, Bass was replaced with another RenTec entity called Badger Holding LP. Subcommittee interview of Martin Malloy, Barclays (5/1/2014).

exceeding one year, involving trading assets with a total initial notional value of about $62 billion and profits totaling about $18.3 billion.[216]

Options After 2010 GLAM. In late 2010, the IRS issued its Generic Legal Advice Memorandum (GLAM) advising that basket options were not true options and could not be used to treat short-term trading profits as long-term capital gains.[217] In response, Deutsche Bank placed a moratorium on issuing new basket options, but continued to administer multiple existing option accounts. In 2012, Deutsche Bank resumed offering basket options, but used a revised version whose term lasted less than one year and whose contract required the option holder to report any gains as short-term capital gains.[218] In contrast, even after the 2010 GLAM, Barclays continued to offer basket options to RenTec until 2013, when it also revised its basket options contract to offer only short-dated options with term lasting less than a year.[219]

According to information supplied by RenTec to the Subcommittee, in 2012, the IRS sent what are commonly known as "60-Day Letters" to RenTec, notifying the hedge fund that the IRS intended to disallow long-term capital gains treatment of basket option profits from option trades lasting less than 12 months and proposing an assessment of additional taxes for certain tax years. RenTec responded with what is known as a "Protest of the 60-Day Letters," indicating that it disagreed with the IRS analysis. According to RenTec, the matter is apparently now awaiting review by the IRS internal Office of Appeals.[220]

Overall Basket Option Statistics. Altogether, as indicated earlier, Deutsche Bank sold MAPS basket options to 13 different hedge funds.[221] RenTec was the largest MAPS client, and George Weiss was

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[216] See undated chart, "History of COLT Options," prepared by Barclays, BARCLAYS-PSI-748604. These figures do not include eight options that were exercised within a year or four options that have not been exercised to date. Notional value for the Barclays accounts was derived by multiplying the premiums by 10 as the premiums represented 10% of the notional value based on Barclays Investment Management Account.
[217] 10/15/2010 memo, "Hedge Fund Basket Option Contracts," Internal Revenue Service, BARCLAYS-PSI-748148-158.
[218] 6/30/2014 briefing by Deutsche Bank counsel to the Subcommittee. See also 7/22/2014 "Post-GLAM Basket Option Contracts," Memorandum to File prepared by the Subcommittee (summarizing Deutsche Bank, Barclays, and RenTec involvement with basket options after the November 2010 issuance of the IRS advisory memorandum on basket options).
[219] 12/2013 "Barclays Powerpoint," prepared by Barclays, BARCLAYS-PSI-748589. See also 7/22/2014 "Post-GLAM Basket Option Contracts," Memorandum to File prepared by the Subcommittee (summarizing Deutsche Bank, Barclays, and RenTec involvement with basket options after the November 2010 issuance of the IRS advisory memorandum on basket options).
[220] Subcommittee interview of Peter Brown, RenTec (6/3/2014). 4/13/2012 "Protest of 60 Day Letters by Renaissance Technologies LLC et al.," RT-PSI-00000001-402 [Sealed Exhibit].
[221] Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582. The hedge funds that purchased MAPS options included: RenTec, GWA LLC, Ballentine Capital Management, Deephaven Capital Management, SAC Capital Advisors, Talon Capital LLC, Provident Advisors LLC, MFT Limited, MWN Limited, Analytic Investors Inc., Riverside Asset Management LLC, 646 Advisors LLC, and Northern Asset Management, Inc.

the second largest.[222] Deutsche Bank used the original MAPS structure from approximately 2000 to the end of 2007, writing over one hundred options that were used to purchase trading assets with a notional value in excess of $75 billion.[223] In 2008, Deutsche Bank restructured the MAPS option, and its hedge fund clients stopped purchasing new basket option contracts, except for RenTec.[224] From 2002 to 2012, Barclays provided COLT basket options solely to RenTec.[225]

The following chart summarizes some of the key data on the MAPS and COLT basket options activity over the past 15 years.

Total Basket Options Sold by Deutsche Bank and Barclays 1998-2014

Bank	Name of Product	All Basket Options*				Basket Options Executed After One Year		
		Total Number Sold[1]	Revenue for Bank	Number Sold to RenTec[1]	Profits Generated for RenTec	Total Number Sold	Total Initial Notional Value	Number Sold to RenTec
Deutsche Bank	MAPS	156	$571	36	$16,969	96	$60,446	29
Barclays	COLT	43	$655	43	$18,484	31	$61,925	31
Total		199	$1,121	79	$35,453	127	$122,371	60

*All dollar amounts in millions.

1. Two Deutsche Bank and four Barclays options are outstanding, of which three Barclays options have lasted over one year.

Source: Tables produced by Deutsche Bank (DB-PSI-00052577-582, DB-PSI-00052586-587, and DB-PSI-0005588-590) and submissions by Barclays (BARCLAYS-PSI-018114-116, BARCLAYS-PSI-748604, and PSI-Barclays-22-000005-114).
Prepared by U.S. Senate Permanent Subcommittee on Investigations, July 2014.

C. Development of MAPS and COLT

Deutsche Bank and Barclays developed their basket option structures in different ways and at different times. Although the Barclays structure was developed later and in response to the Deutsche Bank structure, it is discussed first due to greater simplicity.

(1) Barclays' COLT Structure

Barclays developed the COLT basket option structure in 2002, at the request of RenTec, and it was used solely by that hedge fund over the next decade. The COLT structure was designed and administered by

[222] 8/11/2008 referral letter from SEC to IRS, "Portfolio Option Strategies," prepared by SEC, SEC_RT13_002078 [Sealed Exhibit]. See also Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582.
[223] Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582, at 577-578.
[224] Id. at 577-582; Subcommittee interview of Frederick Doucette, GWA (5/23/2014); 6/2/2014 briefing by Deutsche Bank counsel to the Subcommittee.
[225] Subcommittee interview of Martin Malloy, Barclays (5/1/2014).

the bank's Structured Capital Markets (SCM) group until 2013, when Barclays disbanded that group for involvement with overly aggressive tax strategies.[226]

Under the COLT structure, Barclays created a Cayman Island Special Purpose Entity (SPE) named Palomino Ltd.[227] Palomino was a shell corporation controlled by Barclays; it had no full time employees or physical offices of its own.[228] Its directors and officers were Barclays employees who worked for other Barclays entities.[229] Each basket option account was opened in the name of Palomino, which was the nominal owner of all of the account assets. The accounts were opened as prime brokerage accounts with Barclays Capital Inc. in the United States and by Barclays Capital Securities Limited in the United Kingdom.[230]

In connection with each COLT option, Palomino hired RenTec to be its investment advisor under an Investment Management Agreement that gave RenTec the exclusive right and the "full" discretion without the need to consult with Barclays to execute transactions directly into the Palomino prime brokerage accounts in the United States and United Kingdom, subject to general guidelines specified in the agreement.[231] While RenTec representatives told the Subcommittee that they merely recommended or suggested trades to Palomino,[232] given the company's shell status, the extraordinary number of daily trade executions, and the provisions in the option contracts, the facts indicate that all transactions in the accounts were actually fully controlled by RenTec.

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[226] See 2/12/2013 "Barclays Strategic Review," Barclays Press Release, http://www.newsroom.barclays.com/Press-releases/Barclays-Strategic-Review-9db.aspx (announcing closure of SCM group); "Barclays to Close 'Tax Avoidance' Unit," BBC, (2/10/2013), http://www.bbc.com/news/business-21397844.

[227] 5/28/2002 "Confidential: Project COLT," Barclays new product proposal, product sponsors: Jonathan Zenios, Jerry Smith, Martin Malloy, and Mark D'Andrea, BARCLAYS-PSI-212544-557, at 548.

[228] Subcommittee interview of Sadat Mannan, Barclays (5/15/2014).

[229] Id.

[230] 5/28/2002 "Confidential: Project COLT," Barclays new product proposal, product sponsors: Jonathan Zenios, Jerry Smith, Martin Malloy, and Mark D'Andrea, BARCLAYS-PSI-212544-557, at 545-546.

[231] See, e.g., 12/6/2006 "Amended and Restated Investment Management Agreement," signed by Barclays and RenTec, RT-PSI-00134963. The Investment Management Agreement contained certain limits and guidelines on what could be selected for the account. For example, RenTec could invest only in stocks from a limited set of countries, and no single position could constitute more than 1.5% of the outstanding shares of a company or more than 55% of the total equity in the account. Otherwise, RenTec had complete discretion to identify assets to be acquired for the portfolio. If an order placed by RenTec was not executed, or subsequently undone without orders from RenTec, the assets were still considered part of the reference account for purposes of considering the gain or the loss to Badger. Id. at 964.

[232] Subcommittee interviews of Peter Brown, RenTec (6/3/2014) and Jonathan Mayers, RenTec (5/28/2014).

After the accounts were opened and the Investment Management Agreement signed, Palomino sold options on the performance of the accounts to the U.S. branch of Barclays Bank PLC, which in turn sold identical options to Badger Holding LP (Badger), a shell entity set up in 2004 and fully controlled by RenTec.[233] Like Palomino, Badger had no employees or physical offices of its own. Prior to Badger, RenTec used a company called Bass Equities Ltd. (Bass), which was originally incorporated in Bermuda.[234] Badger was later incorporated in the United States.[235] Badger served as the official option holder for the COLT options on behalf of RenTec.[236]

The COLT options were generally established with three-year terms, meaning that the option holder could exercise the option at any time prior to the maturity date which was three years after the option was established.[237] RenTec representatives told the Subcommittee that one of the benefits of the option structure was that it gave the hedge fund access to long-term financing.[238] In many of the COLT options reviewed by the Subcommittee, however, the option holder – RenTec – exercised the option shortly after 12 months.

RenTec purchased multiple COLT options, some of which were in effect at the same time. In that case, the assets referenced by each option were not separately managed or accounted for, but pooled together in a single trading account of which each option represented a proportional share.[239]

As previously noted, the algorithmic strategy employed by RenTec's Medallion Funds was more effective with a high trading volume. RenTec accordingly conducted tens of thousands of trades per day using the prime brokerage accounts designated in the basket option contracts.

To execute the trades, Barclays gave RenTec direct market access through its proprietary trading software, enabling RenTec to place trade orders instantly into the market and receive immediate executions.[240]

[233] See 8/5/2004 "Certification of Limited Partnership of Badger L.P.," prepared by the Delaware Secretary of State, RT-PSI-00396317.
[234] 8/13/2002 "Certification of Incorporation," prepared by the Registrar of Companies of Bermuda for Bass Equities Ltd., RT-PSI-00396344.
[235] 8/5/2004 "Certification of Limited Partnership of Badger L.P.," prepared by the Delaware Secretary of State, RT-PSI-00396317
[236] See, e.g., 6/13/2008 Barclays Bank PLC letter agreement with Badger Holdings L.P., "Option RR," BARCLAYS-PSI-000345-363, at 45.
[237] See chart, "History of COLT Options," prepared by Barclays, BARCLAYS-PSI-748604.
[238] Subcommittee interviews of James Rowen, RenTec (5/20/2014) and Jonathan Mayers, RenTec (5/28/2014).
[239] Subcommittee interview of Sadat Mannan, Barclays (5/515/2014). For more information about this pooling arrangement, see below.
[240] See, e.g., 1/5/2010 letter from Barclays to SEC, "Follow-up to meeting regarding Colt Transaction Summary," BARCLAYS-PSI-287767-770, at 767, 769 (explaining to the SEC that it

"The trade is done within milliseconds ...."[241] In almost all instances, the trades were placed and executed by computer from RenTec's facilities, using its algorithms to initiate and execute the trades through the bank's proprietary trading software. The trades were typically executed with no human intervention on either side, except when RenTec personnel adjusted the algorithm parameters.[242] The executed positions were held in the designated option accounts in the name of Palomino and were immediately reported to Barclays.[243] All positions were reconciled daily for both Barclays and RenTec.[244]

The value of the COLT options was linked to the performance of the assets held in the designated accounts, consisting of all trading positions resulting from executions made by RenTec for those accounts.[245] The options included a commitment by Barclays to provide financing for the accounts that, based upon the amount of the initial premium provided by Badger, could reach a leverage level of up to 20:1.[246] Because all marketable trade orders made by RenTec were immediately executed and the assets assigned to the designated accounts, those accounts also were described in documents and by Barclays personnel as providing a hedge for Palomino and, ultimately, for Barclays.

Under the Investment Management Agreement, if the value of the referenced assets in the designated accounts were to fall by an amount equal to the premium provided by Badger, the options would terminate. As explained earlier, this provision was called a "knockout." If a knockout occurred, Barclays, through Palomino and with the assistance

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offered accounts in which "[c]lients enter orders electronically via ... proprietary trading engines [and] [t]he desk then routes those orders to exchanges, Alternating Trading Systems (ATSs) and Electronic Communications Networks (ECNS)," and that the RenTec "Flip Account" was "RenTec's execution account that 'flips' executions ... for clearing purposes," while Palomino's account acted as "RenTec's clearing account ... to facilitate settlement").

[241] Subcommittee interview of Peter Brown, RenTec (6/3/2014). See also 1/5/2010 letter from Barclays to SEC, "Follow-up to meeting regarding Colt Transaction Summary," BARCLAYS-PSI-287767-770, at 767 (explaining to the SEC that some of its accounts, including RenTec and Palomino accounts, offered "sub-millisecond internal latency for execution").

[242] According to RenTec, its trading algorithms were dynamic and had to be updated and adjusted on a regular basis by its programmers. RenTec explained that the algorithm was frequently modified manually by programmers through what was described as an "objective function." For example, the objective function could be modified to direct trades to particular options to reduce or increase its portfolio size, or to reduce or increase exposure at a particular bank. Subcommittee Interview of Peter Brown, RenTec (6/3/2014).

[243] Subcommittee interview of Lansford Dyer, Barclays (4/3/2014).

[244] Id. In response to Subcommittee inquiries, Barclays indicated that it did not use its legal authority to create any synthetic positions in the COLT option accounts as a result of rejecting a RenTec trading instruction. Subcommittee briefing by Barclays counsel (7/16/2014).

[245] The trading executions by RenTec were required to be in compliance with the investment guidelines for the account in order to be included in the valuation of the account. See e.g., 12/21/2005 Barclays Bank PLC letter agreement with Badger Holdings L.P., "Option HH," BARCLAYS-PSI-002879-896.

[246] 12/6/2006 "Amended and Restated Investment Management Agreement," signed by Barclays and RenTec, RT-PSI-00134963-5013, at 983-984.

of RenTec, could liquidate the assets in the account to minimize losses.[247] The bank was required to bear any losses that exceeded the premium.

By entering into the basket option arrangement, while RenTec placed its initial premium at risk, Barclays bore the catastrophic risk (also called the "gap risk") associated with the option accounts. According to Barclays and RenTec, that catastrophic risk applied to a situation in which market conditions deteriorated so rapidly that all of the premium paid by RenTec was lost and Barclays was unable to sell the remaining assets from the Palomino accounts quickly enough to cover losses in excess of the premium.[248] Barclays included several features in the basket options structure to ensure that it faced little or no real risk, including provisions giving the bank the right to liquidate the account assets once the losses exhausted the premium amount.[249] Moreover, in more than ten years of operation, in which the COLT options not only experienced millions of trades as detailed below but also operated throughout the worst financial crisis to affect the market in generations, no knockout event ever took place. In fact, the facts indicate that no losses took place in any year with respect to any COLT option.

If the options were exercised rather than knocking out, RenTec, through Badger, received a cash settlement equal to the gains made from the trading activity in the designated account minus the cost of

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[247] Id. at 4973.

[248] In memoranda presented to its own bank executives and to its U.K. regulator at the time, the Financial Services Authority (FSA), Barclays personnel described the actual risk of catastrophic loss as minimal and comparable to risks undertaken by the bank on a routine basis. See, e.g., 9/13/2002 letter from FSA to Barclays, "PROJECT COLT," BARCLAYS-PSI-005258-259 (indicating Barclays had told its U.K. regulator that basket options carried low risks that were comparable to standard brokerage accounts, in part because "[c]redit and operation controls around this transaction are equivalent to those that are in place for a standard prime brokerage transaction"); 7/4/2002 letter from Barclays to FSA, "PROJECT COLT," BARCLAYS-PSI-005241-243, at 241 ("Controls exist within the prime [brokerage account] to ensure that the risk of loss is minimized."); 8/12/2002 letter from Barclays to FSA, "PROJECT COLT." BARCLAYS-PSI-005246-250, at 249; 9/2/2004 Barclays memorandum from Jonathan Zenios to Barclays' SCM Approvals Committee, "Approvals paper – COLT V: Renaissance Restructuring," BARCLAYS-PSI-004161-165, at 164 (describing the risk to the bank from the COLT options as "akin to the risks taken in a normal collateralized Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time"); 4/4/2003 Barclays memorandum from SCM to SCM Approvals Committee, "SCM Approvals paper – Project COLT (Renaissance II)," BARCLAYS-PSI-213947-953, at 949. See also Subcommittee interview of Lansford Dyer, Barclays (4/3/2014)(indicating that Mr. Dyer had calculated the risk of RenTec's options suffering sudden catastrophic losses and breaching an option limit as insignificant, in that it was thought to be less than .0001).

[249] Id. In addition, the COLT options imposed "limits on liquidity, sector exposure, size and leverage in order to substantially reduce the risk that any gap risk loss is greater than the call option premiums." 6/24/2009 memorandum from Barclays to PricewaterhouseCoopers, "Palomino Limited ('Palomino')," BARCLAYS-PSI-139757-166, at 764. See also 9/3/2004 Barclays memorandum from Jonathan Zenios to SCM Approvals Committee, "Approvals paper – COLT V: Renaissance Restructuring," BARCLAYS-PSI-004161-165.

financing, trading, and structuring fees charged by Barclays.[250] Those cash payments were made routinely to RenTec as it exercised various basket options over the years.

For its role as investment advisor to the trading accounts, RenTec, through Badger, received a nominal amount of compensation from Palomino. Barclays, through Palomino, paid Badger a fixed fee equal to about $600,000.[251] Barclays did not provide the promised fee separately; instead it subtracted the fee amount from the trading profits otherwise payable to RenTec, through Badger, upon exercise of the relevant option.[252] By agreeing to allow the investment advisory fee to be subtracted from the option profits, RenTec essentially agreed to forego any additional compensation and instead limit its returns to the trading profits in each option account.

Barclays also entered into tax indemnity agreements with RenTec as part of the COLT transactions.[253] In the agreements, RenTec promised to reimburse Barclays for any tax exposure that Barclays might suffer as a result of entering into the COLT transaction, such as being required to pay penalties for failing to withhold taxes in its role as withholding agent for the option accounts.[254] In other words, under the tax indemnification agreement, Barclays would not have to pay any tax penalties levied on it in connection with the COLT options.

The overall effect of this arrangement was that RenTec received all of the gains resulting from its trading orders, while Barclays remained economically neutral to the designated accounts. Barclays instead made money from its financing, trading, and structuring fees.[255]

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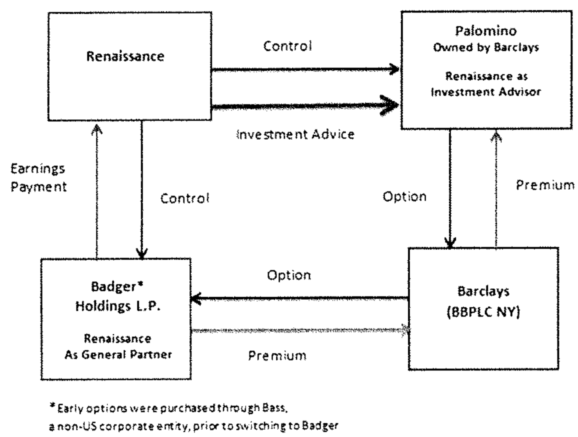
[250] See, e.g., 6/13/2008 Barclays letter agreement with Badger Holdings L.P., "Option RR," BARCLAYS-PSI-000345-363, at 350-351.
[251] See 6/27/2014 RenTec counsel's letter to Subcommittee, PSI-Renaissance-37-000001, at 003. This fee was consistently imposed after 2004. Id.
[252] See, e.g., 6/13/2008 Barclays letter agreement with Badger Holdings L.P., "Option RR," BARCLAYS-PSI-000345-363, at 355.
[253] See, e.g., 10/1/2004 "Indemnity Agreement," signed by Barclay's Bank PLC, Palomino Limited, Badger Holdings L.P., Medallion International Limited, Medallion Capital Investments Ltd., Medallion Associates L.P., Medallion Fund L.P., Medallion USA L.P., and Medallion RMP Fund L.P., BARCLAYS-PSI-632877-904.
[254] Id at 880.
[255] Subcommittee interview of Lansford Dyer, Barclays (4/3/2014); 7/15/2014 letter from Barclays counsel to the Subcommittee, PSI-Barclays-22-000005-014, at 007.

The following chart provides a simplified diagram demonstrating how the COLT basket options structure was intended to work.

Figure 1: A simplified diagram outlining the COLT transaction



(2) Deutsche Bank MAPS

In contrast to Barclays which used a single option structure over time, over the years, Deutsche Bank developed two different types of basket option structures under the MAPS name. The first was used from 1998 through the end of 2007. The second was used from 2008 to 2010, but the bank ceased offering it after the IRS issued its basket options GLAM in November 2010. In 2012, Deutsche Bank began offering the revised MAPS structure again, but limited the duration of the option to less than one year.

(a) Original MAPs

From 1998 to 2007, Deutsche Bank sold basket options on the performance of assets held in designated option accounts within Deutsche Bank propriety accounts, with the trading controlled by the hedge funds that purchased the options. Like COLT, Deutsche Bank hired as the investment advisor for the option accounts an entity related to the hedge fund that purchased the option. Like COLT, Deutsche Bank also gave the hedge fund entity discretionary authority without having to consult with the bank to execute trading transactions directly, using Deutsche Bank's trading platform and proprietary account. Similar to the Investment Management Agreement between Barclays and RenTec, Deutsche Bank and the hedge funds executed Investment Advisory Agreements which included certain limits and guidelines on what could be selected for the accounts.[256]

Like COLT, the MAPS options were generally established with three-year terms, meaning that the option holder could exercise the option at any time prior to the maturity date which was three years after the option was established.[257] In many of the MAPS options reviewed by the Subcommittee, however, as with COLT, the option holder exercised the option shortly after 12 months.

Also like COLT, to execute the trades, Deutsche Bank gave the hedge fund direct market access through its proprietary trading software, enabling the hedge fund to place trading orders and obtain immediate executions. Typically, those trade orders were placed and executed by computers controlled by the hedge fund and bank, with no human intervention on either side. The executed positions were then held in the designated account and reported immediately to Deutsche Bank. All positions were reconciled daily for both Deutsche Bank and the hedge fund.[258] Like Barclays, Deutsche Bank told the Subcommittee that the bank executed every trade order made by a hedge fund with a MAPS account that was within the guidelines established in the Investment Advisory Agreement.[259]

Like COLT, if a hedge fund purchased multiple MAPS options at the same time, prior to 2008, the assets referenced by each option were not separately managed or accounted for, but were part of a single pooled account of which each option represented a proportional share.[260]

Similar to the Barclays options, Deutsche Bank committed to providing financing for each account that would produce a high degree of leverage many times larger than the premium paid by the hedge fund and charged a financing fee for that leverage to the option holder.[261]

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[256] For example, under the Investment Advisory Agreement between Deutsche Bank and RenTec, RenTec agreed not to acquire more than 4% of the shares of any one issuer, not to acquire more than 5% or more of any class of voting security, and not to trade equities on the bank's restricted list. See 12/15/2008 "Master Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank and RenTec, DB-PSI 00000001-047, at 022-025. Otherwise, the hedge fund had complete discretion to select assets for the portfolio.

[257] Chart produced by Deutsche Bank, 6/27/2014, DB-PSI 00052583-585.

[258] Subcommittee interview of Thomas Kerns, RenTec (5/6/2014).

[259] Subcommittee briefing by Deutsche Bank counsel (6/30/2014).

[260] Subcommittee interview of Thomas Kerns, RenTec (5/6/2014). For more information on this pooling arrangement, see below.

[261] RenTec obtained Deutsche Bank's agreement to provide financing up to a maximum leverage level of 18:1; other hedge funds may have reached other agreements, although all sought high leverage. See 12/16/2007 Deutsche Bank letter agreement with Mosel Equities L.P., 'OUTPERFORMANCE' BARRIER OPTION TRANSACTION—Cash Settled, Linear Amortizing Premium—DB Reference No. 941-50053," DB-PSI 00000320-337 at 328; 8/24/2009 email from William Broeksmit to Satish Ramakrishna of Deutsche Bank, "Renaissance Technologies," DB-PSI 00005713-715, at 714.

Because the investment advisor, which in every case was the hedge fund that purchased the option, executed the trades directly into the Deutsche Bank's proprietary account, that account was also described by Deutsche Bank personnel as serving as a hedge for the option for Deutsche Bank.

When the hedge fund exercised the option, it received a cash settlement equal to the gains made from its trading minus the cost of financing and trade execution fees charged by the bank. In addition, the hedge fund was typically paid a nominal amount of compensation by Deutsche Bank for acting as the investment advisor to the option accounts. For example, in the case of RenTec, from 2000 to 2007, Deutsche Bank paid the hedge fund a fixed fee as low as $100,000 per option.[262] Like Barclays, however, Deutsche Bank did not pay the fee separately but instead subtracted it from the option trading profits that would otherwise have been paid to the hedge fund upon exercising the option.[263]

Like COLT, the MAPS options were designed to provide catastrophic risk loss protection to the hedge fund, but also to minimize possible losses to the bank. If the value of the assets in the options account were to drop below a specified level, generally reflecting a loss equal to a certain percentage of the premium paid by the option holder, it could cause one or more of the options in the pool to hit thresholds that would trigger certain actions within the account. Unlike Barclays, Deutsche Bank set the knockout level at a point where the option purchaser would have some premium remaining, resulting in both the investment advisor and the bank maintaining an interest in the liquidation of the account.[264] At the initial level, called a "notice level," the investment advisor maintained control of the account, but was required to initiate a reduction in the portfolio assets and in the account leverage in order to reduce risk.[265] If the value continued to fall, Deutsche Bank could take over the account and liquidate the assets.[266] If the liquidation resulted in leftover premium, that leftover amount would

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[262] See 6/27/2014 letter from RenTec counsel to the Subcommittee, PSI-Renaissance-37-000001-007, at 003. Those payments were far below market rates. In comparison, many hedge funds acting as investment advisor to funds during the same period charged a management fee equal to 2% of the assets under management plus a performance fee equal to 20% of the gains.

[263] 12/16/2007 Deutsche Bank letter agreement to Mosel Equities L.P., 'OUTPERFORMANCE' BARRIER OPTION TRANSACTION—Cash Settled, Linear Amortizing Premium—DB Reference No. 941-50053," DB-PSI 00000320-337 at 328.

[264] 11/16/2007 "Amended & Restated Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank and RenTec, RT-PSI-00000914-931. See also Subcommittee interviews of Peter Brown, RenTec (6/2/2014), Satish Ramakrishna, Deutsche Bank (5/16/2014); and Jonathan Mayers, RenTec (5/28/2014).

[265] 11/16/2007 "Amended & Restated Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank and RenTec, RT-PSI-00000914-931; Subcommittee interview of Satish Ramakrishna, Deutsche Bank (5/16/2014).

[266] Id.

be returned to the option holder; otherwise, the bank would bear any losses exceeding the premium.[267]

The accounts of the two largest users of this version of the MAPS options, RenTec and George Weiss, which purchased and held the options from 2000 to 2007, never experienced any losses or knockout events. Instead, every option, every year, provided a cash payment to the hedge fund that exercised the option.

(b) Revised MAPS

Starting at the end of 2007, following what was known in the hedge fund industry as the "Quant Quake," Deutsche Bank decided to revise the general terms of the MAPS option.[268] In August 2007, several hedge funds which used similar statistical arbitrage strategies based on computer models suffered significant losses in a relatively short amount of time due to the high correlation of their strategies, despite the fact that the market remained overall neutral during the event.[269] Those hedge funds experienced big losses, even though the rest of the market was stable. The Quant Quake event demonstrated that hedge funds employing the same statistical arbitrage strategies ran a risk called "duplication," in which models all reacting in the same manner could drive other models to mimic the same behavior leading to widespread, unexpected losses.[270] In an interview with the Subcommittee, Barclays Director of Credit Risk, Lansford Dyer, said: "The only real risk I worry about, for a fund similar to RenTec, is duplication risk, the risk funds running the same strategies start affecting each other."[271]

Following the Quant Quake, Deutsche Bank personnel reviewed the basket options structure for risk, legal, and compliance issues, including tax, as well as how Deutsche Bank might earn a greater financial return on the MAPS options. At the same time, RenTec became concerned that provisions in its Investment Advisory Agreement with Deutsche Bank did not clearly define which party would be responsible for controlling the liquidation of assets in the managed account if Deutsche Bank were forced to unwind an option.

The new MAPs structure was completed by late 2008. It included a number of significant changes. First, Deutsche Bank began to subdivide each option's referenced assets and place each set of assets in

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[267] Id.
[268] Subcommittee interviews of Satish Ramakrishna, Deutsche Bank (5/16/2014) and Jonathan Mayers, RenTec (5/28/2014).
[269] Subcommittee interviews of Peter Brown, RenTec (6/3/2014) and Satish Ramakrishna, Deutsche Bank (5/16/2014).
[270] See, e.g., "Quant Quake Shakes Hedge-fund Giants," Market Watch, Alistair Barr, (8/13/2007), http://www.marketwatch.com/story/quant-quake-shakes-hedge-fund-giants.
[271] Subcommittee interview of Lansford Dyer, Barclays (4/13/2014).

a separate sub-account, rather than grouping them in one large pooled account. This subdivision meant that, although the referenced assets continued to be traded through one proprietary account, they were tracked separately and assets could be identified as belonging to a particular option, where previously it had not been possible to determine which assets belonged to which option.[272]

Second, the new options had separate investment guidelines for each sub-account as well as continuing to maintain general guidelines for the overall structure. Third, the bank switched from American style options to European style options, meaning the options could no longer be exercised at any time prior to the maturity date, but only on a specified exercise date.

Fourth, under the revised MAPS structure, instead of a fixed fee, the investment advisor was paid a performance fee equal to 2% of the trading gains, which was higher than the prior fee, but was still subtracted from the trading profits in the option account.[273] Fifth, Deutsche Bank changed the formula used to calculate the premium paid by the hedge fund purchasing the option.[274]

Finally, in response to RenTec's concerns, Deutsche Bank and RenTec negotiated new liquidation terms under which, if an option were terminated by the bank without cause and if RenTec determined the liquidation could harm its other holdings, then RenTec had the right to decide whether it wanted to control the liquidation of the account.[275]

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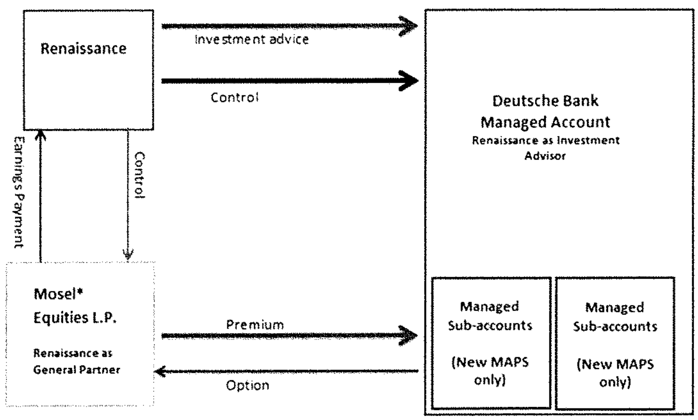
[272] Subcommittee interview of Thomas Kerns, RenTec (5/6/2014).
[273] 6/27/2014 letter from RenTec counsel to the Subcommittee, PSI-Renaissance-37-000001-007, at 003.
[274] 7/30/2008 e-mail from Eamon McCooey of Deutsche Bank to Tom Kerns of RenTec, "RE: Optionality Value" RT-PSI-00046119
[275] See, e.g., 12/15/2008 "Master Investment Advisory Agreement," between Deutsche Bank AG London and RenTec, DB-PSI 00000001-047, at 010.

The following chart provides a simplified diagram demonstrating how the restructured MAPS basket options were intended to work.

Figure 2: A simplified diagram outlining the MAPS transaction as conducted by RenTec.



*Early options were purchased through Franconia, a non-US corporate entity, prior to switching to Mosel.

In designing the restructured MAPS option, Deutsche Bank negotiated with RenTec about a number of the terms. Deutsche Bank also initiated negotiations with George Weiss about switching to the revised MAPS structure. Ultimately, however, Deutsche Bank did not enter into any new MAPS transactions with George Weiss.[276] According to the George Weiss Associates COO, Federick Doucette, George Weiss viewed the new structure as a sign that Deutsche Bank no longer had any real interest in continuing the MAPS structure.[277] Mr. Doucette told the Subcommittee that he believed the new structure had several provisions that lacked "any business purpose" and that Deutsche Bank had explained most of the new provisions as being necessary "for tax purposes."[278] In an email, George Weiss informed Deutsche Bank that several of the new requirements would forcibly change the way that George Weiss operated its business, noting for example that the lack of cross-collateralization could reduce George Weiss investments in MAPS by as much as 60% due to the need for additional liquidity to fund the remainder of the business.[279] After George Weiss was unable to

[276] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
[277] Id.
[278] Id.
[279] 2/26/2009 email from Frederick Doucette, GWA, to Frank Nelson, Deutsche Bank, "MAPS comments," DB-PSI-00033762, at 763-764 (listing out George Weiss concerns with new MAPS structure).

negotiate changes to the revised structure, it decided to end its participation in MAPS.[280] No hedge fund other than RenTec purchased options using the new structure.

At the same time Deutsche Bank was making substantial changes to MAPS, the evidence indicates that very few changes were made to the COLT structure employed by Barclays. As one RenTec employee explained to the Subcommittee, Barclays was very easy to work with and its structure accommodated RenTec's needs. Moreover, as previously noted, RenTec provided Barclays with a tax indemnity agreement, in which RenTec promised to pay for any potential tax exposure that Barclays might suffer as a result of entering into the COLT transaction.[281]

(c) Current MAPS

The restructured MAPS option remained in place from 2009 through 2010, and was used by RenTec to purchase additional options.[282] In November 2010, after the IRS issued its Generic Legal Advice Memorandum (GLAM) on basket options, as indicated earlier, Deutsche Bank ceased writing new MAPS options for over a year. In 2012, Deutsche Bank resumed offering the restructured MAPS basket options. Those MAPS options, however, had been revised yet again. In the new format, the only MAPS options offered to RenTec had terms which lasted less than one year and contractually required all gains to be reported as short-term capital gains.[283] MAPS options lasting more than one year were no longer available.

In contrast to Deutsche Bank, Barclays continued to offer COLT options to RenTec, even after issuance of the IRS basket options GLAM in November 2010. It was not until two years later, in 2013, that Barclays revised its COLT structure so that it, too, offered only those basket options that were less than a year in length.[284]

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[280] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
[281] See 10/1/2004 "Indemnity Agreement," signed by Barclays Bank PLC, Palomino Limited, Badger Holdings L.P., Medallion International Limited, Medallion Capital Investments Ltd., Medallion Associates L.P., Medallion Fund L.P., Medallion USA L.P., and Medallion RMP Fund L.P., BARCLAYS-PSI-632877-904, at 880.
[282] Chart produced by Deutsche Bank, 6/27/2014, DB-PSI 00052583-585.
[283] See, e.g., 6/7/2012 Deutsche Bank letter agreement with Mosel Equities L.P., "BARRIER OPTION TRANSACTION—Cash Settled, DBSI Reference No. 941-50340," DB-PSI 00047768-796, at 786.
[284] See "History of COLT Options," prepared by Barclays, BARCLAYS-PSI-748604.

D. Analysis of Basket Option Case Studies

A review of the basket option transactions involving Deutsche Bank, Barclays, RenTec, and George Weiss Associates demonstrates that although those financial products were styled as options, the terms, conditions, and day-to-day operation of the MAPS and COLT structures, the locus of control in each case, and who realized the profits from those arrangements undercut the structures' status as options and, more generally, as financial derivatives. Instead of options, the MAPS and COLT accounts functioned as highly leveraged prime brokerage accounts controlled by the so-called "option holders" who directed the trading and took the profits. Those basket option holders did not profit from a derivative activity, but directly from the trades they executed.

Although the option accounts and assets were held in the name of the banks, as investment advisors to the trading accounts, RenTec and George Weiss had the exclusive right and discretion to determine what assets were purchased and sold from each account, subject to basic risk reduction guidelines specified in the investment advisory agreements. The hedge funds told the Subcommittee that they were passive option buyers making mere "suggestions" or "recommendations" to assist the banks with their hedging activities, but, in reality, the hedge funds fully controlled the trading accounts used to determine the option payoffs, executed the trades made per day, and reaped the profits from those trades. Additionally, by characterizing the funds lent by the banks as money that the banks were depositing into their own accounts, the hedge funds used the basket option accounts to obtain leverage at far greater levels than otherwise allowed under federal law for prime brokerage accounts.

When RenTec took control of the option accounts at Deutsche Bank and Barclays, it employed a proprietary investment strategy that utilized a computer-based set of algorithms which was managed by over 90 professionals and required continual adjustments. The trading strategy used hundreds of thousands of short-term trades per day and produced an average of 26 to 39 million trades per year. In addition, that high-volume trading strategy caused rapid and significant turnover in the assets in the option accounts. The resulting, ever-changing basket of securities, controlled by RenTec as the investment advisor, continually modified the portfolio of assets supposedly supporting the option contracts. The constant changes not only undermine the notion of an option whose value was linked to a specific set of assets, but also could be seen as having given rise to realization events for tax purposes, further exposing the option's role as window-dressing to disguise direct securities trading by the company purporting to serve as a mere option holder.

In substance, the structures functioned as prime brokerage accounts with non-recourse financing that enabled the hedge funds to far exceed federal leverage limits on margin accounts, conduct non-stop, direct trades using the banks' trade execution software, and reap the resulting profits from their own trading activity. In the case of RenTec, the basket option contracts were not even administered as distinct, independent legal contracts, but were instead woven into an integrated trading strategy across multiple banks, multiple legal entities, and multiple accounts. This integrated strategy conducted hundreds of thousands of trades each day, yet RenTec used the basket option structure to characterize the resulting profits from the option related trades as long-term gains, saving billions of dollars in taxes over more than a decade.

Just as RenTec treated the management of the MAPS and COLT option accounts as components of a larger investment strategy, so too did the banks view and treat the individual option accounts as if they were part of a single large investment pool at each bank rather than trading specific securities within each option contract. For years, neither RenTec nor the banks tracked the basket option trading activity on an option-by-option basis, instead pooling the assets and profits. It was not until 2008, that Deutsche Bank began tracking asset performance on a per option basis, while Barclays has never tracked performance on a per option basis.

In late 2008, when Deutsche Bank revised the MAPS structure and limited the transactions to European style options that could be executed only on a fixed date, RenTec made clear its intention to use the MAPS accounts to maintain its access to cash on a short-term basis. RenTec did so by scheduling the options it purchased to produce exercise dates periodically throughout the year. RenTec then exercised those options on the pre-determined dates to obtain cash payments at regular intervals, and used the cash to support its business operations. This activity offers further evidence of the extent of the hedge fund's control over the option trading activities and profits to meet its financial needs, in contrast to a passive option holder waiting to see how a capital investment might pan out.

Each of these factors, RenTec's control over the trading strategy and related activities, high-volume trading and account turnover, integration of the accounts into a larger investment strategy, and use of the accounts to produce regular cash payments supporting its business operations, contradict a depiction of RenTec as a passive option holder awaiting derivative gains. The option structure functioned instead as a vehicle for RenTec to conduct direct trades with leverage at much higher levels than available in normal margin accounts, to aggregate and defer its gains, and to avoid billions of dollars in short-term capital gains taxes. The structure functioned the same way for George Weiss Associates.

(1) RenTec Utilization of the Basket Option Structure

Because RenTec was the longest and largest user of basket options studied by the Subcommittee, and entered into options with both Deutsche Bank and Barclays, its use of the basket option structures will be analyzed first.

(a) Disguising Trading Activity as an Option

Although Deutsche Bank and Barclays established proprietary accounts for the basket options, purportedly to hold assets that would serve as a hedge to cover the option payoffs, those accounts actually functioned as if they were RenTec's own prime brokerage trading accounts, with RenTec acting in the role of trader rather than option holder. The facts show RenTec had active and total control over the trading strategy and executions. Barclays, in an internal memorandum to its auditors, described RenTec as having so much control over the accounts that Barclays planned to remove from Barclays' financial statements the shell entity, Palomino Ltd., in whose name the accounts and assets were held. Further evidence that the accounts did not function as true options, or likely even as derivatives, is that RenTec managed the MAPS and COLT basket option accounts as components of one large investment pool, journaling assets between option accounts, rolling assets from expired to new option accounts, and shifting parts of its investment portfolio between different financial institutions. The resulting rapid asset turnover in the various option accounts meant that the options purchased by RenTec had no fixed assets and did not function as true options. The accounts existed simply to carry out RenTec's algorithmic trading strategy. In the end, for all practical purposes, the accounts functioned as over-leveraged prime brokerage accounts controlled by the hedge funds to produce trading profits rather than as accounts controlled by the banks to provide a hedge against an option contract.

(i) Controlling Trading Activity

Although the basket option accounts were opened in the name of Deutsche Bank and Barclays, RenTec, and only RenTec, controlled the investment decisions and trading activity undertaken in each account. Since 2000, RenTec was named as the investment advisor for all of the accounts referenced in the 79 basket options it purchased from the two banks, of which 60 have been exercised by RenTec after the one-year mark.[285] As the investment advisor, every direction by RenTec to buy or sell an asset in a particular option account served dual roles: the resulting portfolio of assets served as the reference assets to determine the ultimate value of the option and hold the profits from executed trades and, simultaneously, each transaction provided the assets described by Deutsche Bank and Barclays as the hedges created for the option contracts.

High Volume Trading. Trading records and other evidence indicate that RenTec used its discretion over the basket option accounts to conduct millions of high-volume trades for years. In response to a Subcommittee inquiry, RenTec estimated that the company conducted from 100,000 to 150,000 trades per day with each bank.[286] Those estimates of the daily trading activities at each bank yield a combined estimated average of 26-39 million trades per year through the option accounts.[287] Still another document, prepared by Barclays, described the trading activity of the Medallion Fund, the entity Renaissance used to implement the basket option transactions, as "very high frequency trader."[288]

While RenTec executives repeatedly told the Subcommittee that the company simply "suggested" or "recommended" trades to the banks for their hedge accounts,[289] it is difficult to credit that description of RenTec's actions given that it had the trading authority and electronic means to execute actual trades through the option accounts at its discretion and without consultation with the banks. Another factor is the sheer volume of trades that were actually executed on a minute-to-minute basis each day; it is difficult to understand how all of those trades were completed if RenTec were merely suggesting rather than executing the trades. It is also difficult to understand how the company offered "suggestions," since virtually all of the trade orders were initiated electronically, using RenTec's proprietary algorithms, and were

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[285] See chart, "History of COLT Options," prepared by Barclays, BARCLAYS-PSI-748604. See also chart produced by Deutsche Bank, 6/27/2014, DB-PSI 00052583-585. Six of those options remain outstanding.

[286] 6/27/2014 letter from RenTec's counsel to the Subcommittee, "Response to Renaissance Follow Up Questions," PSI-Renaissance-37-000001-007, at 004.

[287] Subcommittee estimate based on the daily trading estimates supplied by RenTec. 6/27/2014 letter from RenTec's counsel to the Subcommittee, "Response to Renaissance Follow Up Questions," PSI-Renaissance-37-000001-007, at 004. These large figures appear to be corroborated by an SEC examination report that calculated, for the one-year period from April 1, 2008 to March 31, 2009, that RenTec executed approximately 129 million orders. "Examination Report for: Renaissance Technologies LLC (801-53609)," prepared by the SEC, SEC_RT13_001971-993, at 972 [Sealed Exhibit].

[288] 11/18/2008 memorandum prepared by Barclays, "Renaissance Technologies Corp Prime Services Brief on existing BarCap relationship and legacy Lehman relationship," BARCLAYS-PSI-018701-704, at 701.

[289] Subcommittee interviews of Jonathan Mayers, RenTec (5/28/2014) and Mark Silber, RenTec (6/10/2014).

executed immediately using the banks' trading software and direct market access, typically with no human intervention on either side.

Bearing the Rewards and Risks. Within the MAPS and COLT structures, RenTec bore all of the significant risks and rewards due the owner of the securities positions held in the option accounts. Subject to trading and financing costs, all of the profits accrued from the trading in each option account were paid to RenTec when the option was exercised. No portion of the trading profits was paid to either bank, which received only financing and fee income. In addition, except for catastrophic market events, RenTec bore all of the risks associated with the ownership of those assets. For example, any trading losses served to lower the value of the affected option account and lower the final option payoff when RenTec exercised the option. The only risk faced by the banks was a catastrophic market event that depleted the value of the option accounts, an event that never occurred for any RenTec options. One RenTec analyst wrote that, even if a threshold level were breached requiring bank assumption of losses in an option account, losses would be minimal since the portfolio was "well-diversified, market-neutral, and with low liquidity imbalance," and "could be liquidated slowly if required."[290]

Paying Ownership Costs. Further, RenTec bore the day-to-day costs associated with ownership of the assets in the option accounts, even though the assets were held in the name of the banks providing the accounts. Each option had a "trade confirmation," which is a written acknowledgment provided by the bank indicating that a trade has been completed, and which included details such as the date, price, commission, fees, and settlement terms of the trade. A section in the confirmation entitled, "Basket Cost" at Barclays and "Basket Income and Expenses" at Deutsche Bank, identified the account expenses and subtracted the costs directly from the account.[291] The costs charged to RenTec included trade transaction fees, including ticket charges and short sale borrowing fees, reflecting the costs incurred by the bank for completing each individual transaction executed in the account. Transaction fees are common expenses in a traditional client brokerage account, but are normally absent from proprietary trading accounts operated by the bank itself.[292] Similarly, the trade confirmations

[290] Email from Daniel Koranyi, RenTec, replicated in 11/19/2008 email from Colin Masson, RenTec, to Daniel Koranyi, "DB counteroffer," RT-PSI-00368695-697.
[291] For the Barclays confirmations, see, e.g., 12/21/2005 Barclays letter agreement with Badger Holdings L.P., "Option HH," BARCLAYS-PSI-002879-896, at 887-888. For the Deutsche Bank confirmations, see, e.g., 12/16/2007 Deutsche Bank letter agreement to Mosel Equities L.P., "'OUTPERFORMANCE' BARRIER OPTION TRANSACTION—Cash Settled, Linear Amortizing Premium—DB Reference No. 941-50053," DB-PSI 00000320-337, at 327.
[292] These costs were enumerated in the Barclays confirmations and in the Deutsche Bank investment advisory agreements. See, e.g., 12/21/2005 Barclays letter agreement with Badger Holdings L.P., "Option HH," BARCLAYS-PSI-002879-896, at 887-888; 3/14/2002 "Investment

charged RenTec financing fees, which are common in client brokerage accounts, but not in a bank's own proprietary trading accounts.

The financing charges and transaction fees ultimately reduced the cash-settled payout to RenTec when it exercised the option on that account to withdraw its profits. Paying those daily trading and financing costs offer further evidence that the accounts did not operate as the banks' accounts to hedge the options, but as prime brokerage accounts for RenTec.

Disguising Control. At Deutsche Bank, a representation made by the option holder in some option confirmations appears to disguise RenTec's control over the option account.

When RenTec purchased an option, it did not hold the option in its own name, using instead one of its related entities. For the Deutsche Bank basket options, RenTec used a Bermuda corporation, named Franconia Equities Ltd., as the official option holder until 2007, when it replaced the company with a Delaware partnership named Mosel Equities LP (Mosel).[293]

RenTec served as the general partner of the Mosel partnership, and RenTec officials signed legal documents on behalf of Mosel. According to a recent ruling of the First Circuit Court of Appeals, under Delaware partnership law, "a partner 'is an agent of the partnership for the purpose of its business, purposes or activities,' and an act of a partner '... binds the partnership.'"[294] Under that ruling and Delaware law, since RenTec was the general partner of Mosel, it necessarily acted as an agent of Mosel.

At the same time, in the basket option transactions, RenTec served as the investment advisor for the Deutsche Bank accounts. In that role, RenTec determined what assets would be placed in the Deutsche Bank account which served as the reference for the option payoff, with full

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Advisory Agreement" between Deutsche Bank, London Branch, and RenTec, DB-PSI 00123209-221, at 210.

[293] See 5/21/2008 email from Thomas Kerns to Mark Silber of RenTec, "Legal Entity Org Chart Powerpoint," RT-PSI-00363679-717, at 681 and 695; Subcommittee interview of Jonathan Mayers, RenTec (5/28/2014).

[294] Sun Capital Partners III, LP v. New England Teamsters & Trucking Indus. Pension Fund, 724 F.3d 129, 146-47 (1st Cir. 2013) (citing Del. Code. Ann. tit. 6 § 15-301 (West 2000)). Additionally, the option confirmations included "any investment advisor fees accrued during such period, whether or not actually paid by Seller" as a component of the "Basket Expenses" that had to be paid from the account profits. 10/8/2009 Deutsche Bank letter agreement with Mosel Equities L.P., "BARRIER OPTION TRANSACTION—Cash Settled—DBSI Reference No. 941-50310," DB-PSI 00000181-209, at 191.

power to "supervise and direct the investment ... of all assets in the [Deutsche Bank] Account ... without prior consultation."[295]

The result was that Mosel, through its agent, RenTec, controlled the selection of assets for the account of the option seller, Deutsche Bank. However, in the option confirmations executed as part of the basket option transactions, Mosel represented that it would "not attempt to direct or influence the choice of investments in the Basket" of assets to be held in the Deutsche Bank option account.[296] But, as noted above, Mosel did "direct" the choice of investments through its agent RenTec. The representations made by Mosel in the confirmations for each transaction were fictions, using the formal structure of the transaction – Mosel's role as the official option holder – to disguise RenTec's control over the option holder as well as the option's trading activity.[297]

Fronting for the Hedge Fund. Not every Deutsche Bank affiliate felt comfortable using MAPS options. According to one Deutsche Bank employee, the bank's U.K. affiliate declined due to concerns that the MAPS structure involved the bank "fronting" for a hedge fund that was actually "actively trading" the assets in the option account.[298]

In a May 2008 email exchange involving Adrienne Browning, a Deutsche Bank tax counsel who was located in the United States and was handling the MAPS issue, and Steven Purvis, a Deutsche Bank colleague located in the United Kingdom, Ms. Browning asked if he remembered the rationale for Deutsche Bank UK deciding not to move ahead with a MAPS option that sounded very similar to the MAPS options used by RenTec. Ms. Browning wrote:

> "Do you remember ... What the analysis was for the following proposal: a MAPS (managed account) option, where the underlying assets were CFDs [Contract for Differences, a contract similar to a Total Return Swap] traded by DBL/UK. DBL would hire an investment advisor to trade the account, the assets of which

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[295] 12/15/2008 "Master Investment Advisory Agreement," between Deutsche Bank London and RenTec, DB-PSI 00000001-047, at 001-002.

[296] 10/8/2009 Deutsche Bank letter agreement with Mosel Equities L.P., "BARRIER OPTION TRANSACTION—Cash Settled—DBSI Reference No. 941-50310," DB-PSI 00000181-209, at 201.

[297] Franconia Equities Ltd. made a similar representation in earlier MAPS options, stating that "the Buyer [of the option, Franconia] agrees that it shall not contact directly the Investment Advisor regarding the terms or subject matter of this Transaction." 3/14/2002 "OUTPERFORMANCE' BARRIER OPTION TRANSACTION – Cash Settled, Linear Amortizing Premium – DBSI Reference No. 1244131," DB_PSI 00123196-208, at 206. Since Franconia was a shell corporation under RenTec's control, its statement that it would not contact the Investment Advisor – RenTec – does not seem possible. Like the Mosel representation, it was a fiction disguising RenTec's control over the option holder as well as the option's trading activity.

[298] 2/5/2008 email from Adrienne Browning, Deutsche Bank, to Steven Purvis, Deutsche Bank, "do you remember.......," RT-PSI-00062957-959, at 959.

> are CFDs, and write an option on the account to a hedge fund. It is my understanding that we didn't do the trade due to UK regulatory/tax restrictions. Do you recall the rationale?"[299]

Mr. Purvis responded:

> "[W]hat you described faced some general objection where DB could be argued to have been effectively fronting for an unregulated fund, i.e., trading carried ostensibly in the name of DB as counterparty but the reality being that a third party fund was (a) actively trading and (b) DB on limited risk and (c) manager only partially subject to DB oversight. Not thought to be a good idea then and following the Soc. Gen. fiasco I imagine there would be even more twitching now."[300]

(ii) Informing Auditor of RenTec Control

At Barclays, some of the clearest and most direct evidence that RenTec controlled the COLT option accounts and bore the related rewards and risks from the trading in those accounts was Barclays' decision to remove the account assets from its balance sheet. Barclays carried out its decision by removing from its balance sheet the special purpose entity it had established, called Palomino Ltd., to hold the COLT basket option accounts on behalf of the bank. Removing Palomino, a shell corporation, from the balance sheet – an action called deconsolidation – in effect removed Palomino's assets from the balance sheet as well. When consulting with its auditor over making the change, Barclays justified taking that action by explaining how RenTec controlled Palomino and Palomino's accounts and received all of the significant rewards and risks associated with the account activity, as explained below.

Barclays removed Palomino from its balance sheet for accounting purposes in 2009, as part of a larger series of changes to its overall corporate structure.[301] Its action meant that the accounts and assets held in Palomino's name were no longer considered part of Barclays and no longer included in Barclays' financial statements, reducing Barclays' total assets by more than $4 billion.[302] This accounting approach mirrored the accounting treatment that the bank already provided for standard prime brokerage accounts holding client assets; it also mirrored

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[299] Id.
[300] 2/5/2008 email from Steven Purvis, Deutsche Bank, to Adrienne Browning, Deutsche Bank, "do you remember.......," RT-PSI-00062957-959, at 958.
[301] 5/2011 email exchange among Marty Malloy, John Feraca, Lansford Dyer, and others of Barclays, "Palomino deconsolidates from Barclays Group," BARCLAYS-PSI-036091-102.
[302] See 6/24/2009 Barclays memorandum from "SCM" to "PwC," meaning PricewaterhouseCoopers, Barclay's auditor, "Palomino Limited ('Palomino')," BARCLAYS-PSI-139757-766, at 764.

how Prime Services, the Barclays division that dealt directly with RenTec, already handled the accounting for the majority of its client accounts.[303]

Barclays had begun considering the removal of the Palomino assets from its balance sheet in 2008, noting in an early analysis: "Generally, Palomino and Barclays do not share in any gains in the value of the account, because any such gains are paid away to Badger under the Options."[304] Badger was the shell entity established by RenTec to act as the official option holder on behalf of the hedge fund.

In June 2009, to obtain approval for the proposed deconsolidation from its auditor, PricewaterhouseCoopers (PWC), Barclays implemented several PWC recommendations to clarify that Palomino was controlled by and operated for the benefit of RenTec. First, Barclays amended the Palomino Articles of Association to "restrict the activities of Palomino to those it is currently engaged in under the COLT transaction,"[305] including to continue to work with RenTec. Second, Barclays entered into a side letter with RenTec in which its subsidiary, BBPLC, the sole owner of Palomino, "covenant[ed] that it shall not make any amendments or modifications to the Memorandum and Articles of Association of Palomino without ... the prior written consent thereto of Renaissance."[306] According to Barclays and PWC, after taking those actions, Palomino could be considered a special purpose entity "set up for the benefit of Renaissance."[307] In a contemporaneous email, PWC also observed that the risk to Barclays from the Palomino option accounts was "remote," citing several "critical features of the agreement" related to the basket option accounts, including "trading parameters, the trigger points at which Barclays can control a wind-down, the ability to adjust the call premium such that if losses are incurred, more funds are injected, and the involvement of market risk in setting these parameters."[308]

PWC confirmed in writing to Barclays that the restrictions placed on Palomino ensured that Palomino existed only for the benefit of RenTec, citing in particular the restriction on the activities of Palomino resulting from the June 2009 amendments to the Palomino Articles of

[303] Id. at 765.
[304] 7/2/2008 email from Rafal Medak, Barclays, to Nidhi Bajaj, PricewaterhouseCoopers,"Palomino's PB accounts," BARCLAYS-PSI-632060-063, at 061.
[305] 6/19/2009 email from Simon Constant to Paolo Mammola of Barclays, "Project COLT – articles amendment," BARCLAYS-PSI-577747.
[306] 6/26/2009 letter from RenTec to Barclays, New York Branch, "Palomino Limited," signed by Mark Silber on behalf of both RenTec and Badger Holdings, RT-PSI-00236651-655, at 652.
[307] 5/29/2009 email exchange among Abhinav Shah, Rob Konowalchuk, Louise McSweeney, and others of Barclays, "Palamino to PwC 20/5/09," BARCLAYS-PSI-328074-077.
[308] 5/29/2009 email from Rob Konowalchuk, PWC, to Louise McSweeney, Barclays l, "Palamino to PwC 20/5/09," BARCLAYS-PSI-328074-077, at 074-075.

Association.[309] Among other matters, those amendments specified that only RenTec could serve as the trading manager for a Palomino account and that Palomino could hold prime brokerage accounts only through members of the Barclays group.[310] In addition, Palomino's owner, BBPLC, entered into the side letter with RenTec, promising not to further amend the Palomino Articles of Association without obtaining RenTec's prior approval, further demonstrating RenTec's control over Palomino.[311]

On June 24, 2009, Barclays sent a memorandum to PWC proposing to remove Palomino from the bank's balance sheet.[312] In that memorandum, to support the proposed deconsolidation, Barclays made the following statements regarding RenTec's control of Palomino, Palomino's COLT accounts, and the assets in those accounts:

- "Although BBPLC owns 100% of the ordinary shares of Palomino, RenTec has the power to govern the financial and operations decisions for its benefit due to decisions it makes over Palomino's activities under the IMA [Investment Management Agreement] ….
- Palomino was created solely to enable RenTec … to benefit … from its long-short statistical arbitrage strategy in an efficient manner (we understand that RenTec also obtains an additional tax benefit under the transactions as its profits on the Badger Options will generally be subject to tax at the long term capital gains rate of 15% rather than the ordinary income tax rate of 35%).
- The trading activities of Palomino in relation to the PB [Prime Brokerage] Accounts are managed solely by RenTec as the Trading Managers such that RenTec can obtain the majority of the benefits from Palomino's activities. …
- [T]he PB [Prime Brokerage] Accounts are controlled by RenTec.

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[309] See April-May 2009 email exchange among Abhinav Shah and Louise McSweeney of Barclays, Rob Konowalchuk, PWC, and others, "Palamino to PwC 20/5/09," BARCLAYS-PSI-328074-077, at 074.
[310] 6/24/2009 Barclays memorandum from "SCM" to "PwC," "Palomino Limited ('Palomino')," BARCLAYS-PSI-139757-766, at 762; 6/30/2009 "Amended and Restated Memorandum and Articles of Association of Palomino Limited (Adopted Pursuant to Special Resolution Dated 26 June 2009)," RT-PSI-00234974-998; 6/26/2009 letter from Mark Silber, RenTec, to Martin Malloy, Barclays, "Palomino Limited," signed by Mark Silber on behalf of both RenTec and Badger Holdings, RT-PSI-00236651-655.
[311] 6/24/2009 Barclays memorandum from "SCM" to "PwC," "Palomino Limited ('Palomino')," BARCLAYS-PSI-139757-766, at 762; 6/26/2009 letter from Mark Silber, RenTec, to Martin Malloy, Barclays, "Palomino Limited," signed by Mark Silber on behalf of both RenTec and Badger Holdings, RT-PSI-00236651-655.
[312] 6/24/2009 Barclays l memorandum from "SCM" to "PwC," "Palomino Limited ('Palomino')," BARCLAYS-PSI-139757-766.

- RenTec is effectively entitled … to 100% of the benefits from Palomino's trading activates less any prime brokerage fees paid to BCI and BCSL in respect of the PB Accounts.
- Conclusion: Following the proposed amendments to the Articles and the entry into the Side Letter, RenTec controls the major activities of Palomino and is exposed to substantially all significant risks and rewards arising from the activities carried out through the PB Accounts, being the only permitted activities of Palomino."[313]

These statements, made by Barclays to its independent auditor to obtain approval for a significant accounting action, are strong evidence of the control RenTec exerted over Palomino and the option accounts.[314]

Although RenTec signed the side letter with Barclays and agreed to the amendments of the Palomino Articles of Association, a RenTec executive told the Subcommittee that RenTec did not fully understand the nature of what Barclays was doing and was not aware of the representations that Barclays had made to its auditor.[315] When informed of RenTec's assertions, Barclays counsel told the Subcommittee that RenTec was fully engaged in the bank's effort to remove Palomino from its balance sheet and knew the side letter was part of that effort. In a letter to the Subcommittee, Barclays counsel wrote in part:

- "[D]uring this deconsolidation process, Barclays was also engaged with Renaissance and its counsel.
- In the second quarter of 2009, Barclays had a series of telephone calls and e-mail and letter exchanges, and also exchanged drafts of documents, with Renaissance and their counsel that dealt with amendments to the Articles of Association and the drafting of a side letter.
- Mark Silber of Renaissance signed the Side Letter, and at least Jim Rowen and Renaissance outside Counsel Ed Cohen of Winston & Strawn were participants in these exchanges.
- … Barclays believes it made clear during these communications that its objective was to change the accounting treatment of Palomino, and Barclays believed that Renaissance understood that an accounting deconsolidation would be the logical result of these changes.

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[313] Id. at 763-764.
[314] Barclays told the Subcommittee that it distinguished its accounting deconsolidation from regulatory deconsolidation, and that it continued to report to the Financial Services Authority (FSA), its U.K. financial regulator, that Palomino was consolidated for regulatory purposes under an FSA requirement to consolidate any entity in which it owned more than 20% of the shares, even if it did not control that entity. See 5/18/2011 email from Marty Malloy to John Feraca of Barclays, "Palomino deconsolidates from Barclays Group," BARCLAYS-PSI-036091.
[315] Subcommittee interview of Mark Silber, RenTec (6/10/2014).

- ... [Barclays understood] that RenTec confirmed to Barclays that it did not intend to consolidate Palomino under the applicable accounting standards.
- In connection with these discussions, Renaissance requested that Barclays confirm that its prior representations regarding the transaction were still true and correct, which Barclays did. Moreover, Renaissance cooperated with Barclays in negotiating and executing the required documents."[316]

Regarding the amendments to Palomino's Articles of Association, Barclays counsel wrote that, "Renaissance and their counsel reviewed the proposed amendments and confirmed they had no issues."[317] In addition, Barclay's counsel represented that, with respect to the side letter, "Barclays initially proposed that the provision relating to consent to further amendments to the Articles," and "Renaissance and its counsel provided Barclays with an initial draft of a letter that requested certain representations by Barclays, and the provision regarding amendments later was included in that Side Letter."[318]

Barclays disclosed the deconsolidation of Palomino from its financial statements in its 2009 Annual Report and stated the following:[319]

> **"Entities where the Group's interest exceeds 50% which are excluded from consolidation**
>
> Although the Group's interest in the equity voting rights in certain entities exceeds 50%, or it may have the power to appoint a majority of their Boards of Directors, they are excluded from

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[316] 5/27/2014 email from Barclays counsel to the Subcommittee, "My response to your e-mailed questions," PSI-Barclays-20-000001-006 at 003.
[317] Id. at 004.
[318] Id.
[319] 2009 "Barclays PLC Annual Report 2009, Notes to the Accounts," prepared by Barclays, at 256, http://files.the-group.net/library/barclays/annualreport2009/pdfs/barcar09_financialstatements.pdf. This disclosure was also made in other SEC filings in subsequent years. See Form 20-F for year ending 12/31/2009, prepared by Barclays for the SEC (3/19/2010), http://www.sec.gov/Archives/edgar/data/312069/000119312510061597/d20f.htm; Form 20-F (for year ending 12/31/2010), prepared by Barclays for the SEC (3/21/2011), http://www.sec.gov/Archives/edgar/data/312069/000119312511072441/d20f.htm; Form 20-F (for year ending 12/31/2011), prepared by Barclays for the SEC (3/30/2012), http://www.sec.gov/Archives/edgar/data/312069/000119312512142026/d278890d20f.htm; Form 20-F (for year ending 12/31/2012, prepared by Barclays for the SEC (3/13/2013), http://www.sec.gov/Archives/edgar/data/312069/000119312513105055/d497934d20f.htm; The language in Barclay's SEC filings from 2009 through 2012 was virtually identical to that described above. In its most recent filings, however, Barclays modified this language substantially. This change occurred while Barclay's activities were being investigated by the Subcommittee. See Form 20-F (for year ending 12/31/2013), prepared by Barclays for SEC (3/14/2014), http://www.sec.gov/Archives/edgar/data/312069/000119312514099379/d686589d20f.htm.

consolidation because the Group either cannot direct the financial and operating policies of these entities, or on the grounds that another entity has a superior economic interest in them. Consequently, these entities are not deemed to be controlled by Barclays."

Barclays' SEC filing also included a table, excerpted below, with information in relation to such entities as required by the Companies Act 2006 Section 410(2)(b):

Country of Registration or Incorporation	Name	Percentage of ordinary share capital held %
Cayman Islands	Palomino Limited	100

Barclays, with its auditor's support, removed Palomino from its balance sheet, because the accounts and assets held in Palomino's name benefited RenTec, not the bank. In the documents sent to its auditor and disclosed in its annual reports and SEC filings, Barclays plainly stated that RenTec controlled the COLT accounts and bore "substantially all significant risks and rewards" arising from the account activities.[320] Barclay's statements offer yet more proof that RenTec, rather than the banks, controlled and bore the risks and rewards associated with the option trading accounts.

(iii) Functioning as Prime Brokerage Trading Accounts

For all practical purposes, the COLT and MAPS accounts functioned like prime brokerage accounts actively traded by RenTec, rather than as proprietary accounts used by the banks to hedge the options.[321] Both of the banks recognized this fact and in internal communications frequently characterized the option accounts as "prime brokerage" accounts. Opening the COLT and MAPS accounts in the name of the banks and styling them as carrying out option agreements, rather than prime brokerage accounts intended to transact trading, were actions taken to achieve objectives related to lower taxes, increased leverage, and loss protection.

[320] 6/24/2009 Barclays memorandum from SCM to PwC, "Palomino Limited ('Palomino')," BARCLAYS-PSI-139757-766, at 763-764.

[321] As indicated earlier, a "prime brokerage account" is a trading account at a large financial institution which provides the account holder with a bundled set of services, including execution of trades, settlement, financing, and custody services, that the account holder uses to trade with multiple brokerage houses while maintaining cash and assets in the master account. See, e.g., "Financial Glossary: Prime Broker," prepared by NASDAQ, http://www.nasdaq.com/investing/glossary/p/prime-broker; Wikipedia definition of "prime brokerage," http://en.wikipedia.org/wiki/Prime_brokerage.

Barclays, in its initial approval documentation for the COLT basket option structure in 2002, described COLT as providing:

> "an after tax benefit to these investors [RenTec] through the conversion of their return from the fund from short term capital gains (taxed at 39.6%) to long term capital gains (taxed at 20%). This would be achieved by substituting the Fund's direct execution of its trading strategy with the cash settled call option over a Barclays proprietary account whose performance *substantially* replicates the Fund's trading strategy."[322]

This statement shows that Barclays acknowledged the tax objective of COLT and considered the "Barclays proprietary account" – which was a prime brokerage account opened in the name of a shell corporation, Palomino – to be a substitute for RenTec's own trading account.[323]

A 2003 Barclays memorandum approving a second COLT option with RenTec again described the option account as a prime brokerage account, while also making the point that the risks presented by the option account were "akin to the risks taken in a normal collateralised Prime Brokerage relationship":

> "The Second Renaissance Transaction would utilize the existing prime brokerage trading accounts held with both BCSL and BCI (collectively referred to as the 'PB Account'). … Palomino [the shell company used by Barclays in COLT] will not have any credit risk or market risk in the transaction, due to the fact that … its PB Account is hedged by the Synthetic Call Option and Prime Brokerage effectively has taken the downside risk. The risk borne by Prime Brokerage is akin to the risks taken in a normal collateralised Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time."[324]

Barclays view of the option account as a prime brokerage account is further evidenced in a Barclays evaluation of the COLT structure in 2010:

> "The options reference the value of these PB [Prime Brokerage] accounts, which is equivalent to them referencing

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[322] 8/22/2002 Barclays memorandum from Jonathan Zenios et al. to Iain Abrahams et al., "SCM Approvals paper – Project COLT," BARCLAYS-PSI-212590-598, at 590.
[323] Id. See also 9/13/2002 letter from Financial Services Authority to Barclays, "Project COLT," BARCLAYS-PSI-005258-259 ("Credit and operational controls around this [COLT] transaction are equivalent to those that are in place for a standard prime brokerage transaction.").
[324] 4/4/2003 Barclays memorandum from SCM to SCM Approvals Committee, "SCM Approvals paper – Project COLT (Renaissance II)," BARCLAYS-PSI-213947-953, at 949.

the assets directly, and therefore there is no leakage between the value of the assets … and the value of the options. Thus, the net effect is that Barclays is extending senior financing to RenTec."[325]

At Deutsche Bank, a 2009 email described the MAPS structure in similar terms, as a "PB" or Prime Brokerage facility used to carry out the trading strategy directed by RenTec:

"The Renaissance MAPS trade is a synthetic, non-recourse PB-inspired facility. We [Deutsche Bank] carry the equity longs and shorts, as directed by Renaissance, on our BS [balance sheet] and pass the performance of [the] portfolio to Renaissance via swap."[326]

In fact, the so-called "option" accounts provided RenTec with more benefits than normal prime brokerage accounts. Prime brokerage accounts are subject to federal margin rules that limit the financing that can be provided by a broker-dealer to a client through the account for the purchase of securities, allowing no more than a 2:1 leverage ratio. The MAPs and COLT option accounts established in the name of the banks, which designated RenTec as the investment advisor rather than the owner of the assets, sidestepped those margin limits; any funds added to the account by the banks could be treated as the banks supplying money for their own trades. By engaging in that fiction, Deutsche Bank offered RenTec a leverage ratio of up to 18:1, while Barclays offered a leverage ratio of up to 20:1.[327]

In a true option account, the option holder would not be actively trading the securities that determine the value of the options. The option holder would not be seeking or using financing to make more trades. Instead, the option holder would be passively awaiting the financial return on a trading account under the control of the option seller. The accounts set up in connection with the so-called basket option structures, however, were designed and intended from their inception to be under

[325] 5/19/2010 email from Edward Sherwood to Brett Beldner of Barclays, "COLT XIX – Draft SCM Approvals Notification," BARCLAYS-PSI-010082. "Senior financing" refers to very secure financing, senior debt that has a position of priority relative to other lenders in the event of bankruptcy. See, e.g., 12 C.F.R. § 327 app. C. ("Senior debt includes any portion of total debt that has a priority claim on any of the borrower's assets. A priority claim is a claim that entitles the holder to priority of payment over other debt holders in bankruptcy.")
[326] 8/25/2009 email from William Broeksmit to Anshu Jain of Deutsche Bank, "RenTech MAPS," DB-PSI 00006983-084, at 083.
[327] 12/6/2006 "Amended and Restated Investment Management Agreement," signed by Barclays and RenTec, RT-PSI-00134963-5013, at 983-984. Barclays provided an upper leverage limit of 20:1, 8/15/2007 memorandum from Hamish McPherson to Iain Abrahams of Barclays, "Project Colt X (Renaissance Technologies)," BARCLAYS-PSI-003792; while DB provided an upper leverage limit of 18:1. 8/24/2009 email from William Broeksmit to Satish Ramakrishna of DB, "Renaissance Technologies," DB-PSI 00005713-715, at 714.

the control of the option holder and to produce trading profits benefiting the option holder alone.

Here, RenTec served as both the controller and the beneficiary of the trading activity in the basket option accounts, and but for mischaracterizing this as option activity, RenTec would not have been permitted under law to receive the added leverage it sought. While those accounts were purportedly established to provide a reference account for the basket option as well as a hedge for the banks, and all trading assets were held in the name of the banks, in reality, the accounts functioned in substance as prime brokerage trading accounts used by RenTec to carry out its trading strategy, while claiming lower taxes and higher leverage than it could otherwise justify.

(b) Changing the Asset Pool

As previously noted, RenTec developed, employed, and continually adjusted a complex algorithm to implement its trading strategy. It initiated hundreds of thousands of short-term trades per day, resulting in rapid and significant turnover in the assets in the option accounts, creating an ever changing basket of securities in the referenced accounts. This activity, controlled by RenTec as the investment advisor, continually modified the portfolio of assets supposedly supporting the option contracts. The constant changes undermined the notion of an option whose value was linked to a specific set of assets, and could also be seen as having given rise to realization events for tax purposes.

(i) Constantly Changing Algorithm

During the period examined by the Subcommittee, RenTec indicated that it employed over 90 professionals with doctorates in mathematics, physics, and computer science, and directed them to constantly monitor, update, and improve its key trading algorithm, which encompassed many different strategies that RenTec used to trade.[328] RenTec explained to the Subcommittee that those employees constantly worked on and modified the algorithm, carefully modeling new factors and introducing them into the algorithm over time to alter how it decided what trading recommendations to make.[329]

In addition, according to Peter Brown, RenTec's Co-CEO, RenTec's investment strategy was not confined to application of its algorithm; at times, RenTec employees also personally intervened to suggest trading strategies. In a 2008 telephone call between Deutsche Bank and RenTec, Dr. Brown was asked the question: "[H]ow would

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[328] 2/26/2013 RenTec briefing of the Subcommittee.
[329] Id.

we react when some extraordinary thing happened that can't be so easily measured in market statistics?"[330] Dr. Brown answered:

> "Well, the answer there is that we have a risk control department and we also have senior management, all of whom are quite tuned into what is going on in a qualitative sense in the market. . . . We then take that into account and it adjust the levels at which we run. So, for example ... now is a perfect example. [O]ur models are functioning very well in this environment. Nonetheless, we are ... running at reduced levels and the reason we are running at reduced levels is precisely the reasons that you bring up. It's ... not clear – we're still in unchartered territory here. We don't know exactly – is government intervention going on. ... [T]he models don't see the government intervention but we do and we are nervous that something could happen. ... So we have actually intervened and we do that from time to time when things like this happen."[331]

In interviews with the Subcommittee, RenTec representatives explained that the algorithm executing its investment strategy was also managed by a separate "allocation function," that worked off of data manually entered by RenTec employees and could be updated at any time by RenTec employees.[332] A RenTec email exchange provided an example of how this function worked, indicating that, during the Greek crisis in 2011, RenTec used the allocation function to alter the priorities of its accounts between Deutsche Bank and Barclays, directing trades away from Barclays and towards Deutsche Bank to reduce counterparty risk, which then altered the size of the respective option structures at the two bank by nearly $4 billion.[333] RenTec told the Subcommittee that the allocations between option accounts and its other prime brokerage accounts, which use the same algorithm strategy, are also updated regularly and manually by RenTec employees.[334]

Together, these facts indicate that RenTec's trading strategy relied on a complex, computer-based algorithm that was undergoing constant modifications and upgrades and whose results were further modified at times by trading suggestions and by manual allocation functions. The end result was that RenTec's trading strategy changed on a regular and ongoing basis.

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[330] Audio recording of 11/6/2008 telephone call among James Rowen, RenTec, and Satish Ramakrishnan, and Deepak Agrawal of Deutsche Bank, DB-PSI 00122457.
[331] Id.
[332] Subcommittee interview of Peter Brown, RenTec (6/3/2014).
[333] 8/23/2011 email from Peter Brown to Daniel Koranyi of RenTec, "US portfolio shift – overrides?" RT-PSI-00364418; Subcommittee interview of Peter Brown, RenTec (6/3/2014).
[334] Subcommittee interview of Peter Brown, RenTec (6/3/2014).

(ii) Constantly Changing Asset Mix

RenTec's constantly changing trading strategy and high-volume trading approach produced continuous turnover in the assets attributed to the option accounts. Prior to 2012, the majority of RenTec's basket options were exercised more than one year after they were created. A 2010 SEC examination report found that the average length of the 42 options RenTec had exercised to that point was 385 days.[335] In addition, the SEC examination report found that, during the one-year period from April 1, 2008 to March 31, 2009, RenTec placed approximately 129 million trade orders, involving nearly 10,000 different financial instruments across 18 countries.[336] As previously noted, RenTec advised the Subcommittee that it "recommended" between 100,000 and 150,00 trades per day, each, through Deutsche Bank and Barclays' trading platforms.[337] Those estimates of the daily trading activities at each bank yield a combined estimated average of 26-39 million trades per year through the option accounts.

In addition to initiating a high volume of trades, the data indicates that RenTec generally held the assets it acquired for relatively short periods of time. As part of its 2010 examination, the SEC prepared a chart analyzing the length of time that RenTec held its positions.[338] An excerpt from that chart, reprinted below, showed that, during the two-year period examined, RenTec's Medallion funds held positions for less than three months 87% of the time. They held positions for over six months less than 1% of the time. As a result of this constant turnover, RenTec regularly altered the entire composition of the assets included in the option accounts several times a year. When asked about this turnover rate, RenTec told the Subcommittee that it viewed the rate of change as critical to the success of RenTec's investment strategy.[339]

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[335] May 2010 Examination Report for RenTec, prepared by SEC New York Regional Office, SEC_RT13_001965-993 [Sealed Exhibit].
[336] Id. at 972 [Sealed Exhibit].
[337] 6/27/2014 letter from RenTec counsel to the Subcommittee, PSI-Renaissance-37-000001-000007, at 004. In an internal memorandum, Barclays described the trading activity of the Medallion Fund, the entity Renaissance used to implement the basket option transactions, as "very high frequency trading." 11/18/2008 memorandum prepared by Barclays, "Renaissance Technologies Corp Prime Services Brief on existing BarCap relationship and legacy Lehman relationship," BARCLAYS-PSI-018701-704, at 701.
[338] Undated chart, "Holding Period Comparison RIEF vs. Medallion, From January 1, 2007 thru March 31, 2009," prepared by RenTec , SEC_RT13_010650-651, at 651 [Sealed Exhibit].
[339] Subcommittee interview of Peter Brown, RenTec (6/3/2014).

Holding Period Medallion		
From January 1, 2007 thru March 31, 2009		
Lots Relieved In*	MED**	Cumulative
3 months	12.25%	86.97%
4 months	5.95%	92.91%
5 months	2.92%	95.84%
6 months	1.57%	97.41%
7 months	0.85%	98.26%
8 months	0.61%	98.87%
9 months	0.43%	99.30%
10 months	0.27%	99.58%
11 months	0.16%	99.74%
12 months	0.10%	99.84%
over 1 year	0.16%	100.00%

*Turnover time frame.
**Medallion holding time for its securities.
Source: Undated chart, "Holding Period Comparison RIEF vs. Medallion" January 1, 2007 through March 31, 2009," prepared by RenTec, SEC_RT13_010650-651 [Sealed Exhibit].

Not an option. Options and other derivatives usually require the participants to make careful calculations about how specified financial assets will perform, but in the case of the basket options, the hedge funds and banks agreed to allow constant change in the option assets. The agreement to allow such extensive asset changes is evidence that the option accounts were intended to function as trading accounts rather than an option or other derivative.

A fundamental feature of a derivative is the presence of an underlying or referenced set of assets that can be identified, analyzed, and used to determine the derivative's price, performance, and ultimate resolution with respect to the participating parties.[340] To evaluate and price a derivative, including an option, the participants typically analyze the referenced assets; if those assets are not fixed or easily identified, and are instead permitted to undergo constant and fundamental change, the required analysis cannot be performed. Products like the basket options that cannot, as a practical matter, produce an identifiable set of referenced assets do not function as true options or even as derivatives.

The basket option contracts between RenTec, Deutsche Bank, and Barclays did not set up an arrangement that would produce an identifiable set of referenced assets. The contracts stated that the determinant of what the banks would owe RenTec upon exercise of the option would be the performance of a designated option account. The

[340] 12/2/2011 "Present Law and Issues Related to the Taxation of Financial Instruments and Products," prepared by the Joint Committee on Taxation, JCX-56-11, at 7, https://www.jct.gov/publications.html?func=startdown&id=4372.

account, which was to be managed and controlled by RenTec, was permitted to include a broad array of assets, whose selection was at the discretion of RenTec, subject only to some basic guidelines to reduce trading risk.[341]

RenTec then used the basket option accounts to implement a proprietary investment strategy that employed as many as 300,000 securities trades at two banks per day, constantly changing the mix of assets in the option accounts. RenTec personnel were continually monitoring and adjusting the factors used by the complex computer model that RenTec developed and employed to execute its strategy. The volume of trades that RenTec conducted in the account was so large and the length of time that the assets were held was generally so short that the entire composition of tens of thousands of assets in the option accounts changed several times a year. In essence, the banks allowed RenTec to write an option on RenTec's own daily trading activity, whatever RenTec might decide that trading activity would be. The contracts did not further identify the referenced assets.

Material, fundamental changes to the option. RenTec's extensive, continual changes to the basket of assets in the referenced accounts had a second consequence. Even if the basket option structure were determined to be a derivative, the basket of assets was altered in such a fundamental and material way by the trading activity that the changes may be deemed to be an exchange of one property for another, resulting in an exchange of the existing option for a new one, triggering a "realization event" for RenTec under Section 1001 of the tax code.[342]

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[341] Multiple documents describe RenTec's absolute control over the trading accounts. In a letter to the IRS, a copy of which was provided by RenTec to the Subcommittee, RenTec stated that the option was on a "notional stock portfolio that changed in accordance with recommendations of the Algorithm." 4/13/2012 "Protest of 60 Day Letters by Renaissance Technologies LLC et al.," RT-PSI-00000001-402, at 016 [Sealed Exhibit]. In option confirmations with the banks, the basket of assets was defined as "positions that (i) actually result from transactions specified by the Investment Advisor ... or (ii) are Designated Positions (as such term is defined in the Master Investment Advisory Agreement.)" 10/8/2009 Deutsche Bank letter agreement with Mosel Equities L.P., "BARRIER OPTION TRANSACTION—Cash Settled—DBSI Reference No. 941-50310," DB-PSI 00000181-209, at 190. Pursuant to the 1992 ISDA Master Agreement as supplemented in December 15, 2008, a designated position was any position "reject[ed]," "unwound," or "liquidated" by the Client "without the direction of the Advisor." 12/15/2008 "Master Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank and RenTec, DB-PSI 00000001-047, at 002-003. The investment advisory agreement also stated: "[T]he Advisor shall ... have full power, authority and right to ... supervise and direct the investment and reinvestment of all assets in the Accounts, and engage in such transactions on behalf of the Client's Account, in the Advisor's discretion and without prior consultation with the Client, subject only to the terms of this Agreement ...." Id. at 001-002.

[342] Analysis of the IRS GLAM suggests that the combination of direct control over the option account by the option buyer or its agent combined with changes in the referenced securities presents a good argument for a § 1001 "exchange every time there is a change to the referenced securities." "Options Over a Managed Account: The IRS Weighs in," What's News in Tax, KPMG, Daniel Mayo and Sam Chen, (12/17/2010), at 12, http://www.us.kpmg.com/microsite/taxnewsflash/2010/Dec/Options.pdf.

Section 1001 determines the point at which gains should be recognized for tax purposes.

An IRS regulation states that a taxpayer must recognize gain "from the exchange of property for other property differing materially either in kind or in extent."[343] It has also determined that a realization event triggering the report of gain from an exchange of property may occur when there is a material change in an option contract:

> "A change in contractual terms effected through an option provided in the original contract is treated as an exchange under section 1001 if there is a sufficiently fundamental or material change that the substance of the original contract is altered through the exercise of the option. Under such circumstances, the old contract is treated as if it were actually exchange for a new one."[344]

Given how rapidly the assets in the option accounts turned over, any such gains would be short-term and not long-term, thus undercutting the option's objective of producing long-term capital gains subject to a lower tax rate.

(c) Ignoring Option Formalities

RenTec entered into 29 options with Deutsche Bank and 31 with Barclays for a total of 60 basket options that RenTec exercised after the one-year mark. George Weiss entered into 10 basket options with Deutsche Bank. One striking feature of how they operated is that neither the hedge funds nor the banks traded the option assets on an individualized, per option basis; instead, they pooled the assets from multiple options before trading them, transferred assets among different option accounts, and used a single trading strategy for all of them. By ignoring the option formalities and treating the assets as part of a single, large investment pool, the hedge funds and banks showed the option format was a pretext for enabling the hedge funds to conduct a complex trading strategy while claiming the strategy produced lower taxes and higher leverage than would otherwise be available through a normal prime brokerage account.

(i) Option Accounts as One Big Investment Pool

The banks and RenTec told the Subcommittee that, from 1999 to 2008, they did not keep track of assets on a per-option basis. Instead, the assets from multiple options were pooled together in a single proprietary trading account opened in the name of the bank. Once assets

[343] Treas. Reg. § 1.1001-1(a).
[344] Rev. Rul. 90-109, 1990-2 C.B. 191.

were added to the pool, they lost their identity as being associated with a particular option. Thereafter, to determine its profits, each individual option was viewed as having claim to a specified percentage of the overall portfolio of assets.

While Barclays has continued using that approach from 2002 to the present, in 2008, after Deutsche Bank restructured the MAPS option, it required each MAPS option to be tracked separately and the assets purchased through each option to be assigned to a separate subaccount within the larger proprietary trading account used for basket options. Even then, however, once separate subaccounts were established for each option, Deutsche Bank allowed RenTec to transfer assets between the subaccounts using book entries to transfer the assets without trading on the market, a practice called journaling. Deutsche Bank's practice of allowing the free transfer of assets between option subaccounts offers further evidence that the parties did not view the option contracts as creating separate financial instruments referencing separate, distinct sets of assets, but instead viewed them as interrelated parts of a single trading strategy under RenTec's control.

Percentage Allocations. Because the assets purchased through multiple options were pooled, at Deutsche Bank until the end of the year 2008, and at Barclays through the present day, RenTec and George Weiss determined the value of an individual option using a rough-cut percentage allocation, meaning using a process to allocate a percentage of the pooled assets to a particular option.[345] In other words, neither the hedge funds nor the banks made any attempt to assign specific securities to specific options and track those specific securities on an ongoing basis. Instead, given the pooling of assets, RenTec told the Subcommittee that it was impossible to say at any given time that the gains from any given holding in the pooled securities applied or did not apply to a particular option.[346] One RenTec employee agreed that, during the time that the options were accounted for in this manner, it would have been impossible to walk it back and determine which assets from the pooled securities had belonged to which option.[347] Similarly, Barclays personnel told the Subcommittee that they accounted for

[345] See, e.g., 12/16/2007 Deutsche Bank letter agreement with Mosel Equities L.P., "'OUTPERFORMANCE' BARRIER OPTION TRANSACTION—Cash Settled, Linear Amortizing Premium—DB Reference No. 941-50053," DB-PSI 00000320-337; 12/21/2005 Barclays letter agreement with Badger Holdings L.P., "Option HH," BARCLAYS-PSI-002879-896. See also Subcommittee interview of Frederick Doucette, George Weiss (5/23/2014); 12/17/2007 Deutsche Bank letter agreement to RenTec, "First Amendment to the Amended & Restated Investment Advisory Agreement," RT-PSI-00000932-933.

[346] Subcommittee interview of Thomas Kerns, RenTec (5/6/2014) (stating it would it be very difficult or even impossible to determine what stocks were assigned to a particular option during or after an unwind).

[347] Subcommittee interview of Thomas Kerns, RenTec (5/6/2014).

RenTec trading and compliance with the bank's investment guidelines on a single, structure-wide basis.[348]

The evidence indicates that the method actually used for calculating the value of an option under the old Deutsche Bank structure and the Barclays structure required looking at each option in existence at the time that a new one was added and assigning a percentage of the total assets invested in the structure at that time to each existing option.[349] In other words, each time that a new option was added or an existing option was exercised, every other option was re-valued and assigned a new percentage of the total pooled assets.

This rough-cut percentage allocation method meant that every option affected the overall value of every other option that coexisted with it at any point in time. The value of each option was not individually tracked, but calculated as a percentage of the value of the overall pooled assets at each bank. This practice provides additional evidence that the assets in the individual options were pooled and treated as an integrated whole, rather than being associated with specific options. It is also far from clear that an "option" with an ever changing basket of securities with no identifiable assets of its own merits treatment as a true option, or even as a derivative.

(ii) Journaling Between Deutsche Bank Option Subaccounts

From 1998 to 2008, in the old MAPS system, Deutsche Bank pooled all of the assets purchased through multiple basket options and hired RenTec as the investment advisor for the account containing all of those assets. RenTec told the Subcommittee that the same account simultaneously served as the bank's hedge for all of the outstanding options.[350] In 2008, as part of Deutsche Bank's restructuring of the MAPS option, Deutsche Bank created a new system that purported to divide up the holdings for each separate option and assign the assets for each option to a separate subaccount. At the same time, the new system continued using a single proprietary trading account that contained all of the option assets. Despite continued use of that pooled account, RenTec told the Subcommittee that the new subaccounts ensured specific assets individually corresponded to and hedged each option separately.[351] Both

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[348] Subcommitte interview of Lansford Dyer, Barclays (4/3/2014).
[349] See, e.g., 12/16/2007 Deutsche Bank letter agreement with Mosel Equities L.P., "'OUTPERFORMANCE' BARRIER OPTION TRANSACTION—Cash Settled, Linear Amortizing Premium—DB Reference No. 941-50053," DB-PSI 00000320-337; 12/21/2005 Barclays letter agreement with Badger Holdings L.P., "Option HH," BARCLAYS-PSI-002879-896. See also Subcommittee interview of Thomas Kerns, RenTec (5/6/2014).
[350] 7/31/13 letter from RenTec to the Subcommittee describing journaling between basket option sub-accounts, RT-PSI-00384749-761.
[351] Id.

Deutsche Bank and RenTec explained that the new system also "resolved ambiguity" relating to how an individual option could be liquidated in the event of the option breaching its barrier, because with subaccounts, it would be clear what assets to liquidate.[352]

At the same time, as part of the new system, Deutsche Bank allowed RenTec to "journal" assets between different subaccounts.[353] A "journal" in this context is the ability to transfer a stock position from one subaccount to another, using book entries for the two accounts to accomplish the transfer, without the need to sell the position to the market and then immediately buy it back.[354] According to both Thomas Kerns and Eamon McCooey, who managed operations for Deutsche Bank's updated MAPS system at different times, this kind of transfer would have been problematic if it had been conducted through the market, since selling and repurchasing identical securities could have been misinterpreted as "wash sales" or some other type of manipulative trading.[355]

RenTec completely controlled the journaling process through its authority to determine what assets could be included in a particular option account. According to RenTec, it used journaling for "Portfolio rebalancing due to Option Exercise," meaning to "reallocate the positions in the sub-account underlying the exercised option to the remaining options based on their relative cash settlement amounts."[356] Peter Brown, co-CEO of RenTec, explained to the Subcommittee that the journaling process was important, because it assisted RenTec with loss protection.[357] He explained that it also made sense to be able to journal from a business perspective because, under the new MAPS structure, Deutsche was charging RenTec an "upfront 20% of the

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352 Subcommittee interviews of Satish Ramakrishna, Deutsche Bank (5/16/2014) and Jonathan Mayers, RenTec (5/28/2014).
353 For a list of all journaling between subaccounts, see 7/31/13 letter from RenTec to the Subcommittee describing journaling between subaccounts, RT-PSI-00384749-761.
354 Id. See also Subcommittee interview of Eamon McCooey, Deutsche Bank (5/2/2014).
355 Subcommittee interviews of Eamon McCooey, Deutsche Bank (5/2/2014), Thomas Kerns, RenTec (5/6/2014), and Peter Brophy, Deutsche Bank and RenTec (5/13/2014 and 5/19/2014). However, RenTec counsel told the Subcommittee that it was irrelevant whether its "recommendation" to remove a position from a subaccount resulted in a journal or a sale to the market. "There does not need to be, and there is not, any provision in the Deutsche Bank option confirmations relating to Renaissance's ability to recommend that securities positions be journaled from one sub-account to another. This is because, as previously discussed, each option references the notional portfolio resulting from Renaissance's recommendations for an individual Deutsche Bank sub-account, and it is irrelevant, from the standpoint of the option, whether Renaissance recommends that a position be removed from the sub-account by means of a journal to another sub-account or by means of a sale into the market." 8/30/2013 email from RenTec's counsel to the Subcommittee, "per our discussion," PSI-RenaissanceTech-20-000001-002, at 002. This position appears to be inconsistent, however, with RenTec's explanation for why it preferred journaling over asset sales when moving assets from one MAPS account to another.
356 5/15/2008 "Deutsche Bank Maps New Process/Procedures," prepared by RenTec, RT-PSI-00002319-322 at 321.
357 Subcommittee interview of Peter Brown, RenTec (6/4/2014).

premium as prepaid financing," incentivizing RenTec to start with high leverage because they were already paying for it.[358]

RenTec used the journal process frequently to transfer positions between Deutsche Bank subaccounts when a new option was opened or an older option was exercised.[359] At the Subcommittee's request, RenTec provided a listing of journal entries it had made in preparation for the exercise of an option or the initiation of a new option. The list shows that, after 2008, journaling was used to transfer assets at all but one European style option at Deutsche Bank.[360] The list also indicates that the journals were used to transfer between 14% and 100% of the assets in a particular option subaccount.[361] Of the ten journals RenTec identified for the Subcommittee as undertaken in anticipation of an option exercise, two transferred 100% of the assets in the option that was about to be exercised, and two more transferred 99% of the assets in the option about to be exercised.[362] The average value of each of those ten journal entries represented over $800 million in positions, and RenTec used those journals to transfer those positions to other option subaccounts it controlled, before exercising the options that referenced those positions.[363] The data indicates that RenTec also used journals at other points in the life of an option contract: many were done just prior to exercise, but a few journals transferred assets more than three months prior to the exercise of the option from which they were journaled.[364] In 2011, RenTec conducted a pair of journals after an option had already been exercised but prior to its final valuation.[365]

A 2008 RenTec email also noted that the process could be used to "reshuffle" assets among options at the end of a trading day. As James Rowen, RenTec's COO stated in an email to another RenTec executive: "[T]here is no prohibition against end-of-day transfers in our new MAPS documentation. We may reshuffle the constituents of the underlying options at the end of the day, at the current closing price."[366] Mr. Rowen also advised in the email that Mark Silber, RenTec's legal and compliance head, was involved in the planning to keep the reshuffling

[358] Id.
[359] See 7/31/13 letter from RenTec to the Subcommittee listing journaling transfers between subaccounts, RT-PSI-00384749-761.
[360] See 8/30/2013 chart, "Journal Entry Dates," prepared by RenTec for the Subcommittee, RT-PSI-00384762.
[361] 7/31/2013 letter from RenTec to the Subcommittee describing journaling between sub-accounts, RT-PSI-00384749.
[362] Id.
[363] Statistics prepared by Subcommittee from data taken from 8/30/2013 chart, "Journal Entry Dates," prepared by RenTec for the Subcommittee, RT-PSI-00384762.
[364] Id.
[365] Id.
[366] 9/10/2008 email from James Rowen to Peter Brown of RenTec, "Re-shuffle- Follow-up," RT-PSI-00068362. See also "Deutsche Bank Maps: New Process/Procedures As of May 15, 2008," prepared by RenTec, RT-PSI-00002319-322, at 321.

"manageable" and "below the radar of DB."[367] When asked about his email, Dr. Brown told the Subcommittee that RenTec did not actually make any journal entries simply to reshuffle assets among existing options at the end of a trading day, even though it was allowed under the terms of the management agreement.[368]

RenTec's frequent usage of journaling exposed several features of the new MAPS structure that may not have been immediately clear. First, it demonstrated that, although the new MAPS structure purported to set up separate option subaccounts to separate the assets assigned to each option, journaling allowed RenTec to continue to transfer assets among the options. Second, exercising an option did not require RenTec to give up assets that it wanted to retain; instead, RenTec could use journaling to transfer the assets it wanted to keep from the option being exercised to a different option subaccount, thereby maintaining the underlying assets. Third, each option subaccount was not operated on an independent basis, but was used by RenTec to pursue trading strategies that reached across all of its options. Fourth, journaling allowed RenTec to transfer assets out of a particular option subaccount and then exercise that option to cash out only a percentage of what had been its overall portfolio, just as it had been able to do through the old MAPS structure.

RenTec's active journaling showed that the new MAPS structure did not stop the hedge fund from switching assets among options. To the contrary, it provided additional evidence of RenTec acting as if it were the owner of the option assets, as opposed to a passive option holder. RenTec's journaling again raised the issue of whether the basket options operated as true options, when their reference assets could be and were so easily altered.

(d) Withdrawing Cash at Regular Intervals

After Deutsche Bank restructured the MAPS options in 2008, and began using European style options that required option exercise on a specific date, RenTec set up the options it purchased so that it could regularly withdraw cash throughout the year from the option accounts and use that cash to support its business operations.

RenTec told the Subcommittee that it wanted to cash out its earnings from its basket option holdings on a regular basis in order to protect its gains from a significant market downturn.[369] RenTec also

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[367] 9/10/2008 email from James Rowen to Peter Brown of RenTec, "Re-shuffle- Follow-up," RT-PSI-00068362.
[368] Subcommittee interview of Peter Brown, RenTec (6/4/2014). See also 12/15/2008 "Master Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank London and RenTec, DB-PSI 00000001-047, at 001-002 (explaining that the advisor had discretion to conduct trades for all subaccounts without consulting the client).
[369] Subcommittee interview of Peter Brown, RenTec (6/3/2014).

indicated that it wanted to regularly access the option earnings to cover employee salaries and bonuses, and to make distributions to shareholders in order to keep the Medallion funds at a specified size.[370] Peter Brown, RenTec's Co-CEO, told the Subcommittee that RenTec explicitly designed its 2008 option purchases to facilitate cash flow from the basket option structures on at least a semiannual basis to run its business operations, including paying salaries.[371]

The technique that RenTec used was to stagger the initiation of the options it purchased so that they reached the one-year mark at intervals that enabled RenTec to withdraw funds on a regular basis, either quarterly or semi-annually, past the one-year time frame.[372] When an option matured, RenTec typically cashed out the earnings it needed and rolled the remaining assets from the expired option's subaccount into the subaccount of an existing or newly initiated option. RenTec referred to this practice as the "Steady State."[373] RenTec apparently communicated its desire to maintain that steady state to Deutsche Bank, since a 2008 email from Satish Ramakrishna, head of risk for the Global Prime Finance division at Deutsche Bank, indicated that he understood that RenTec "wish[ed] to stagger options once every 3 months."[374]

The fact that RenTec was able to orchestrate the timing of the options to guarantee itself regular access to the gains from short-term trades underscores how completely it controlled the transactions. In addition, RenTec's ability to make routine cash withdrawals from the basket option accounts to support its business operations is additional evidence that RenTec acted in the role of an owner of the underlying account assets, rather than as an option holder awaiting final resolution of an option under the control of another party.

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370 Subcommittee interviews of Peter Brown, RenTec (6/3/2014), James Rowen, RenTec (5/20/2014), and Mark Silber, RenTec (6/10/2014). But RenTec's counsel told the Subcommittee that the cash withdrawals were not used for employee salaries or bonuses, but only for returns to investors. Subcommittee briefing by RenTec counsel (6/16/2014).

371 Subcommittee interview of Peter Brown, RenTec (6/3/2014).

372 In addition to allowing cash withdrawals to support its business operations, RenTec described other benefits from using options with staggered start dates. A 2008 email suggested they could be helpful in preventing a large loss during a crisis by ensuring that no two options had the same starting values or maturing dates, preventing cascading effects. See 6/16/2008 email from Satish Ramakrishna of Deutsche Bank to James Rowen of RenTec, "Language," RT-PSI-00054256; Subcommittee interview of James Rowen, RenTec (5/20/2014). In addition, by rolling assets from exercised options into new options, RenTec could ensure that it took only the funds it needed and avoid large changes in the overall leverage or other parameters of its investment pool at Deutsche Bank and Barclays. See, e.g., 12/8/2011 email exchange among Noor Islam, Jordan Friedman, Devasish Majumdar and others of Barclays, "COLT Option XXIV – GFRM," BARCLAYS-PSI-013658 (explaining that as long as RenTec put on a new option in the right order, it could exercise three others without violating leverage guidelines).

373 See, e.g., 9/10/2008 email from Peter Brown to James Rowen, "Re-shuffle- Follow-up," RT-PSI-00068362.

374 6/16/2008 email from Satish Ramakrishna of Deutsche Bank to James Rowen of RenTec, "Language," RT-PSI-00054256.

(2) George Weiss Utilization of Basket Option Structure

The use of the basket option structure by George Weiss Associates – the second largest user of the basket option structures – further calls into question the legitimacy of this structure as a derivative, and whether resulting gains qualified for long-term capital gains treatment.

From 2003 to 2007, George Weiss bought ten MAPS basket options from Deutsche Bank, involving assets that at their inception had a notional value totaling about $2.8 billion.[375] Those basket options functioned in the same manner as the MAPS options purchased by RenTec. The option assets were held in the name of Deutsche Bank and kept in a proprietary trading account opened in the name of the bank. Like RenTec, George Weiss was named as the investment advisor for the option accounts, and it was George Weiss that determined the trading strategy and initiated the trading orders, which were then executed using Deutsche Bank's trading software. Like RenTec, the assets purchased through George Weiss' individual options were pooled, and the hedge fund traded them as part of an integrated trading strategy. Unlike RenTec, George Weiss did not trade as frequently nor did it rely on a trading algorithm.

(a) Crossing Trades Between Accounts

On several occasions, George Weiss used basket option assets in ways that appeared to disregard which entity nominally owned the assets.

For example, in July 2008, prior to closing out several MAPS options, George Weiss moved some of the assets from the MAPS account it managed to a prime brokerage account opened in the name of OGI Associates LLC, a related entity.[376] The OGI prime brokerage account was also located at Deutsche Bank. In an email instructing the transfer – or journal – to occur, George Weiss personnel requested movement of the assets "to [the] OGI account from the MAPS account."[377] Later, in the same year, crossing positions were suggested again by George Weiss personnel in order to correct a perceived

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375 See Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582, at 579.

376 7/10/2008 email from Apollo Wong to David Betten, "George Weiss MAPS Investment Guidelines – PLEASE READ," GWALLC-PSI-0002504. See also "Connecticut Companies" profile of OGI Associates LLC, http://www.connecticutcompaniesindex.com/ogi-associates-llc-5ahy/ (indicating the company's business address was care of George Weiss Associates Inc. and its "principal" was "George A. Weiss Manager").

377 7/9/2008 email from Apollo Wong to Susan Sevigny of GWA, "FW: George Weiss MAPS Investment Guidelines– PLEASE READ," GWALLC-PSI-0002492-494, at 493. See also Subcommittee interview of Frederick Doucette, GWA (5/23/2014) (confirming assets were moved from MAPS to OGI).

imbalance between long and short exposure in the MAPS account.[378] On both occasions, George Weiss transferred assets that had been held in the name of the bank to a brokerage account where those same assets would be held in the name of a related entity. When asked about the trades, George Weiss COO Federick Doucette told the Subcommittee that "a handful" of these trades did occur, but that George Weiss viewed them as "a mistake" and that they involved "very small amounts."[379]

In addition to moving assets from MAPS accounts to the brokerage account of a related entity, OGI, George Weiss negotiated a "Master Netting Agreement" with Deutsche Bank, which allowed it to avoid financing charges when it had assets in MAPS accounts that left it economically neutral when combined with assets in the OGI prime brokerage account.[380] This 2003 agreement allowed George Weiss to offset assets from the two accounts, even though the assets in the OGI account were held in the name of a George Weiss entity and the assets in the MAPS account were held in the name of Deutsche Bank. That Deutsche Bank allowed this arrangement for some of the MAPS transactions conducted with George Weiss shows that the bank, as well as George Weiss, viewed the assets in the basket option accounts as belonging to the hedge fund rather than the bank.

When Deutsche Bank restructured the MAPS options in 2008, Deutsche Bank decided that it would no longer allow George Weiss to "cross sell positions" held in its MAPS accounts to its OGI prime brokerage account.[381]

(b) Using MAPS Assets as Collateral for Other Accounts

Despite the fact that the assets in the MAPS accounts – and the accounts themselves – were held in the name of Deutsche Bank, for several years, Deutsche Bank allowed George Weiss to use the options as collateral in other financial transactions. For example, Deutsche Bank permitted George Weiss to use "100% of the options market value to cross collateralize its OGI account," a prime brokerage account also located at Deutsche Bank.[382] When asked, George Weiss told the

[378] 10/10/2008 email from Apollo Wong to Federick Doucette, "db maps account imbalance," GWALLC-PSI-0002328.
[379] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
[380] 6/16/2003 "Master Netting Agreement," GWA, LLC, OGI Associates, and Deutsche Bank, GWALLC-PSI-0003427.
[381] See, e.g., 10/26/2009 email from Jeffrey Dillabough, GWA, to Frank Nelson, Deutsche Bank, "DB/Weiss MAPS option," DB-PSI 00036700 (noting the restructured MAPS option would no longer allow George Weiss to "cross sell" assets from a MAPS account to a prime brokerage account as part of George Weiss' "routine rebalancing activities"); Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
[382] See id. (noting that George Weiss had been allowed to use 100% of the option market value to "cross collateralize" its prime brokerage account at OGI).

Subcommittee that the bank had agreed to the collateral arrangement, because of the long duration of its basket options and the relatively large amount of equity that had accrued in its MAPS option accounts.[383] George Weiss indicated that the bank had also permitted it to pledge the MAPS option accounts as collateral for a line of credit offered by Deutsche Bank, which the hedge fund then used to run its day-to-day business.[384] In both cases, the bank essentially allowed the hedge fund to treat the option account assets as if the hedge fund owned them.

In response to questions, George Weiss COO Frederick Doucette told the Subcommittee that neither George Weiss nor Deutsche Bank had fully considered what would happen if a margin call on the OGI account had required Deutsche Bank to draw upon the option equity as collateral.[385] Mr. Doucette noted that founder, George Weiss, had enough funds personally to cover the borrowed funds.[386]

When Deutsche Bank restructured the MAPS option in 2008, it indicated to George Weiss that it wanted to limit or remove the ability to use the options as collateral in other transactions.[387] During negotiations over a proposed term sheet for the restructured MAPS option, a George Weiss employee noted in an email: "As the draft is written, the failure to fund the collateral does not trigger our ability to terminate the IMA [Investment Management Agreement] and the option. In our view it should . . . ."[388] In another email to Deutsche Bank, George Weiss noted that the lack of cross-collateralization could reduce George Weiss' MAPS investments by as much as 60%, because the hedge fund would have to find additional liquidity structures elsewhere to finance its business operations.[389] When Deutsche Bank declined to allow the restructured MAPS option accounts to be used as collateral in other financial transactions, it contributed to the decision of George Weiss to discontinue its involvement with MAPS.[390]

Mr. Doucette told the Subcommittee that Deutsche Bank indicated that it was restructuring MAPS, in part, because of tax concerns.[391] He further noted that, because of the increased costs associated with the new

[383] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).
[384] Id.
[385] Id.
[386] Id.
[387] See, e.g., 10/26/2009 email from Jeffrey Dillabough, GWA, to Frank Nelson, Deutsche Bank, "DB/Weiss MAPS option," DB-PSI-00036700 (indicating that under the new structure, cross-collateralization would be limited to 25% of the option value).
[388] 8/16/2010 email from Jeffrey Dillabough, GWA, to Peter Brophy and Frank Nelson, Deutsche Bank, "RE: New MAPs Term Sheet," GWALLC-PSI-0009484.
[389] 2/26/2009 email from Federick Doucette, GWA, to Frank Nelson, Deutsche Bank, "MAPS comments," DB-PSI-00033762, at 763-764 (listing George Weiss concerns with proposed new MAPS structure).
[390] 2/25/2009 email from Federick Doucette, GWA, to Frank Nelson, Deutsche Bank, "MAPs comments," DB-PSI-00033762-765, at 763.
[391] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).

structure, George Weiss declined to use it and, instead, decided to use its own prime brokerage accounts to execute the same trading strategies.[392]

(3) Claiming a Business Purpose

Deutsche Bank, Barclays, George Weiss, and RenTec all claimed that the motivation for using basket options was that it offered increased leverage to the option buyer as well as downside loss protection which was capped at the initial premium. They all claimed that tax avoidance was not a key motivator for the transactions.[393] Other evidence shows, however, that tax avoidance was a key aspect motivating the basket option structure. In addition, as indicated earlier, SEC examination reports determined that basket options appear to have enabled a handful of hedge funds, in less than five years, to avoid paying taxes totaling an estimated $915 million, while other data suggests that total tax avoidance could exceed $6 billion.

(a) Facilitating Tax Avoidance

Barclays, which dealt only with RenTec, was very direct about the tax-based motivation for their COLT transactions. In its original 2002 product approval memorandum for project COLT, Barclays' Structured Capital Markets (SCM) group wrote that COLT would provide "an after tax benefit to these investors through the conversion of their return from the fund from short term capital gains (taxed at 39.6%) to long term capital gains (taxed at 20%)."[394] In a 2004 product approval memorandum, SCM wrote the following about the "economic driver" for the COLT basket options being purchased by RenTec:

> "Fund Benefit
>
> US individual investors of the Fund would obtain a post-tax benefit if the Call Option is exercised after 12 months, because all the gain on the Call option would be treated as a long-term gain for US tax

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392 Id.

393 Subcommittee interviews of Peter Brown, RenTec (6/3/2014), Mark Silber, RenTec (6/10/2014); and James Rowen, RenTec (5/20/2014); 6/30/2014 briefing by Deutsche Bank counsel to the Subcommittee; Subcommittee interview of Frederick Doucette, GWA (5/23/2014).

394 5/28/2002 "Confidential: Project COLT," Barclays new product proposal, product sponsors: Jonathan Zenios, Jerry Smith, Marty Malloy, and Mark D'Andrea, BARCLAYS-PSI-212544-557, at 547; 8/22/2002 Barclays memorandum from Jonathan Zenios and Jerry Smith to Iain Abrahams and others, "SCM Approvals paper – Project COLT," BARCLAYS-PSI-212590-598, at 593. See also 4/4/2003 Barclays memorandum from SCM to SCM Approvals Committee, "SCM Approvals paper – Project COLT (Renaissance II)," BARCLAYS-PSI-213947-953, at 950-951.

purposes and would therefore be taxed at 15%, as opposed to 35%."[395]

Barclays also conveyed this message to its regulator. In 2002, after it had underwritten its first basket option with RenTec, Barclays wrote to its U.K. regulator, the Financial Services Authority (FSA), explaining the COLT transaction and its tax benefits. Barclays wrote: "This transaction is designed to provide hedge funds with a tax effective means of undertaking the business and for Barclays it would generate both a structuring fee and additional volume for its prime brokerage business."[396] These documents show that, from its inception, Barclays understood tax to be a major component of the basket options structure and designed the product with that in mind.

Like Barclays, Deutsche Bank senior executives understood that tax avoidance was a key motivator for MAPS basket options. The following excerpt from a 2008 telephone conversation between Satish Ramakrishna, then Deutche Bank's Global Head of Risk, and William Broeksmit, then Co-Global Head of Finance, discussing RenTec's use of MAPS options illustrates the significance of the tax benefit:

> Satish Ramakrishna: "[S]o that's the way option is supposed to work. [N]ow what I've uh – now this is meant – this is structured as an option because – "
>
> William Broeksmit: "Yeah for tax reasons[.]"
>
> Satish Ramakrishna: "For tax reasons but the.... [T]he option makes it clear that the premium is the only ... commitment that the option holder has[.]"
>
> William Broeksmit: "Yeah umm hum[.]"
>
> Satish Ramakrishna: "And so it's like a non-recourse strike[.]"
>
> William Broeksmit: "Yes[.]"[397]

MAPS Restructuring. Information provided to the Subcommittee indicates that tax considerations also played a significant role in the restructuring of the MAPS option in 2008.

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[395] 9/3/2004 Barclays memorandum from Jonathan Zenios to SCM Approvals Committee, "Approvals paper – Colt V: Renaissance Restructuring," BARCLAYS-PSI-004159-172, at 163.
[396] 6/4/2002 letter from Barclays to Financial Services Authority, "Project Colt," BARCLAYS-PSI-005241.
[397] Audio recording of 11/7/2008 telephone call between William Broeksmit and Satish Ramakrishna of Deutsche Bank, DB-PSI 00122458.

Mark Haas, a former Deutsche Bank employee who was in charge of the MAPS restructuring negotiations in the first half of 2008, told the Subcommittee that a tax attorney had informed him at the time that the MAPS restructuring had been undertaken as part of a broader review of structured transactions at the bank.[398] He told the Subcommittee that Deutsche Bank was concerned about whether the MAPS structure, as it was then configured, qualified as a derivative, and undertook the 2008 restructuring in an effort to obtain a favorable legal opinion that the basket options could, in fact, be characterized as derivatives.[399] Mr. Haas explained that he had learned that the changes were made, because the bank's legal and compliance department had viewed the structure as "not enough like an option."[400] He indicated that tax considerations were a "major driver" in making the changes to the structure at that time.[401]

Other Deutsche Bank representatives confirmed Mr. Haas's description of the 2008 changes. Deutsche Bank's counsel told the Subcommittee that the pre-2008 MAPS structure had been similar to the types of basket options described in the November 2010 IRS GLAM, and that tax considerations had been a factor in the changes made to the overall structure in 2008.[402] Deutsche Bank's counsel explained further that, in 2008, the bank placed McKee Nelson, Deutsche Bank's counsel for tax and transaction matters, in charge of determining the necessary changes to the MAPS structure in order for the bank to obtain a favorable tax opinion on MAPS' compliance with the tax code and for it to be respected as an option.[403]

Mr. Haas' description of the 2008 restructuring effort is also supported by Deutsche Bank documents. In 2008, the Global Prime Finance Division initiated a division-wide effort called "Change the Bank Programs" to revise systems and products throughout the division. A September 2008 presentation describing the ongoing and planned

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[398] Subcommittee interview of Mark Haas, Deutsche Bank (5/30/2014). Mr. Hass served as the global head of Deutsche Bank's Prime Brokerage division from 2005 to 2007, and as head of its Global Business Development Relations for Prime Finance from 2007 to 2009. Id. According to Deutsche Bank personnel, the Global Prime Finance Division was engaged in a division-wide effort (called "Change the Bank Programs") to revise and restructure systems and products throughout the division. A September 2008 presentation that described ongoing and planned projects provided this explanation of the program: "Due to recent market conditions, we have focused some efforts on research and tactical developments to circumvent regulatory and reputational risks." 9/2008 "GPF Business Development - CTB Program Portfolio," prepared by Deutsche Bank Global Prime Finance Division, DB-PSI-00116157-185, at 158.

[399] Subcommittee interview of Mark Haas, Deutsche Bank (5/30/2014).

[400] Id.

[401] Id.

[402] 6/30/2014 briefing by Deutsche Bank counsel to the Subcommittee.

[403] Id. See also undated email from Joshua Goldstein and McKee Nelson of Deutsche Bank, to Michael O'Brien, Winston and Strawn, "DB/Rentec – Responses to Issues Discussed on 10/16," DB-PSI 00079017; 8/13/2008 email from James Rowen, RenTec, to Jonathan Hitchon and Richard Carson of Deutsche Bank, DB-PSI-00028006.

projects provided the following description of the program's focus: "Due to recent market conditions, we have focused some efforts on research and tactical developments to circumvent regulatory and reputational risks." [404]

One of the projects was the MAPS re-structuring. The project objectives were described as follows:

> "The object of this initiative is to provide a New Multiple MAPS structure that will more closely resemble a traditional options structure – premium risk. This new structure will require a major overhaul of our existing MAPS product …."[405]

The expected benefits of the project were also identified:

> "Will enable us to more actively market this structure to new clients as well as protect existing revenue streams of the existing MAPS clients."[406]

Deutsche Bank developed the new MAPS structure by the end of 2008. As already detailed above, the changes included subdividing each option's referenced assets into separate subaccounts; creating separate investment guidelines for each subaccount as well as guidelines for the overall structure; switching to European style options from American style options; paying the investment advisor – the hedge fund – a performance fee rather than a fixed fee; and changing the formula used to calculate the premium paid by the hedge fund, to make it appear more like conventional pricing mechanisms used in options.[407]

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[404] September 2008 "GPF Business Development CTB Program Portfolio," prepared by Deutsche Bank Global Prime Finance, DB-PSI-00116157-185, at 158.
[405] Id. at 177.
[406] Id.
[407] Previously, there were two components of the premium. The first was a fixed fee, which served as the collateral for the initial acquisition of assets for the account. All purchases for the account drew first on that fee. The second component was the "amortization amount," which was a finance charge anticipated to be paid by the hedge fund over the life of the option. Any part of the finance charge (amortization amount) that was unused when the option was exercised or expired was returned to the option holder. See 5/15/2008 "Deutsche Bank MAPS New Process/Procedures As of May 15, 2008," prepared by RenTec, RT-PSI-00002319 - 322; undated "MAPS Restructuring Highlights," prepared by Deutsche Bank, RT-PSI-00068592-599.

Under the restructured MAPS, the premium included two similar components. The first was a "fixed amount," which served the same purpose as the fixed fee in the old structure. The second component which reflected a financing charge and was called the "amortization amount" in the original MAPS structure, was called the "optionality value" in the new MAPS. It was an up-front, non-refundable fee, based on the cost of financing the transaction over the life of the option. Ostensibly, the "optionality value" was based on a formula deriving from the anticipated debt balance over the life of the option, called the "Anticipated Leverage Amount." The anticipated leverage amount was adjusted, however, to ensure that the fee (the "optionality value") would be between 20% and 25% of the initial premium amount. In an email to colleagues, Satish Ramakrishna, the Deutsche Bank Global Head of Risk for Global Prime Finance, wrote: "The anticipated leverage am[oun]t is not randomly chosen. It is chosen so that the funding cost (which we will call the 'optionality value') on the long side ... is between 20%-

George Weiss told the Subcommittee that Deutsche Bank personnel also told its representatives that tax considerations drove a number of the 2008 changes to the MAPS structure.[408] George Weiss CEO Frederick Doucette stated that, when the hedge fund entered into negotiations with Deutsche Bank over the MAPS restructuring, Deutsche Bank had explained that most of the new provisions in the option were necessary "for tax purposes."[409] At another point during the negotiations, George Weiss raised concerns that a 2009 codification of the economic substance doctrine by Congress could pose a problem for the structure, noting in an email that the codification "could have serious implications with respect to the DB option transaction."[410]

During the negotiations on the MAPS restructuring, RenTec also appeared to insist on certain features for tax reasons. For example, on a telephone call with Deutsche Bank personnel who were discussing the possibility of lowering the available leverage offered by the MAPS options, RenTec's counsel Jonathan Mayers explained that a high initial leverage was a requirement for the structure by RenTec counsel.[411] Presumably, RenTec viewed the provision of high leverage levels as a defensible business justification for MAPS and wanted to be able to point to that feature aside from the option's tax benefits.

Together, the statements made by Barclays, Deutche Bank, George Weiss, and RenTec personnel provide strong evidence that tax considerations were a key driver in the original development and later restructuring of the basket options.

Delayed Disclosure of the Basket Options to DOJ. In 2010, as described above, after being caught participating in a number of abusive tax shelters, Deustche Bank entered into a Non-Prosecution Agreement (NPA) with the Department of Justice (DOJ) promising to stop "participat[ing] in and implement[ing] fraudulent tax shelters."[412] In addition, as part of the NPA, Deutsche Bank agreed to bring to the attention of DOJ: "products or transactions that may run afoul of U.S.

25% of the initial premium ...." 6/17/2008 email from Satish Ramakrishna to Axel Niemann of Deutsche Bank, "What we need coded on PEAS apart from guidelines," DB-PSI 00010767-769 at 768. In other words, the formula had been designed to ensure the bank received a financing fee equal to 20%-25% of the premium, instead of calculating a premium that reflected the value of the so-called "option."

[408] Subcommittee interview of Frederick Doucette, GWA (5/23/2014).

[409] Id.

[410] 10/6/2009 email from Steve Kleinman to Federick Doucette of GWA, "DB Option – possible new development," DB-PSI 00036241, at 242.

[411] Audio recording of 12/1/2008 telephone call among Satish Ramakrishna, Deutsche Bank, and Jonathan Mayers, and Thomas Kerns of RenTec, DB-PSI 00122467.

[412] 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York, to Deutsche Bank's counsel, "Deutsche Bank AG – Non-Prosecution Agreement," at 1, http://lib.law.virginia.edu/Garrett/prosecution_agreements/sites/default/files/pdf/deutschebank.pdf.

federal income tax laws, rules, and regulations."[413] Despite negotiations on the NPA that lasted several years and the affirmative disclosure requirement in the final agreement, Deutsche Bank apparently did not, during the negotiations, notify federal prosecutors about the basket options product the bank had been selling to hedge fund clients for years.[414]

During the negotiations and while the NPA was in force, Deutsche Bank issued dozens of new basket options.[415] Deutsche Bank told the Subcommittee that, because it had obtained a legal opinion from outside counsel that the basket option structure, as revised in 2008, "should" withstand IRS scrutiny and the restructured options were different from those described in the 2010 IRS GLAM, the bank had not found it necessary to report the transactions to DOJ.[416] Deutsche Bank also indicated that, after the 2010 GLAM was issued, the bank had placed a moratorium on underwriting any new options, because of reputational concerns for the bank.[417] Deutsche Bank advised the Subcommittee that it was being conservative by staying away from anything that could be viewed as a listed transaction.[418]

In 2012, the Federal Reserve Bank of New York (FRBNY) examiners learned of the basket options being sold by Deutsche Bank to RenTec.[419] The FRBNY examiners raised concerns about the tax implications of the basket option transactions and, at the Federal Reserve's insistence, Deutsche Bank reported the transactions in connection with the NPA to the U.S. Attorney's Office for the Southern District of New York in January 2013, two years after signing the NPA.[420] The Subcommittee is unaware of what actions, if any, were taken by federal prosecutors in response to the bank's disclosure.

(b) Circumventing Leverage Requirements

The hedge funds told the Subcommittee that, rather than tax, a major motivating factor behind their participation in the basket options was the opportunity to obtain high levels of leverage, beyond the federal leverage limit of 2:1 normally applicable to brokerage accounts, an assertion supported by the banks. Deutsche Bank used its MAP

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[413] Id. at 2.
[414] 6/2/2014 and 6/30/2104 briefings by Deutsche Bank counsel to the Subcommittee.
[415] Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582.
[416] 6/2/2014 Deutsche Bank briefing to the Subcommittee.
[417] Id.
[418] 1/24/2013 Deutsche Bank briefing to the Subcommittee.
[419] 8/2/2012 meetings notes, "MAPS Meetings Highlights," prepared by the Federal Reserve Bank of New York, FRBNY to PSI (MAPs) 000238 [Sealed Exhibit].
[420] Information provided by the Federal Reserve Bank of New York (6/17 and 18/2014). See also 1/24/2013 Deutsche Bank briefing to the Subcommittee.

accounts to provide a leverage level of up to 18:1,[421] while Barclays used its COLT accounts to provide a leverage level of up to 20:1.[422]

As explained earlier, federal securities laws and financial regulations impose restrictions on the use of credit to purchase securities.[423] Those restrictions were developed after highly leveraged securities transactions led to the stock crash of 1929, which imposed losses, not only on stock speculators, but also on the banks and broker-dealers that had lent them funds to buy securities, and led to the years of the Great Depression, the country's worst economic period.[424] To prevent future stock market shocks of a similar nature, Section 7 of the Securities Exchange Act of 1934 required federal financial regulators to issue "margin rules" to limit the amount of credit that a broker-dealer or other party may lend to a customer to buy securities, using those securities as collateral for the loan. One analyst summarized the policy reasons for imposing the margin rules as follows:

> "(1) to 'prevent[ ] the excessive use of credit for the purchase or carrying of securities'; (2) 'to protect the margin purchaser by making it impossible for him to buy securities on too thin a margin'; and (3) to 'prevent undue market fluctuations and help stabilize the economy generally ....' In short, margin rules were created to protect individual investors, the market, and the economy as a whole."[425]

A number of representatives indicated that Deutsche Bank, Barclays, RenTec, and George Weiss viewed achieving leverage beyond the limits of Regulation T as a major business objective for entering into the basket options.[426] In a 2012 letter to the IRS, for example, RenTec described its past use of leverage and how the basket options provided more leverage than it had achieved in any other setting:

> "Leverage ... is restricted by the U.S. Federal Reserve's Regulations T, U, and X, commonly referred to as the 'margin rules.' The margin rules limit the extent to which brokerage customers can borrow against the stock positions that they own. ...

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[421] See, e.g., 12/15/2008 "Master Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank and RenTec, DB-PSI 00000001-047, at 021.
[422] See, e.g., 12/6/2006 "Amended and Restated Investment Management Agreement," signed by Barclays and RenTec, RT-PSI-00134963-5013, at 4983.
[423] See, e.g., Section 7 of the Securities Exchange Act of 1934 (codified at 15 U.S.C. § 78a); Regulations T, U, and X, commonly referred to as the "margin rules," 12 CFR 220.1(Regulation T); 12 CFR 221.1 (Regulation U); 12 CFR 224.1 (Regulation X).
[424] See, e.g., 9/2000 "Margin Requirements, Margin Loans, and Margin Rates: Practice and Principles," New England Economic Review, Peter Fortune, at 25.
[425] "Leveraged ETFs: The Trojan Horse has Passed the Margin-Rule Gates," 34 Seattle U.L. Rev. 299, 310, William M. Humphries (Fall 2010) (omitting citations).
[426] Subcommittee interviews of Frederick Doucette, GWA (5/23/2014), Peter Brown, RenTec (6/3/2014), Satish Ramakrishna, Deutsche Bank (5/16/2014) and Martin Malloy, Barclays (5/1/2014).

A brokerage account in which an investor can trade stocks utilizing money borrowed from the broker is referred to as a 'margin account.' A margin account can be opened in connection with a prime brokerage arrangement. Under the relevant Federal Reserve Regulations, if a Renaissance fund were to seek to obtain leverage by trading long and short positions in such a prime brokerage margin account held at a U.S. broker-dealer, it would be able to achieve leverage of no more than 2:1. That is, in order to hold $100 of long positions and $100 of short positions, the Renaissance fund would have to have invested $100 in the account.

To achieve greater leverage, Renaissance made use of a 'joint back office' or 'JBO' arrangement. This involved qualifying one of Renaissance's investment funds as a registered broker-dealer in its own right, trading for its own account. As a result, the fund was exempt from the margin rules and was instead subject to the SEC 'net capital' rules .... This amounted to a leverage ratio limit of approximately 7.6:1[427] (i.e., with $100 of equity the fund could hold approximately $335 of long positions and $335 of short positions.) Renaissance's fund that had a JBO arrangement during 2005 and 2006 had an average leverage ratio of 4.6:1 during those years, with a peak leverage ratio of 6.4:1.

In the late 1990s, Renaissance began discussions with DB [Deutsche Bank] regarding the possibility of purchasing options from DB that would give Renaissance funds highly leveraged exposure .... DB was initially prepared to make leverage of up to 16:1 available to Renaissance pursuant to each option – a level that it later increased to 18:1. That is, if the premium paid by the Renaissance fund for the option was $100, the notional portfolio referenced by the option could consist of as much as $900 of long positions and $900 of short positions. This represented a dramatic increase over the leverage that Renaissance had been able to achieve through the JBO arrangement and substantially enhanced the opportunity to profit from the Algorithm. ...

During 2005 and 2006, the average leverage in the DB Options was 11.7:1 and the maximum leverage utilized in those Options was 15.9:1. During the same period, the average leverage in the Barclays Options was 12.9:1, with the maximum leverage being 16.8:1."[428]

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[427] RenTec informed the Subcommittee that in its original submission to the IRS, it transposed the numbers describing the permissible leverage of a JBO arrangement and incorrectly listed it as 6.7:1, but is providing corrected information to the IRS.

[428] 4/13/2012, "Protest of 60 Day Letters by Renaissance Technologies LLC et al.," RT-PSI-00000001-402, at 012-015 [Sealed Exhibit].

This letter indicates that, if RenTec had utilized a normal prime brokerage trading account at Deutsche Bank or Barclays, it would have been subject to the margin limits in Regulation T. But by using the basket option structure, which RenTec used to trade securities in virtually the same manner as normal prime brokerage trading accounts, the hedge fund claimed it could operate free of the federal margin rules imposing leverage limits. Because the basket option accounts were opened in the name of the banks and the account assets were also held in the name of the banks, the banks treated funds deposited into those accounts as supplying money to themselves rather than lending money to the hedge funds, which meant the federal leverage limits did not apply. The banks took the position that they were not lending money to the hedge funds, even though the hedge funds paid financing fees for use of the bank funds;[429] the hedge funds' premiums provided collateral to secure the financing;[430] and the banks described the options as a way to provide financing to their hedge-fund clients.[431] RenTec used the billions of dollars deposited into its option accounts by the banks to conduct millions of trades per year, and reported to the IRS that Deutsche Bank made "available to Renaissance" leverage as high as 17:1, secured only by the assets purchased with the borrowed money. At its peak, with bank financing, RenTec's basket option securities portfolio reached an outstanding notional value of more than $50 billion.[432]

The banks and hedge funds claimed the option accounts could operate entirely outside of the federal margin rules, even though those accounts operated in the same way as prime brokerage accounts subject to margin rules. Circumventing margin rules by relabeling a prime

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[429] See, e.g., financing fees listed in 12/21/2005 Barclays Bank PLC letter agreement to Badger Holdings L.P., "Option HH," BARCLAYS-PSI-002879-896, at 887-888; 12/16/2007 Deutsche Bank letter agreement to Mosel Equities L.P., "'OUTPERFORMANCE' BARRIER OPTION TRANSACTION—Cash Settled, Linear Amortizing Premium—DB Reference No. 941-50053," DB-PSI 00000320-337, at 327.

[430] See, e.g., 4/4/2003 Barclays memorandum from SCM to SCM Approvals Committee, "SCM Approvals paper – Project COLT (Renaissance II)," BARCLAYS-PSI-213947-953, at 949 (explaining, in a memorandum seeking approval of a second basket option transaction for RenTec, that the hedge fund "would pay a premium ... of [$136m[illion]] comprising: [$130m] representing the collateral for the Trading Strategy; and an amount representing SCM's fee from the transaction ($6m in the diagram)").

[431] See, e.g., 5/19/2010 email from Edward Sherwood to Brett Beldner of Barclays, "COLT XIX – Draft SCM Approvals Notification," BARCLAYS-PSI-010082 (describing the "net effect" of the COLT option "is that Barclays is extending senior financing to RenTec"); 2/17/2012 email from Satish Ramakrishna to Eamon McCooey and others of Deutsche Bank, "Two Sigma Follow-up," DB-PSI 00045265 ("Non-recourse financing is one option (MAPS is just a name for that)").

[432] See 6/25/2008 email exchange between Eamon McCooey and Michael Ginelli of Deutsche Bank, "Tentative: MAPS Working Group – Wednesday Sessions @ 3PM – June Meetings," DB-PSI 00025040-041. See also 6/25/2008 email from Michael Ginelli to Eamon McCooey of Deutsche Bank, "Re: Tentative: MAPS Working Group-Wednesday Sessions @3 PM-JuneMeetings," DB-PSI 0025040-041; 6/24/2009 memorandum, "Palomino Limited ("Palomino")," prepared by Barclays, BARCLAYS-PSI-139757-766, at 764.

brokerage account as an "option" account is not, however, a legitimate business purpose. Moreover, bypassing the leverage limits did not displace tax avoidance as a key motivating factor for the basket option activity, as detailed above. Using the basket option structure as a way to circumvent federal leverage limits is another example of how the attempt to classify this transaction as a derivative was used to skirt laws and regulations in addition to tax.

(4) Restructuring the Basket Option Products

The final part of the basket options story involves the response of the banks and hedge funds to IRS efforts to stop the basket options from being misused to avoid federal taxes.

Deutsche Bank has offered basket options to a shrinking number of clients since around 1998; Barclays has offered them to a single large client, RenTec, since 2002. From 1998 to 2013, Deutsche Bank issued a total of 156 MAPS options to 13 hedge funds, including 36 to RenTec and 10 to George Weiss.[433] Barclays issued a total of 43 COLT options, all to RenTec. The hedge funds used those basket options to conduct more than $100 billion in securities transactions, presumably claiming that virtually all of the trading profits from options that lasted more than one year could be treated as long-term capital gains subject to the lower tax rate.

In November 2010, the IRS issued the Generic Legal Advice Memorandum (GLAM) advising that basket options cannot be used to turn short-term trading profits into long-term capital gains. Both Deutsche Bank and Barclays acknowledged to the Subcommittee that the banks were aware of the GLAM when it was issued, and that the IRS had determined that the basket option structure did not function as an option and should not be respected as such for tax purposes. Despite knowing of the GLAM, Barclays personnel continued issuing the same types of basket options to RenTec for another two years. Deutsche Bank responded to the GLAM by suspending its issuance of new basket options, while continuing to administer multiple basket options already in existence. In 2012 for Deutsche Bank and 2013 for Barclays, the banks issued revised basket option products, with terms lasting less than one year, so that the structures could no longer be used to characterize short-term trading profits as long-term capital gains.

For years, Deutsche Bank and Barclays spent a great deal of time, energy, and money to secure legal advice and opinions reaffirming the basket options as derivatives, in order to maintain the benefits that such a characterization provided. While the banks have not changed their position that the basket options are derivatives – a position which

[433] Table, "MAPS Transaction," produced by Deutsche Bank, 6/27/2014, DB-PSI 00052577-582.

benefits the banks as well as their hedge fund clients – they have abandoned their longstanding efforts to facilitate their clients' claims that the option earnings should be classified as long-term capital gains.

(a) Barclays' Restructuring

Despite learning of the IRS GLAM in November 2010, Barclays continued issuing basket options to RenTec for another two years. Barclays internal communications justified its actions by noting that RenTec had provided the bank with a tax indemnity agreement and the bank had already participated in so many COLT transactions that its reputational risk would not be affected by participating in additional transactions.

Learning of the GLAM. The IRS GLAM was issued on November 12, 2010. That same day, Graham Wade, an SCM employee, sent an email to his colleagues, including Jonathan Zenios and Nizam Siddiq, notifying them of the GLAM and describing it as a "detailed write up" of the COLT basket options product. He reported that he planned to discuss the GLAM with RenTec and other bank personnel, and suggested that the GLAM did not affect the bank:

> "This [the GLAM] is a detailed write up of Colt concluding it doesn't work. We can discuss on MDs [managing directors'] call but I intend to reach out to RenTec and Ed Cohen this morning to make sure they are aware. We will also confirm it does not impact Barclays. The only issue for Barclays I could see is some deemed wht [withholding] agent issue as the memo concludes that RenTec are the legal owner of the stocks.
>
> To me this would signal that IRS is inevitably going to litigate Colt."[434]

At that point, Barclays recognized that the IRS had concluded that its basket option structure "doesn't work." Yet, that realization did not dissuade Barclays from continuing with the transaction. Over the next two years, Barclays entered into another nine basket option transactions with RenTec.[435]

Approving Additional COLT Options. One of those COLT transactions was presented to the Barclays SCM Approvals Committee in October 2012, which decided to approve it. Meeting attendees included Gerard LaRocca, Barclays' Chief Administrative Officer (CAO) and the most senior bank executive in the United States, as well

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[434] 11/12/2010 email from Graham Wade to Nizam Sidiq and Jonathan Zenios of Barclays, "Privileged Colt," BARCLAYS-PSI-748506.
[435] See undated spreadsheet, "History of COLT Options," BARCLAYS-PSI-748604.

as executives Graham Wade, Nizam Siddiq, and Marty Malloy, among others.

According to a memorandum summarizing the meeting, some of the key points made during the discussion that led to approval of the new COLT option were as follows:

- "The tax risk is assumed by the Client.
- The New Option Transaction does not meaningfully increase Barclays' reputation risk in relation to the Option Transactions, because writing a new option (or exercising an existing one) should be viewed as the maintenance of a longstanding structure."[436]

The memorandum also stated: "[S]enior management may desire to be informed of Option Transactions in the context of the current internal and external reviews at Barclays (Project Mango and the Salz Review)."[437] As explained earlier, because the bank was then under criticism for engaging in questionable conduct in a variety of settings, including participating in abusive tax shelters, Barclays leadership had initiated the Salz Review to get an independent review of Barclays' business practices and determine "what went wrong."[438]

On October 3, 2012, the SCM Group sent a memo to Barclays' Tax Risk Committee, informing it of the Group's decision to approve the new COLT transaction and explaining the controversy surrounding basket options.[439] The memorandum noted: "Barclays is entitled to a contractual tax indemnity from the client."[440]

On October 4, 2012, Gerard LaRocca, Barclays CAO, also sent an email alerting the Chair of Barclays' CIB Reputational Risk Committee to the COLT situation: "The SCM US Approvals Committee recently approved an option transaction in which US tax reputation risk is an issue."[441]

The new option was actually issued on October 9, 2012.[442]

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[436] 10/3/2012 memorandum from Graham Wade to SCM, "COLT XXVII," BARCLAYS-PSI-016946-947.
[437] Id. at 947.
[438] See 4/2013 "Salz Review: An Independent Review of Barclays' Business Practices," prepared by Anthony Salz et al., at opening letter from Anthony Salz, http://online.wsj.com/public/resources/documents/SalzReview04032013.pdf.
[439] 10/3/2012 memorandum from SCM US Approvals Committee to Tax Risk Committee, "COLT," BARCLAYS-PSI-016951.
[440] Id.
[441] 10/4/2012 email from Gerard LaRocca to Larry Wiesene of Barclays, "COLT SCM Transaction/Important," BARCLAYS-PSI-748590.
[442] 10/12/2012 memorandum from SCM to Tax Risk Committee, "COLT," BARCLAYS-PSI-018114-116.

On October 12, 2012, SCM sent a second memo to the Barclays Tax Risk Committee about the COLT transaction, even though the option had already been issued.[443] In it, SCM advocated approving the new COLT transaction, because while Barclays faced "reputation risk," the risk of litigation fell to the client.[444] SCM concluded that "we believe it remains an appropriate transaction for Barclays to be a party to."[445]

The memorandum acknowledged that, "[i]n 2010, the IRS issued a memo … arguing that options like the ones in the Option Transactions should not be treated as options for tax purposes."[446] In a section entitled, "Why the Option Transaction Remains Appropriate Notwithstanding the IRS Challenge," the SCM memorandum made the following points:

> "There is a reputation risk for Barclays, especially if the matter proceeds to court and the IRS's challenge and Barclays' role become publicly disclosed. However, continuing with the Option Transactions should not meaningfully increase Barclays' reputation risk, insofar as any court litigation would relate to the entire structure. Barclays' role will be that of a witness (alongside Deutsche Bank) and, provided Barclays fully cooperates with the process, there is no reason to expect damaging accusations from the IRS or the court. In particular, Barclays could not be considered to have sold a risky investment structure to an unsophisticated investor that did not understand the risk."[447]

Essentially, the memorandum contended that since Barclays was already at risk, due to previous basket option transactions, it would not "meaningfully increase" its reputational risk by participating in additional transactions, so there was no reason to stop offering the COLT options at that point in time. It also attempted to characterize Barclays' role as a "witness," even though the bank had designed, sold, and administered multiple COLT options for a decade. The memorandum also noted that Barclays had collected £322.7 million in revenue since the inception of the tax product, which, in 2012, was equivalent to about $415 million.[448]

[443] Id.
[444] Id. at 116.
[445] Id. at 114.
[446] Id. at 115.
[447] Id. at 116.
[448] Id. at 114.

The next month, in November 2012, the SCM Approvals Committee met to discuss RenTec's request to purchase yet another COLT option.[449] A memorandum summarizing the meeting again referred to the IRS investigation into the COLT product: "In AM 2010-005, the IRS concluded the call option does not function as an option and should not be treated as one for US tax purposes." Nevertheless, the memorandum again advocated approving the new option. It noted that many Barclays committees had already expressed approval of the product:

> "SCM has notified and received approval from the following in relation to proceeding with the proposed transaction: Tax, Finance, Credit Risk, Market Risk, Regulatory, Legal, Compliance, and Operations."[450]

The Barclays Tax Committee concurred. On November 23, two COLT options were issued to RenTec.[451] That same day, an email from one of the SCM employees noted that if the COLT structure were later found not to be in compliance with the U.S. tax code, the bank could terminate any open option in 60 days and also had a tax indemnification from RenTec which would protect the bank from the payment of any tax penalties.[452]

These documents indicate that multiple departments within Barclays were notified of and approved use of the COLT product, despite the IRS memorandum advising that those types of options were being used to violate U.S. tax law. Barclays continued issuing the suspect options even though the bank was then under public criticism for its involvement with abusive tax shelters.

Revising the COLT Options. During 2012, Barclays issued five COLT options to RenTec, all of which had terms longer than one year. In contrast, during 2013, Barclays did not issue any until the end of the year when it offered RenTec a revised option designed to prevent it from being used to claim that it produced long-term capital gains. During 2013, the Salz Review had intensified and produced a report.[453] In addition, in early 2013, Barclays initiated a bank-wide effort, described above, called Project Transform, to ensure the bank no longer offered or

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[449] 11/2012 memorandum from Maxim Kulikov and Rama Subramaniam to SCM US Approvals Committee, "Project COLT XXVIII (Renaissance Technologies) – Approvals Notification," BARCLAYS-PSI-017091-093, at 091.
[450] Id. at 093.
[451] 11/23/2012 email from Noor Islam to Eugene Kim of Barclays, "Colt – Market Risk/Credit Risk," BARCLAYS-PSI-293251-254, at 251.
[452] 11/23/2012 email from James Saxton to Marty Malloy of Barclays, "Palomino options," BARCLAYS-PSI-322103.
[453] 4/2013 "Salz Review: An Independent Review of Barclays' Business Practices," prepared by Anthony Salz et al., http://online.wsj.com/public/resources/documents/SalzReview04032013.pdf.

participated in abusive tax shelter products.[454] As part of that effort, during 2013, the COLT option was revised so that the term of the option was less than twelve months.[455]

In December 2013, a newly established Barclays Transaction Review Committee met to discuss the revised COLT structure.[456] In that meeting, the committee reviewed the proposed COLT transaction, along with a document entitled, "Background and Commercial Drivers."[457] That document described the new features of the COLT transaction as follows:

> "On 25 March 2013, following the conclusion of Barclays' strategic review (TRANSFORM), the Tax Risk Committee agreed that Renaissance be permitted to enter the New COLT Transaction with the maturity of the options no greater than 11 months. US individual investors of Renaissance would no longer claim the Rate Differential Benefit."[458]

In late 2013, Barclays offered the new, short-duration COLT option to RenTec.[459] RenTec purchased one of the new COLT options in early 2014.[460]

(b) Deutsche Bank's Restructuring

Deutsche Bank took a different approach than Barclays in reacting to the IRS GLAM. Instead of essentially ignoring or disputing the GLAM's findings and continuing to issue basket options, Deutsche Bank stopped issuing new MAPS options for more than a year.

Prior to the release of the GLAM, Deutsche Bank had been under investigation by the U.S. Department of Justice for its involvement with abusive tax shelters and, over several years ending in 2010, was negotiating with federal prosecutors over a Non-Prosecution Agreement (NPA).[461] After release of the GLAM in November 2010, Deutsche

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[454] See 2/12/2013 "Barclays Strategic Review," Barclays Press Release, http://www.newsroom.barclays.com/Press-releases/Barclays-Strategic-Review-9db.aspx .
[455] See undated spreadsheet, "History of COLT Options," BARCLAYS-PSI-748604.
[456] See December 2013 "The New COLT Transaction: Transaction Review Committee," PowerPoint prepared by Barclays, Barclays-PSI-748587-589.
[457] Id. at 588.
[458] Id.
[459] See undated spreadsheet, "History of COLT Options," BARCLAYS-PSI-748604.
[460] Id. See also 7/22/2014 "Post-GLAM Basket Option Contracts," Memorandum to File prepared by the Subcommittee (summarizing Deutsche Bank, Barclays, and RenTec involvement with basket options after the November 2010 issuance of the IRS advisory memorandum on basket options).
[461] 6/30/2014 briefing by Deutsche Bank counsel to the Subcommittee.

Bank chose to suspend writing any new options for the rest of that year and all of 2011, while it re-evaluated the MAPS structure.[462]

Within the bank, some executives expressed reluctance to accept the IRS' analysis and stop offering the product. One Deutsche Bank official wrote in an email: "GLAM is not of precedential value [and] merely represents the current view of the IRS chief counsel office of a particular set of facts."[463] Deutsche Bank representatives explained to the Subcommittee that some in the bank viewed the MAPS option, which had been significantly restructured in 2008, as sufficiently different from the option described in the GLAM to allow it to continue, but others were "sensitive" to any issues related to tax, given the NPA, which was why the bank chose to suspend offering the options.[464]

In 2012, Deutsche Bank resumed issuing MAPS options, but with a new requirement that the option term be less than 12 months and the option agreement include a provision requiring the option buyer to treat the option proceeds as short-term capital gains.[465]

The NPA. As discussed above, Deutsche Bank had been under investigation by DOJ for its involvement with abusive tax shelters and had been in the process of negotiating the Non-Prosecution Agreement (NPA) for several years. The NPA was finally issued on December 21, 2010, a month after the GLAM was released. Among other measures, the NPA imposed an affirmative disclosure obligation on the bank, requiring Deutsche Bank to bring to the attention of DOJ: "products or transactions that may run afoul of U.S. federal income tax laws, rules, and regulations."[466] Failure to comply with that requirement, among other terms of the NPA, could have subjected the bank to criminal prosecution.[467] In addition, Deutsche Bank was required to engage an independent expert to review the bank's compliance systems and ensure its compliance with the NPA, including steering clear of abusive tax transactions.[468]

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[462] Id.

[463] 10/26/2011 email from Mark Meachen to Anthony Tuths of Deutsche Bank, "Rentec [I],"DB-PSI 00019248-250, at 249.

[464] 6/2/2014 briefing by Deutsche Bank counsel to the Subcommittee.

[465] See, e.g., undated letter from Deutsche Bank to Mosel Equities LP, "Barrier Option Transaction – Cash Settled-DBSI Reference No. 941-50340," DB-PSI 00047768.

[466] 12/21/2010 letter from Preet Bharara, United States Attorney for the Southern District of New York, to Deutsche Bank's counsel, "Deutsche Bank AG – Non-Prosecution Agreement," at 2, http://lib.law.virginia.edu/Garrett/prosecution_agreements/sites/default/files/pdf/deutschebank.pdf.

[467] Id. at 4.

[468] Id. at 5.

About six weeks later, on February 3, 2011, the bank met with the independent expert, Bart Schwartz, who had been hired by the bank to oversee the bank's compliance with the NPA.[469] The Subcommittee has received conflicting accounts about whether Deutsche Bank informed the independent examiner, as required by the NPA, about its involvement with the MAPS options. According to Mr. Schwartz, neither he nor anyone on his team recalled Deutsche Bank ever informing them about the MAPS transactions, in 2011 or later.[470] Mr. Schwartz told the Subcommittee that MAPS was the "kind of transaction that he expected to know about" and he was surprised that the Bank had not informed him of it.[471] In contrast, Deutsche Bank representatives told the Subcommittee that the bank had, in fact, discussed the MAPS transaction with Mr. Schwartz and team members working directly for him, after a member of Mr. Schwartz's team raised the issue.[472] According to Deutsche Bank, Mr. Schwartz's team was aware of the GLAM, was informed of the MAPS structure in one of the initial meetings with Deutsche Bank, and did not request any further information, despite the concerns expressed by the IRS.[473]

In the spring of 2012, the Federal Reserve Bank of New York began examining the MAPS transactions and instructed Deutsche Bank to alert the U.S. Attorney's Office for the Southern District of New York, which was overseeing the NPA, about the options. According to Deutsche Bank's counsel, in August 2012, Deutsche Bank contacted the U.S. Attorney's Office and then had followup conversations and meetings with the office in September and December 2012 and February 2013.[474] The Subcommittee is unaware of what actions, if any, were taken by the U.S. Attorney's Office on the matter.

Reaction to the GLAM. Due to the NPA and reputational concerns, after the issuance of the GLAM in 2010, Deutsche Bank determined not to issue any further MAPS options without evaluating the transaction.[475] However, when the GLAM came out, Deutsche Bank had coincidentally nearly finished issuing another option to RenTec and chose to finish that process, completing the option just two days after the

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[469] Subcommittee briefing by Bart Schwartz, independent expert for Deutsche Bank (10/8/2013).
[470] Id.
[471] Subcommittee briefing by Bart Schwartz, independent expert for Deutsche Bank (7/16/2014).
[472] 6/2/2014 and 6/30/2014 briefings by Deutsche Bank counsel to the Subcommittee.
[473] Id. Officials of the Federal Reserve Bank of New York reviewing the MAPS structure questioned Deutsche Bank about whether the bank had disclosed MAPS to Bart Schwartz's team. Deutsche Bank advised the examiners that it had informed Mr. Schwartz's team that Deutsche Bank had on its books a transaction like the one reported in the GLAM, but noted that the conversation was "very short." 8/2/2012 meetings notes, "MAPS Meetings Highlights," prepared by the Federal Reserve Bank of New York, FRBNY to PSI (MAPs) 000238 [Sealed Exhibit].
[474] 6/30/2014 briefing by Deutsche Bank counsel to the Subcommittee.
[475] Id.

GLAM was released.[476] In addition to the new option, at that time, Deutsche Bank had several other outstanding MAPS options with RenTec.[477]

In connection with evaluating the GLAM, Deutsche Bank personnel noted that there was a "30d [day] right of termination for DB [Deutsche Bank] embedded in all these contracts" that did not require cause for termination.[478] That provision would have allowed Deutsche Bank to terminate the contracts, using a method that would have required it to terminate one account at a time with a gap of twenty exchange business days between each account.[479] Deutsche Bank declined to terminate the options, however, for several reasons. According to the bank, it declined to terminate the options, because the post-2008 MAPS structure differed from the options described in the GLAM; it had acquired a legal opinion stating the new MAPS complied with the tax law; liquidation of multiple options could have suppressed the option asset values; it was concerned about its client relationship; and it wanted to protect its reputation as a reliable counterparty.[480] However, the bank stopped issuing additional MAPS options pending a re-evaluation of the product.

Attempts to Develop New Structures. In 2010 and 2011, Deutsche Bank conducted a review of the MAPS options product. It also worked to develop a new product that would not raise the same tax problems. In October 2011, Deutsche Bank reviewed a product developed under what was called Project Dawn, involving the writing of call options to Mosel, a Delaware partnership in which RenTec served as the general partner.[481] Under the proposal, each Project Dawn call option would be an outperformance option which, at expiration, would result in payment to the option holder of the difference in the performance of RenTec's strategy and the performance of the S&P 500.[482] Each option would be a European style option with a 13-month term.[483] These outperformance options were intended to isolate the portion of RenTec's trading strategy that performed above the S&P 500

[476] 6/2/2014 briefing by Deutsche Bank counsel to the Subcommittee.
[477] See chart produced by Deutsche Bank, 6/27/2014, DB-PSI 00052583-585. See also 7/22/2014 "Post-GLAM Basket Option Contracts," Memorandum to File prepared by the Subcommittee (summarizing Deutsche Bank, Barclays, and RenTec involvement with basket options after the November 2010 issuance of the IRS advisory memorandum on basket options).
[478] 1/6/2010 email from Axel Niemann to Giovanni Favretti of Deutsche Bank, "MAPS," DB-PSI-00006875.
[479] See 12/15/2008 "Master Investment Advisory Agreement: Execution Copy," signed by Deutsche Bank and RenTec, DB-PSI 00000001-047, at 006.
[480] 6/27/2014 letter from Deutsche Bank counsel to the Subcommittee, PSI-DeutscheBank-23-000001 [Sealed Exhibit].
[481] 10/27/2011 Approval Paper, "Project Dawn," prepared by Deutsche Bank, DB-PSI 00020110-117, at 110. Mosel had served as the option holder for the MAPS basket options since 2007.
[482] Id.
[483] Id.

and provide a payoff "attributable to [that] portion only of the Strategy."[484]

In November 2011, Deutsche Bank drafted preliminary terms and conditions of another proposed transaction.[485] This transaction involved a call option "outright on [RenTec's] fund rather than the relative performance version."[486]

An email exchange concerning those proposals at the time indicates that senior Deutsche Bank officials recognized that it was difficult to characterize the MAPS transaction as a true derivative. In a discussion between Satish Ramakrishna, then Deutsche Bank's risk management head, and Anthony Tuths, a former member of the Tax Structuring and Planning Division at Deutsche Bank, Mr. Ramakrishna raised the concern that under the new proposal, RenTec would not receive back any portion of its premium.[487] Mr. Tuths responded: "That's the result of having a real option," in contrast to the previous transactions between the parties.[488] In an interview with the Subcommittee, Mr. Ramakrishna said that RenTec had indicated that it was not interested in Deutsche Bank's proposed transactions because they did not closely track the performance of the trading recommended by RenTec's algorithm.[489] Ultimately, RenTec rejected both proposed transactions.[490]

Resumption of MAPS in 2012. After RenTec rejected the proposed new structures in 2011, Deutsche Bank considered resuming MAPS. Ultimately, two years after issuance of the GLAM, Deutsche Bank decided to offer MAPS to RenTec on modified terms with a shorter duration that would not risk the misreporting of trading profits as long-term capital gains.[491] As part of the new terms, all post-2012 MAPS options had terms that lasted less than one year (generally around 11 months), and all included a new rider in the option confirmation contract stating: "Buyer represents that for tax purposes, it will report the Transaction as a derivative financial instrument generating short-

[484] Id. at 112.
[485] 11/29/2011 Indicative Terms and Conditions, "[TBD] c/o Renaissance Technologies," prepared by Deutsche Bank, DB-PSI 00009727-730, at 728.
[486] 9/19/2011 email from Greg Bunn to Satish Ramakrishna of Deutsche Bank, "Fund Option," DB-PSI 00018723.
[487] 11/13/2011 email from Satish Ramakrishna to Anthony Tuths of Deutsche Bank, "Rentec," DB-PSI 00112522.
[488] Id.
[489] Subcommittee interview of Satish Ramakrishna, Deutsche Bank (5/16/2014) and James Rowen, RenTec (5/20/2014). In his interview, Mr. Rowen, Chief Operating Officer of RenTec, echoed Mr. Ramakrishna's description of why RenTec rejected both proposals.
[490] Subcommittee interview of Satish Ramakrishna, Deutsche Bank (5/16/2014) and James Rowen, RenTec (5/20/2014).
[491] 6/30/2014 briefing by Deutsche Bank counsel to the Subcommittee.

term capital gains at exercise or maturity."[492] The new option confirmation contract also stated in part: "Seller represents that for tax purposes, it and any Affiliate thereof will report the Transaction as a derivative financial instrument."[493] In the end, Deutsche Bank, like Barclays, took years to stop offering a product that it knew was being used to dodge the payment of U.S. taxes.

[492] 12/16/2011 email from Anthony Tuths to Satish Ramakrishna and Vincent Capone of Deutsche Bank, "Rentec confirm and IMAs [I]," DB-PSI-00020740-748, at 746. See also undated letter from Deutsche Bank to Mosel Equities LP, "Barrier Option Transaction – Cash Settled-DBSI Reference No. 941-50340," DB-PSI 00047768.

[493] Id. at 745.

IV. SYSTEMIC CONCERNS

In its Generic Legal Advice Memorandum of November 2010, the IRS rejected the attempt to use basket option structures to try to convert short-term trading profits into long-term capital gains with lower tax rates. It also initiated a review of the largest basket options user to evaluate its tax liability. While those actions have begun to address some of the specific conduct examined in this investigation, they are incomplete and unresolved. The basket option case studies also raise four larger, systemic concerns.

Invalidating Derivative Tax Schemes. First, the basket option case studies are emblematic of a larger effort by some tax practitioners and sophisticated financial firms to claim that derivatives can be used to lower tax liability even when those derivatives mimic economic activity giving rise to taxable income. Treasury, the IRS, and Congress need to make it clear that derivatives alone cannot magically eliminate or lower tax liability. As part of that effort, tax regulations providing special benefits to derivatives, such as the U.S. source rule for swaps, should be revised or eliminated, and the message driven home that financial engineering using derivatives is insufficient to avoid income taxation.

Analyzing Circumvention of Leverage Limits. Second, basket options are just one example of derivatives and other arrangements being used to circumvent federal limits on the use of borrowed funds to purchase securities. In the case of RenTec, basket options were used to provide it with leverage levels as high as 20:1, which the hedge fund said it had been unable to achieve in other settings under federal rules.

In recent years, a few studies have examined how financial institutions, using derivatives, structured financial products, and other arrangements, have weakened or circumvented federal leverage limits.[494] One recent study by the Office of Financial Research in the Treasury Department noted that "data [is] currently insufficient to understand the

[494] See, e.g., 9/2013 "Asset Management and Financial Stability," prepared by the Office of Financial Research of the U.S. Department of the Treasury, at 1, 17-18 http://www.treasury.gov/initiatives/ofr/research/Documents/ OFR_AMFS_FINAL.pdf (examining in part asset management industry use of leverage); Concept Release on Use of Derivatives by Investment Companies, prepared by the SEC, 76 Fed. Reg. 55238 (Sept. 7, 2011) (examining in part investment company use of derivatives to create leverage); 7/6/2010 "Report of the Task Force on Investment Company Use of Derivatives and Leverage," prepared by the American Bar Association Business Law Section, Committee on Federal Regulation of Securities, Task Force on Investment Company Use of Derivatives and Leverage, https://apps.americanbar.org/buslaw/blt/content/ibl/2010/08/0002.pdf; 2012 "SEC Concept Release Tackles Investment Company Use of Derivatives," The Review of Securities & Commodities Regulation, vol. 45, Jay G. Baris and Andrew J. Donohue, http://media.mofo.com/files/Uploads/Images/120308-Securities-Commodities-Regulation.pdf.

exposures and the extent of leverage" being used in the U.S. financial system.[495]

The Financial Stability Oversight Council, working with the Office of Financial Research and other federal agencies, should establish new reporting and data collection mechanisms to gather the data needed for an indepth analysis of the extent of leverage in the U.S. financial system, the many ways in which financial firms are bypassing federal margin rules and leverage limits, and the extent to which highly leveraged financial instruments and arrangements may be contributing to overextensions of credit by lenders, asset bubbles, and systemic risks. Federal margin rules, which are a direct response to the stock market crash of 1929, represent a vital financial safeguard whose circumvention is too important to be disregarded by federal regulators charged with detecting and evaluating systemic risk.

More generally, the financial sector and the corporate community are using derivatives to try to achieve a variety of favorable outcomes in accounting, tax, financial, and other regulatory contexts, even when the derivative instruments mimic economic activities that by themselves yield different results. Two examples have been highlighted in this report. Congress and the appropriate agencies should closely examine the growing use of derivatives to circumvent accounting, tax, or regulatory rules, and what steps should be taken to prevent disparate outcomes, particularly when they may pose a threat to the transparency, safety, soundness of our financial system or the economy as a whole.

Auditing Large Partnerships. Third, despite ongoing IRS audits of RenTec's basket options activities, the IRS' overall audit coverage of large partnerships similar to RenTec is poor. Large partnerships – which include hedge funds, private equity funds, and publicly traded partnerships – are some of the most profitable entities in the United States. According to a 2013 preliminary report issued by the U.S. Government Accountability Office (GAO), "[i]n tax year 2011, nearly 3.3 million partnerships accounted for $20.6 trillion in assets and $580.9 billion in total net income."[496]

That GAO report also found that the IRS was failing to audit 99% of the tax returns filed by large partnerships with assets exceeding $100 million.[497] The GAO report showed that while the number of those large partnerships had increased significantly in recent years, IRS audits had

[495] 9/2013 "Asset Management and Financial Stability," prepared by the Office of Financial Research of the U.S. Department of the Treasury, at 18, http://www.treasury.gov/initiatives/ofr/research/Documents/OFR_AMFS_FINAL.pdf.
[496] 3/19/2014 "Large Partnerships: Characteristics of Population and IRS Audits," prepared by the Government Accountability Office, GAO-14-379R, at 1, http://www.gao.gov/assets/670/661772.pdf.
[497] Id. at 4, 6.

not kept pace. According to the GAO after examining a ten-year time frame, between tax years 2002 and 2011, the number of businesses organized as "large partnerships (with 100 or more direct partners and $100 million or more in assets) increased more than 200 percent, accounting for $2.3 trillion in total assets and $69.1 billion in total net income by tax year 2011." [498] The IRS' audit efforts worsened yet again in 2012. According to the preliminary report, IRS field audits reviewed the books and records of only 0.8% of large partnership returns.[499]

In response to a Subcommittee inquiry about low audit coverage of large partnerships, the IRS Large Business and International Division and Office of Chief Counsel explained that one of the reasons for the low audit performance was because of the procedural hurdles erected by the Tax Equity and Fiscal Responsibility Act (TEFRA).[500] The IRS pointed out that a TEFRA notification provision requires the IRS to notify all partners holding more than a 1% interest in a partnership prior to initiating an audit.[501] The IRS explained that some large partnerships, such as publicly traded partnerships, may have more than 100,000 partners at a time, some of whom hold a partnership interest for only a few trading days in a given year, making identifying and notifying all partners difficult, if not impossible. In addition, at the end of an audit, TEFRA requires the IRS to notify each partner of any tax assessment for the deficiencies attributable to the partnership, failure of which may cause the assessment to become invalid.[502] That notification burden is equally difficult, time consuming, and expensive to implement. A possible solution is amending TEFRA to allow the IRS, in the case of large partnerships, to notify the partnership itself when initiating or concluding an audit, and to rely on that partnership to notify the individual partners it deems appropriate.

Ending Bank Participation in Abusive Tax Structures. Finally, this investigation is not the first by the Subcommittee to examine bank participation in transactions involving substantial tax avoidance.[503] Past investigations have exposed highly suspect transactions involving major financial institutions, major law firms, sophisticated counterparties, and hundreds of millions or billions of dollars. Because banks employ personnel and systems capable of designing, implementing, and

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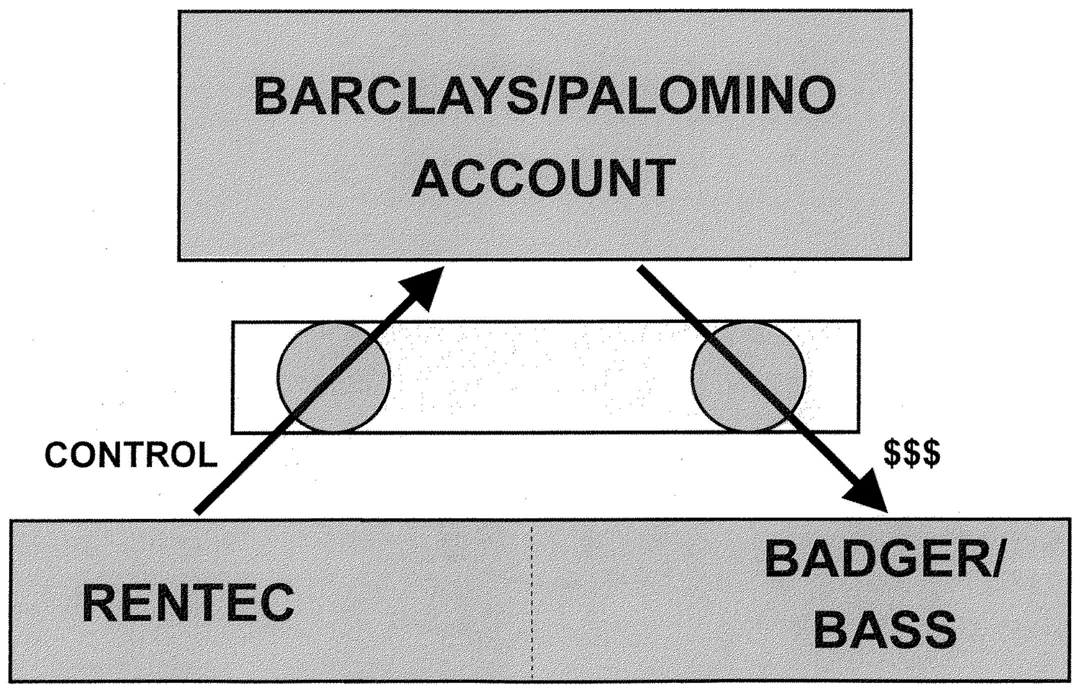
[498] Id. at 1.
[499] Id. at 20.
[500] Tax Equity and Fiscal Responsibility Act of 1982, Pub. L. No. 97-248.
[501] 26 U.S.C. § 6223.
[502] 26 U.S.C. § 6225.
[503] See, e.g., U.S. Senate Permanent Subcommittee on Investigations reports and hearings, "Fishtail, Bacchus, Sundance, and Slapshot: Four Enron Transactions Funded and Facilitated by U.S. Financial Institutions," S. Prt. 107-82 (1/2/2003); "U.S. Tax Shelter Industry: The Role of Accountants, Lawyers, and Financial Professionals," S. Hrg. 108-473 (11/18 and 20/2003); "Tax Haven Abuses: The Enablers, The Tools and Secrecy," S. Hrg 109-797 (8/1/2006); "Tax Haven Banks and U.S. Tax Compliance," S.Hrg. 110-614; "Dividend Tax Abuse: How Offshore Entities Dodge Taxes on U.S. Stock Dividends," S.Hrg. 110-778 (9/11/2008).

administering complex transactions involving structured financial products and other derivatives, too many have too often become facilitators of financially engineered tax avoidance and even tax evasion schemes. In some cases, federal prosecutors and regulators have imposed civil or criminal penalties against banks for aiding or abetting tax misconduct. But more is needed. To end bank involvement with abusive tax structures, federal financial regulators, as well as Treasury and the IRS, need to intensify their warnings against, scrutiny of, and legal actions to penalize bank participation in tax-motivated transactions.

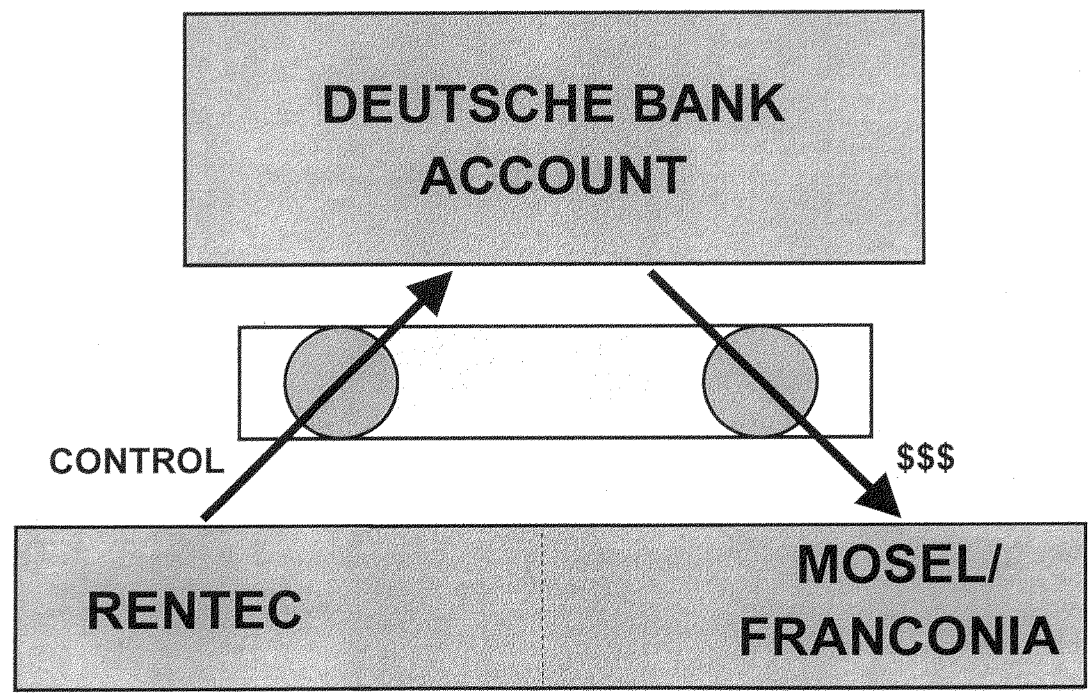
# # #

THE FICTION OF INDEPENDENCE



Permanent Subcommittee on Investigations
EXHIBIT #1a

THE FICTION OF INDEPENDENCE



RENTEC CONTROL OF PALOMINO

- "Palomino was created solely to enable RenTec (sponsor) to benefit (through the Badger Options and Barclays' Options) from its long-short statistical arbitrage strategy in an efficient manner."

- "The trading activities of Palomino in relation to the [Prime Brokerage] Accounts are managed solely by RenTec as the Trading Manager such that RenTec can obtain the majority of the benefits from Palomino's activities."

- "As described in Section VII in relation to the [Investment Management Agreement], the [Prime Brokerage] Accounts are controlled by RenTec."

- "RenTec is effectively entitled (through the Badger Options and the Barclays' Options) to 100% of the benefits from Palomino's trading activities less any prime brokerage fees paid to BCI and BCSL in respect of the PB Accounts."

- "RenTec is exposed to 100% of the risks from Palomino's trading activities up to a maximum of the call option premiums. ...Barclays Credit and Market Risk departments are comfortable the gap risk is managed within acceptable limits."

- "Conclusion: RenTec controls the major activities of Palomino and is exposed to substantially all significant risks and rewards arising from the activities carried out through the [Prime Brokerage] Accounts, being the only permitted activities of Palomino."

Source: Excerpts from 6/24/2009 Barclays Memorandum to PwC, "Palomino Limited," the purpose of which was to set out the proposed accounting treatment relating to Palomino, BARCLAYS-PSI-139757-766, at 763-764.

Permanent Subcommittee on Investigations
EXHIBIT #1b

Permanent Subcommittee on Investigations
EXHIBIT #1c

Medallion Master Funds

MOSEL EQUITIES LP (Delaware)	BADGER HOLDINGS LP (Delaware)	MEDALLION HOLDINGS LTD (Bermuda-4.13 EXEMPT)	MEDALLION TRADING (Bermuda – 4.7 EXEMPT)	NOVA FUND LP (Delaware)

The 5 Medallion Master Funds are owned jointly by the 6 Medallion Feeders and are structured to meet a variety of legal and tax Requirements. *Please click on the buttons above to get more information*:

Mosel Equities LP purchases barrier options offered by Deutsche Bank

Badger Holdings LP purchases barrier options offered by Barclays Bank

Medallion Holdings Ltd is the holding company for a variety of trading entities

Medallion Trading trades Futures, Foreign Exchange, Fixed Income Securities and Options not otherwise traded in other Renaissance related entities

Nova Fund LP is a Broker/Dealer in a Joint Back Office arrangement with Bear Stearns.

RETURN TO MEDALLION PAGE | RETURN TO MAIN PAGE

RT-PSI-00363694

SIGNATORIES TO FRANCONIA-RENTEC INVESTMENT ADVISORY AGREEMENT

assignable, transferable or delegable without the written consent of the other party hereto. Any attempted assignment, transfer or delegation hereof without such consent shall be void.

9. **Waiver; Modification.** No provision of this Agreement may be waived or modified other than by a writing signed by the party to be charged with such waiver or modification. This Agreement constitutes the entire agreement between the Client and Advisor. Any supplement to this Agreement shall be in writing, signed by the parties hereto.

10. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York without giving effect to conflicts of laws.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the day and year first above written.

FRANCONIA EQUITIES LTD.

By: ____________________
Mark Silber
Vice President and Director

RENAISSANCE TECHNOLOGIES CORP.

By: ____________________
Mark Silber
Vice President

SIGNATORIES TO
MOSEL LIMITED PARTNERSHIP AGREEMENT

service of process in any action arising out of this Agreement by the mailing thereof by registered or certified mail, return receipt requested, to such Partner's address set forth in the Schedule of Partners. In any action to enforce any provision of this Agreement, the prevailing party shall be entitled to recover all expenses, including reasonable attorneys fees, incurred in connection therewith.

8.5 Not for Benefit of Creditors.

The provisions of this Agreement are intended only for the regulation of relations among Partners and between Partners and former or prospective Partners and the Partnership. This Agreement is not intended for the benefit of non-Partner creditors and no rights are granted to non-Partner creditors under this Agreement.

8.6 Consents.

Any and all consents, agreements or approvals provided for or permitted by this Agreement shall be in writing and a signed copy thereof shall be filed and kept with the books of the Partnership.

8.7 Miscellaneous.

(a) The captions and titles preceding the text of each Section hereof shall be disregarded in the construction of this Agreement.

(b) This Agreement may be executed in counterparts, each of which shall be deemed to be an original hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

GENERAL PARTNER:

RENAISSANCE TECHNOLOGIES LLC.

By: ______________________
MARK SILBER
VICE PRESIDENT

LIMITED PARTNERS:

MEDALLION FUND L.P.
By: Renaissance Technologies LLC.
its General Partner
By: ______________________
Mark Silber, Vice President

MEDALLION ASSOCIATES L.P.
By: Renaissance Technologies LLC.
its General Partner
By: ______________________
Mark Silber, Vice President

MEDALLION USA L.P.
By: Renaissance Technologies LLC.
its General Partner
By: ______________________
Mark Silber, Vice President

MEDALLION RMP FUND L.P.
By: Renaissance Technologies LLC.
its General Partner
By: ______________________
Mark Silber, Vice President

MEDALLION INTERNATIONAL LTD.
By: ______________________
Mark Silber, Director

MEDALLION CAPITAL INVESTMENTS, LTD.
By: ______________________
Mark Silber, Director

SIGNATORIES TO BASS-RENTEC INVESTMENT ADVISORY AGREEMENT

assignable, transferable or delegable without the written consent of the other party hereto. Any attempted assignment, transfer or delegation hereof without such consent shall be void.

9. **Waiver; Modification.** No provision of this Agreement may be waived or modified other than by a writing signed by the party to be charged with such waiver or modification. This Agreement constitutes the entire agreement between the Client and Advisor. Any supplement to this Agreement shall be in writing, signed by the parties hereto.

10. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware without giving effect to conflicts of laws.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the day and year first above written.

BASS EQUITIES LTD.

By: ______________________
Mark Silber
Vice President and Director

RENAISSANCE TECHNOLOGIES CORP.

By: ______________________
Mark Silber
Vice President

SIGNATORIES TO
BADGER HOLDINGS LTD. PARTNERSHIP AGREEMENT

service of process in any action arising out of this Agreement by the mailing thereof by registered or certified mail, return receipt requested, to such Partner's address set forth in the Schedule of Partners. In any action to enforce any provision of this Agreement, the prevailing party shall be entitled to recover all expenses, including reasonable attorneys fees, incurred in connection therewith.

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

GENERAL PARTNER:

RENAISSANCE TECHNOLOGIES CORP.

By: ______________________

LIMITED PARTNERS:

MEDALLION FUND L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION ASSOCIATES L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION USA L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION RMP FUND L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION INTERNATIONAL LTD.

By: ______________________
Mark Silber, Director

MEDALLION CAPITAL INVESTMENTS, LTD.

By: ______________________
Mark Silber, Director

Office of Chief Counsel
Internal Revenue Service
Memorandum

Number: **AM2010-005**

Release Date: 11/12/10
CC:FIP

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UILC: 1234.03-00

date: October 15, 2010

to: Area Counsel (Financial Services)
(Large Business & International)

from: Associate Chief Counsel
(Financial Institutions & Products)

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subject: Hedge Fund Basket Option Contracts

This memorandum addresses certain contracts styled as options in form but acting like direct ownership of the underlying property in substance. This memorandum should not be used or cited as precedent.

ISSUES

Where the taxpayer, a partnership, entered into a contract styled as an option to purchase a basket of securities that the taxpayer's general partner also actively managed and controlled while the contract remained open, and with respect to which the taxpayer had opportunity for full gain and income and substantially all of risk of loss: (1) whether the contract should be treated as an option for tax purposes; and (2) whether the taxpayer should be treated as the tax owner of the securities.[1]

CONCLUSIONS

(1) The contract does not function like an option, and should not be treated as such.

(2) A contract that provides a taxpayer with dominion and control over a basket of securities, the opportunity for full gain and income, and substantially all of the risk of loss, provides to the taxpayer beneficial ownership of the securities for tax purposes.

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[1] To simplify the discussion, this memorandum refers to both long and short positions in securities as "securities."

Thus, the taxpayer must currently recognize the trading gains, losses, income, or expense resulting from trading and holding the securities in the basket.

FACTS

Taxpayer and affiliated entities. The taxpayer is a Delaware limited partnership that operates as a hedge fund (the taxpayer is hereinafter referred to as "HF"). During the relevant tax years, HF and other affiliated limited partnerships ("Other Hedge Funds") had common partners that were Delaware limited partnerships ("Feeder Funds"), one of which was GP. GP was the general partner of HF and the Other Hedge Funds. GP also served as the Investment Manager for the Other Hedge Funds. Among these entities, only GP had employees, and the individuals who owned interests in GP also owned interests in the Feeder Funds.

Basket Contract. HF entered into a contract ("Basket Contract") with Foreign Bank ("FB"), which is a U.K. public limited company.[2] The Basket Contract was styled as a call option on a basket of securities ("Reference Basket") held in a specified prime brokerage account administered by FB. The value of the securities in the Reference Basket was \$10x when the parties entered into the Basket Contract, and the Reference Basket was funded with \$1x in "premium" paid by HF and \$9x paid by FB. FB determined HF's \$1x premium through its finance department, rather than through option valuation formulas typically used when pricing standard options. HF had the right to terminate the Basket Contract at any time during a two-year term and receive a specified "Cash Settlement Amount," which was based on the performance of the Reference Basket.

The Basket Contract provided for a strike price equal to the initial value of the Reference Basket (\$10x). The Cash Settlement Amount that HF was entitled to receive upon termination of the contract equaled the greater of (1) zero or (2) the reimbursement of the \$1x premium, plus "Basket Gain" or less "Basket Loss." Basket Gain or Loss comprised:

> (1) trading gains, unrealized gains, interest, dividends, or other current income; minus: (2)(a) trading losses, unrealized losses, interest, dividend, or other current expenses; (b) commissions and other trading costs incurred in acquiring or disposing of the securities and positions; and (c) financing charges on the \$9x provided by FB.

Accordingly, Basket Gain or Loss fully reflected all of the net economic return or loss on the performance of the Reference Basket, including the financing charges on \$9x.

[2] This memorandum will not consider whether FB or any investors in HF have income that is effectively connected with a trade or business within the United States pursuant to I.R.C. §§ 864(b)-(c), 871(b), and 882(a).

Moreover, the Cash Settlement Amount allowed HF to receive back its $1x premium investment, reduced by any Basket Loss. Specifically, the Cash Settlement Amount would be reduced, dollar-for-dollar, for any Basket Losses up to $1x (i.e., 10% of the initial amount in the basket).

The Basket Contract contained a "Knock-Out" provision that automatically terminated the contract at any time that Basket Losses reached 10%, which was the same amount as HF's initial premium investment.[3] Thus, if Basket Losses breached the Knock-Out barrier, the contract would terminate and HF would receive a Cash Settlement Amount of zero. FB also had the right to require HF to enter into risk reducing trades even before losses in the Reference Basket reached the 10% barrier. Consequently, HF bore the risk of loss, dollar-for-dollar, for Basket Losses up to the amount of its investment. The Knock-Out provision protected FB against additional Basket Losses by allowing FB to terminate the Basket Contract and obtain control over the assets in the Reference Basket.

Investment Management Agreement. Related to its Basket Contract with HF, FB entered into an Investment Management Agreement ("IMA") with GP. In accordance with the IMA, GP conducted short-term trading (including acquisition of the initial make-up of the Reference Basket) of both short and long positions in exchange traded and over-the-counter securities as permitted by Investment Guidelines incorporated by reference into the IMA. GP conducted such short-term trading by instructing FB to execute GP's trading decisions. The Investment Guidelines limited the aggregate trading positions in the Reference Basket based on the value of any one security, business sector, or types of issuers; FB could terminate the Basket Contract if GP violated the Investment Guidelines, regardless of whether the value of the Reference Basket was near the Knock-Out barrier.

Although not contractually obligated to follow GP's specific trading instructions as long as the net value of the Reference Basket nevertheless reflected GP's instructions, FB in fact executed all of GP's trading instructions, which could entail numerous trades per day. In addition to making every trading decision, GP also had power to make corporate action decisions over the securities, addressing tender offers, mergers, and other decisions that offer a choice of consideration of cash or shares.

Nothing in the agreements between HF and FB contractually prohibited FB from commingling, lending or otherwise using the securities in the Reference Basket without notice to HF. These are customary rights a pledgee has over the assets of its brokerage customers.

[3] A contract that is subject to a knock-out contingency is part of a broader category of contracts referred to as "barrier options." See Emanuel Derman and Iraj Kani, The Ins and Outs of Barrier Options: Part 2, Derivatives Quarterly, Spring 1997, at 73, 77. As this memorandum explains, infra, the Basket Contract's particular Knock-Out provision caused the contract to function in a manner unlike options generally.

GP Management Fee Arrangement. Under the IMA, FB paid GP a fixed annual fee of less than 0.1% of $10x, which was described as a compensation and incentive fee for trading management of the Reference Basket. This is significantly less than GP received from HF's partners and beneficial owners of HF (Feeder Funds) for providing the same service. The Feeder Funds' partnership agreements provided GP with 2% of the net asset value of the Reference Basket and 20% of specified levels of Basket Gain. These fees from the Feeder Funds were consistent with the standard industry fees for trading and management services.

LAW AND ANALYSIS

HF in form owned a call option to purchase the Reference Basket, which contained securities held by FB. It has long been a principle of federal tax law, however, that the substance of a transaction and not its form will determine the federal income tax consequences of the transaction. Commissioner v. Court Holding Company, 324 U.S. 331 (1945); Gregory v. Helvering, 293 U.S. 465, 470 (1935). If the Basket Contract was not, in substance, an option contract, then HF must treat the transaction for tax purposes in accordance with its actual substance. This memorandum first addresses whether the Basket Contract qualifies as an option for tax purposes, and then addresses whether HF, in substance, is the tax owner of the Reference Basket.[4]

1. The Basket Contract Is Not an Option

Although labeled as an option, the Basket Contract lacks the essential economic and legal characteristics of an option.

Case law defines an option as having two characteristics: (1) a continuing offer to do an act, or to forebear from doing an act, which does not ripen into a contract until it is accepted; and (2) an agreement to leave the offer open for a specified period of time. Saviano v. Commissioner, 80 T.C. 955, 970 (1983), aff'd, 765 F.2d 643 (7th Cir. 1985). The purpose of an option that references property is to provide a party the opportunity to buy or sell specified property in the future at a defined price without the potential liability inherent in being obligated to buy or sell. See United States Freight Co. v. United States, 422 F.2d 887, 894-95 (Ct.Cl. 1970). Thus, an option only makes sense economically if the option holder's cost of failing to exercise is lower than the holder's

[4] Hedge Funds typically own directly the assets they manage by using prime brokerage accounts offered by investment banks and securities firms. In this case, HF sought two tax advantages in characterizing the Basket Contract as an option to purchase the Reference Basket rather than as direct ownership of basket assets through a prime brokerage account: (1) Basket Gains, including short term gains, interest, and dividends earned within the Reference Basket, would not be taxable to HF until HF exercised the option, since unexercised options on property are typically treated as "open transactions" pursuant to Rev. Rul. 58-234, 1958-1 C.B. 279; and (2) Basket Gains, including short term gains, interest, and dividends, would taxable at the low rate applicable to long-term capital gains if HF received the Cash Settlement Amount after holding the Basket Contract for more than one year, pursuant to I.R.C. §§ 1221; 1234(a)(1), (c)(2).

potential liability had he or she instead entered into and breached a contract to buy or sell the underlying property. See Halle v. Commissioner, 83 F.3d 649, 655-56 (4th Cir. 1996)(comparing potential buyer's liquidated damages with seller's expected damages in event of buyer's default to determine whether contract is option versus sale).[5] A contract that imposes a high cost upon an offeree for failing to accept an offer will not be deemed an option if the cost effectively compels the offeree to exercise. See Progressive Corp. v. United States, 970 F.2d 188, 193 (6th Cir. 1992) (explaining that certain "options" may be disguised sales because "the exercise of such options may be virtually guaranteed"); Commissioner v. Baertschi, 412 F.2d 494, 498 (6th Cir. 1969) (noting buyer's high cost of breach equal to 29% of property value is indication of sale rather than option).[6]

Upon applying these principles to the agreements between HF and FB, it is clear that the Basket Contract, despite its option terminology, lacks the requisite characteristics of an option. In particular, two elements of the agreements between HF and FB are contrary to the typical functioning of an option: (a) the interplay between the Basket Contract's premium, Cash Settlement Amount, and Knock-Out provision, which imposed upon HF costs similar to an obligated buyer and preclude any possibility of lapse; and (b) HF's ability to alter the Reference Basket, through GP, while the Basket Contract remained open, which is inconsistent with the notion that an option on property must reference specific property at a defined price.

a. Costs Imposed upon HF and the Possibility of Lapse

The Basket Contract did not function like an option insofar as its terms imposed costs upon HF that compelled HF to exercise rather than allow it to lapse. As noted by the courts in United States Freight and Halle, a call option should function so that the holder has a real choice to allow the option to lapse; if the contact imposes a cost for failure to exercise that places the holder in a similar economic position to a party obligated to buy, then the holder lacks the choice not to buy and the contract is not an option. In the instant case, the Cash Settlement Amount ensured that HF would lose its premium investment dollar-for-dollar for Basket Losses until the Reference Basket fell in value by the full amount of HF's premium investment (i.e., 10%), and the Knock-Out provision would terminate the contract with HF losing its entire investment. Accordingly, the terms of the Basket Contract ensured one of two outcomes: (1) if the Reference Basket increased in value, or decreased by less than 10%, HF would exercise in order

[5] In terms of pricing and risk, call options generally allocate risk of loss between option writers and holders such that the option writers/sellers bear the risk of price decreases in the underlying asset while the option holders/buyers enjoy the benefits of price increases while also bearing the risk that they may lose their premium. See Halle, 83 F.3d at 657.

[6] The court in Progressive adopted language from Rev. Rul. 80-238, 1980-2 C.B. 96, which held that a purported stock option is actually a sale if it is deep "in-the-money" at the time it is issued, i.e., the holder can purchase the stock at below current market price such that the holder is almost certain to exercise. Likewise, the Service in Rev. Rul. 82-150, 1982-2 C.B. 110, held that a sale of a deep-in-the-money option was, in substance, not an option but a completed sale of the referenced stock.

to recoup at least a portion of its investment; or (2) the Reference Basket would fall in value by 10% and the Knock-Out provision would force HF to terminate the option and receive nothing. Thus, the Cash Settlement Amount placed HF in the same economic position as a party obligated to buy the Reference Basket, while the Knock-Out provision ensured that the Basket Contract would never lapse unexercised. In this manner, the Basket Contract did not function like an option.

Moreover, there is no indication that HF and FB employed recognized option pricing methodologies to determine the premium. Rather, the premium that HF paid was merely a fixed percentage of the Reference Basket (i.e., 10%), which is also equal to the loss required to trigger the Knock-Out barrier. Thus, the premium under the Basket Contract is more akin to collateral for a nonrecourse margin loan than to an option premium. The similarity between HF's premium and margin loan collateral is consistent with the other terms of the Basket Contract, which, again, imposed potential costs upon HF that were more like those imposed upon an owner or a party obligated to buy than upon a party with the mere option to buy.

b. The Effect of HF's Ability (Through GP) to Alter the Reference Basket

The Basket Contract did not function like and option insofar as it referenced a basket of assets that HF (through GP and the IMA) can and did alter by actively trading the underlying securities. Though the IMA in form was a management agreement between GP and FB, which permitted GP to trade assets within the Reference Basket, GP in substance acted on HF's behalf. GP was the only entity among HF's affiliates that had employees, and GP served as the investment manager for Other Hedge Funds that had common partners with HF. Since the Basket Contract provided HF with full opportunity for gain and risk of loss up to the first 10% of losses, GP's management of the Reference Basket served to benefit HF more than FB. This is evident in the manner in which FB and HF compensated GP; the fee that FB paid to GP was a fixed annual fee of less than 0.1% of $10x, whereas the fee that HF's partners and beneficial owners (the Feeder Funds) paid to HF for comparable services was much larger, equal to 2% of the net asset value of the Reference Basket and 20% of specified levels of Basket Gain. The fees that the Feeder Funds paid to GP were consistent with the standard industry fees for trading and management services. Thus, the facts and circumstances indicate that GP was trading within the Reference Basket on behalf of HF, rather than FB.

HF's control over the Reference Basket caused the Basket Contract to operate unlike an option. As explained by the court in Saviano, an option provides one party with the choice of accepting an offer, while the other party is obligated to keep the offer open for a specified period of time. Options on property allow the holder to accept an offer buy or sell specified property at defined price. In this case, the Basket Contract purports to identify the Reference Basket as specific property subject to an option, yet the IMA contradicts that characterization by allowing HF (through GP) to alter the Reference Basket while the Basket Contract remained open. HF's ability to trade component securities within the Reference Basket calls into question whether the Reference Basket constitutes specific property apart from its components; thus, rather than having the right to buy the Reference Basket, HF could be viewed as having a series of separate contractual rights for each security within the Reference Basket such that each trade HF executes while the Basket Contract is open would generate a taxable event attributable to that trade under sec. 1001.[7] FB permitted HF to have this control because the terms of the Basket Contract ensured that FB was protected from HF's investment decisions; as noted above, the Basket Contract imposed potential costs upon HF that were more consistent with a party that had an obligation to buy than upon a party with a mere option to buy. Not surprisingly, the Basket Contract was neither priced like an option nor did it apportion costs like a typical option because HF's power to control and alter the Reference Basket was contrary to the very notion of what an option is.[8]

Having applied the principles set forth in the relevant authorities to the terms of the Basket Contract, we conclude that the Basket Contract is not an option for Federal income tax purposes.

2. HF Had Tax Ownership of the Reference Basket

We now turn to the question of whether HF, in substance, owns the Reference Basket.[9]

To determine whether a taxpayer holds the beneficial ownership of assets for tax purposes, courts have considered numerous factors indicative of the burdens and benefits of ownership.[10] No one factor is determinative; courts accord varying weight to

[7] See generally James M. Peaslee, Modifications of Nondebt Financial Instruments as Deemed Exchanges, Tax Notes, April 29, 2002, at 766-67 (discussing whether options referencing baskets of generate deemed exchanges under sec. 1001 when basket is changed in accordance with terms of the contract). Given the conclusion in Part 2 of this memorandum's "Law and Analysis" section that HF actually owned the component securities within the basket for tax purposes, this memorandum need not address whether the Reference Basket should be disaggregated into a series of contractual rights.

[8] The Treasury Regulations governing notional principal contracts also recognize this principle by prohibiting parties to a contract from controlling indexes that are used as referenced assets. Treas. Reg. § 1.446-3(c)(2)(iii), (c)(4)(ii).

[9] We have already concluded that the Basket Contract was not an option because HF is compelled to exercise; thus, the remaining question is whether HF owned the assets in the Reference Basket during the period in issue, or whether HF was merely obligated to purchase the assets in the future, i.e., through a forward contract. Forward contracts are typically treated as open transactions, and parties obligated to buy under forward contracts are not taxed as though they are current owners of the asset. See Lucas v. N. Texas Lumber Co., 281 U.S. 11, 13 (1930) (agreement to sell land in 1916 was not a closed sale for tax purposes until price paid and title transferred in 1917). In certain circumstances, however, taxpayers holding forward contracts may be treated as constructively owning the underlying asset. See I.R.C. § 1260(d)(1)(B) (treating taxpayers as constructively owning financial assets subject to certain forward contracts).

[10] In Grodt & McKay Realty, Inc. v. Commissioner, 77 T.C. 1221 (1981), the Tax Court applied an eight factor test to determine whether taxpayer owned cattle, including: (1) Whether legal title passes; (2) how

each factor, depending on the type of property and transaction at issue. See Pac. Coast Music Jobbers v. Commissioner, 55 T.C. 866, 874 (1971) (employing multi-factor test to determine ownership of stock and according less weight to attributes that are formalistic and "not useful"), aff'd, 457 F.2d 1165 (5th Cir. 1972). For example, in determining the ownership of stock for tax purposes, the following factors are most relevant: (1) the ability to sell the shares; (2) the power to vote, especially as a means of controlling the board of directors and managing the underlying business; (3) the right to receive dividends; and (4) the opportunity for gain and the risk of loss in the value of the shares. See, e.g., Ragghianti v. Commissioner, 71 T.C. 346, 350 (1978) (sharing in profit and loss, and participating in shareholder meetings); Pac. Coast Music, 55 T.C. at 876-77 (dividends and voting proxies); Hall v. Commissioner, 15 T.C. 195, 200 (1950), aff'd,194 F.2d 538 (9th Cir. 1952) (noting that right of sale is "one of the most important attributes of ownership").

Tax Court has recently issued two opinions in which it addressed whether taxpayers were owners of fungible securities -- the type of securities in the Reference Basket. In each case, the court employed an analysis that was consistent with the principles described above. In Anschutz v. Commissioner, 135 T.C. No. 5 (July 22, 2010), the taxpayer received a nonrefundable upfront cash payment in exchange for transferring stock subject to a purported forward sale of the same stock (with variable number of shares to be delivered) and a purported share lending agreement of the same stock. The Tax Court held that the taxpayer had transferred its beneficial ownership of the stock because the taxpayer: (1) transferred most of the opportunity for gain; (2) eliminated its risk of loss; and (3) the party to whom the taxpayer loaned the stock had the right to dispose of the shares. Anschutz, slip op. at 46-47.

In Calloway v. Commissioner, 135 T.C. No. 3 (July 8, 2010), the taxpayer likewise received a nonrefundable upfront cash payment in exchange for transferring stock, in this case subject to a purported loan. The Tax Court held that the taxpayer had transferred its beneficial ownership because the taxpayer: (1) could not sell the shares during the three year term of the purported loan; (2) eliminated its risk of loss; and (3) the purported stock borrower was authorized to sell the stock immediately after receiving it from the taxpayer. Calloway, slip op. at 13-18.

The Court of Appeals for the Eighth Circuit focused on the same three factors employed by the Tax Court and Anschutz and Calloway in holding that a taxpayer had beneficial ownership of mutual fund shares that supported a variable annuity contract held by the taxpayer. In Christoffersen v. United States, 749 F.2d 513 (8th Cir. 1984), the taxpayers purchased a variable annuity contract that provided the taxpayers the full

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the parties treat the transaction; (3) whether an equity interest in property is acquired; (4) whether the contract creates a present obligation on the seller to transfer ownership and a present obligation on the purchaser to make payments; (5) whether the right of possession is vested in the purchaser; (6) which party pays property taxes; (7) which party bears the risk of loss or damage to the property; and (8) which party receives the profits from the operation and sale of the property. 77 T.C. at 1237-38.

investment return and risk of loss of mutual fund shares held in an account of the issuing insurance company. The taxpayers had the right to direct that their premium payments be invested in any one of six publicly traded mutual funds, and the taxpayers could reallocate their investment among the funds at any time. The taxpayers also had the right upon seven days notice to withdraw funds, surrender the contract, or apply the accumulated value under the contract to provide annuity payments. The court noted that the taxpayer bore full investment risk and had immediate access to the funds, and that the policy's limitations upon the taxpayer's control of the mutual fund shares were no different than the limits imposed by traditional brokerage accounts. Id. at 516.[11]

Upon application of the factors set forth by the authorities discussed above to the terms of the agreements between HF and FB, it is clear that HF should be treated as the tax owner of the Reference Basket because HF had: (a) opportunity for full trading gain and current income; (b) substantially all of the risk of loss related to the Reference Basket, and (c) complete dominion and control over the Reference Basket.

a. HF's Opportunity for Gain and Income

HF had full opportunity for gain and income from the Reference Basket performance. The Cash Settlement Amount included the refund of HF's premium investment and Basket Gain or Loss, which was defined to include all trading gains and losses, net current income or expenses, trading costs, and a financing charge for the funding of $9x provided by FB. Basket Gain or Loss reflected all of the economic return or loss on the performance of the Reference Basket. Because HF could also exercise its right to receive the Cash Settlement Amount at any time, HF was at all times free to take full advantage of its opportunity for gain and income.[12] Moreover, HF could lock in gain in any single position within the Reference Basket by instructing its disposition, while the Basket Contract remained open.

b. HF's Risk of Loss

HF had substantially all of the risk of loss of the Reference Basket. As explained in Part 1.a. of this memorandum's "Law and Analysis" section, the Basket Contract's Cash Settlement Amount reduced HF's ability to recoup its investment to the extent of any Basket Loss. HF had the risk of loss, dollar-for-dollar, up to the full amount of its premium investment, which was equal to 10% of the Reference Basket's initial value.

[11] The IRS has declined to treat policyholders as the owner of mutual fund shares supporting variable life and annuity contracts if the shares are only available to the insurer's policyholders, and not to the general public, thus indicating that the policyholders lacked control over the mutual funds. Rev. Rul. 2003-91, 2003-2 C.B. 347; Rev. Rul. 81-225, 1981-2 C.B. 12.

[12] See Calloway, slip op. at 31 (taxpayer has full opportunity for gain "only if the taxpayer is able to effect a sale of the security in the ordinary course of the relevant market (e.g., by calling a broker to place a sale) whenever the security is in-the-money." (quoting Samueli v. Commissioner, 132 T.C. 37, 48 (2009)).

Moreover, due to the Knock-Out provision, the full risk of loss inherent in the Basket Contract was the 10% borne by HF.

FB did indeed bear a theoretical risk; FB could possibly suffer a loss if Basket Losses were incurred so quickly that FB was unable to liquidate the Reference Basket timely enough to prevent losses beyond the 10% threshold created by the Knock-Out. That possibility was remote, however, and FB also had rights through the Investment Guidelines to force HF into risk reducing trades or cause an early termination (and liquidation) of the Basket Contract even before Basket Losses reached the 10% barrier. Thus, the Knock-Out provision (and FB's additional risk-reduction rights) merely reflected the typical arrangement between a broker and an investor who purchases securities through margin loans in a prime brokerage account, i.e., the investor's risk of loss is limited to the amount of the purchase price the investor itself funded, while the broker has rights to liquidate the securities or take other actions to ensure that losses will not exceed the amount funded by the investor.[13]

c. HF's Control over the Reference Basket

HF, through GP, had complete dominion and control over the Reference Basket. As HF's agent, GP instructed numerous trades per day, which FB executed without exception. GP also had the power to make corporate action decisions over the securities in the Reference Basket. FB arguably had some control over the Reference Basket, as FB could have (and may have) lent or rehypothecated the securities without HF's knowledge. Nevertheless, these are customary powers that a broker-pledgee has over assets under custodial arrangement with prime brokerage customers. In this regard, HF's ability to trade any security within the Reference Basket or terminate the Basket Contract at any time and receive the Cash Settlement Amount further places HF in a similar position to an owner of a prime brokerage account and limits FB's ability to lend or rehypothecate the securities.

Accordingly, HF had: (a) opportunity for full trading gain and current income; (b) all of the risk of loss inherent in the Basket Contract; and (c) complete dominion and control of the Reference Basket. We conclude that HF is the beneficial owner of the Reference Basket for tax purposes.

[13] Furthermore, courts have respected the debt character of nonrecourse debt used in leveraged purchases of property (and thus the debtor's ownership of the leverage purchased property), despite the lender's bearing the risk of loss if the property decreases in value below the amount owed on the loan. For example, the Court of Appeals for the Fourth Circuit in Odend'hal v. Commissioner, 748 F.2d 908 (4th Cir. 1984) recognized that a nonrecourse obligation constitutes genuine indebtedness "so long as the fair market value of the property is at least equal to the amount of the nonrecourse debt at the time it was incurred, because the taxpayer, even though he has no personal liability at stake, has an economic incentive to pay off the debt rather than to lose the collateral." Id. at 912.

CASE DEVELOPMENT, HAZARDS AND OTHER CONSIDERATIONS

You have informed us that there are variations to the contract described above. We encourage you to develop those cases, and stand ready to assist with legal analysis and alternative arguments. For example, in some cases it may be appropriate to assert that changes in a contract's reference index generate taxable exchanges of either contractual rights within the reference index, or of the entire contract; these would be alternative arguments to direct ownership of the underlying securities. We also suspect that this transaction is not confined to large hedge funds. Lastly, given the particularly aggressive nature of this transaction, we further encourage you to gather information about similar cases so that the Service can determine whether to resolve this issue case-by-case or through the formal programs in place for addressing potentially abusive transactions.

Please call Robert A. Martin or Anna H. Kim at (202) 622-3900 if you have any further questions.

cc: Linda M. Kroening
Division Counsel
(Large Business & International)

Walter Harris
Industry Director
(Financial Services)

From: Peter Brown <peter@rentec.com>
Sent: Wednesday, September 10, 2008 5:09 AM
To: Rowen, Jim
Subject: Re-shuffle- Follow-up

Importance: Low

Thanks. -Peter

Rowen, Jim writes:
> I confirmed that there is no prohibition against end-of-day transfers in our new MAPS documentation. We may re-shuffle the constituents of the underlying options at the end of the day, at the current closing price. For the avoidance of doubt any position selected to be re-shuffled will need to be transferred at the prevailing market close. These are not trades but journal entries, so there are theoretical costs to journal. Please remember that only new options have this re-shuffle functionality and the older options do not. I understand that our proposed steady state plans will require us to roll many of the existing DB options in to the new option structure. So the ability to do the end of day re-shuffle will start slowly during the fourth quarter to pick up momentum next year.
> Mark Silber was going discuss with you the ability to optimize the end of day re-shuffle process in order to keep the number of position re- shuffles to a manageable amount and below the radar of DB. DB is still testing their re-shuffle capability in anticipation of our first new MAPs option next week. I believe We can determine the appropriate re-shuffle quantity over time.. Unlike the new re-shuffle functionality The new advisory/trading guidelines transcend both old and new options.
> If you have any questions please either call me at home or at work tomorrow.
> Take care<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2//EN"> > <HTML> > <HEAD> > <META HTTP-EQUIV="Content-Type" CONTENT="text/html; charset=utf-8"> > <META NAME="Generator" CONTENT="MS Exchange Server version 6.5.7652.24"> > <TITLE>Re-shuffle- Follow-up</TITLE> > </HEAD> > <BODY> > <!-- Converted from text/plain format --> > > <P><FONT SIZE=2>I confirmed that there is no prohibition against end-of-day transfers in our new MAPS documentation. We may re-shuffle the constituents of the underlying options at the end of the day, at the current closing price. For the avoidance of doubt any position selected to be re-shuffled will need to be transferred at the prevailing market close. These are not trades but journal entries, so there are theoretical costs to journal. Please remember that only new options have this re-shuffle functionality and the older options do not. I understand that our proposed steady state plans will require us to roll many of the existing DB options in to the new option structure. So the ability to do the end of day re-shuffle will start slowly during the fourth quarter to pick up momentum next year.
 > Mark Silber was going discuss with you the ability to optimize the end of day re-shuffle process in order to keep the number of position re- shuffles to a manageable amount and below the radar of DB. DB is still testing their re-shuffle capability in anticipation of our first new MAPs option next week. I believe We can determine the appropriate re-shuffle quantity over time.. Unlike the new re-shuffle functionality The new advisory/trading guidelines transcend both old and new options.
 > If you have any questions please either call me at home or at work tomorrow.
 > Take care</FONT> > </P> > > </BODY> > </HTML>

Permanent Subcommittee on Investigations
EXHIBIT #3

To: Daniel Koranyi[dkoranyi@rentec.com]
Cc: Peter Brown[peter@rentec.com]; Robert Mercer[mercer@rentec.com]; Jim Rowen[jrowen@rentec.com]
From: Colin Masson
Sent: Wed 11/19/2008 5:04:22 PM
Importance: Normal
Subject: Re: DB counteroffer

Dan,

I believe that 160 is pessimistic. If you look at their fig 9 for trading costs vs rate, you will see that the typical trades in their sample have a rate of about 0.25. That corresponds to liquidating 0.15 dvol in 3/5 of a day. So to do 0.15 dvol in 1 day would cut the cost to roughly 100bp. And even cheaper over several days.

Also, in doing the estimate, we have to compare the properties of the portfolio with the average of their sample. So the 80bp would be for trades just like theirs. Even our doubled spreads of 1.2e-3 are at the low-to-middle end of the points plotted in fig 6. I would read that as saying that their stocks are less liquid than ours. So in high spread times we might expect 80bp and in normal times maybe 40bp.

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Colin

Daniel Koranyi wrote:
> From their working papers, it appears that the underpinnings of their model
> are reasonable, as it is predicated on the papers of Almgren, which Colin
> says are quite sensible.
>
> Colin points out that the Optimal Execution paper supports our contention
> that any portfolio they would find themselves having to liquidate would be
> low-risk, and could be liquidated slowly if required. The portfolio would be
> well diversified, market-neutral, and with low liquidity imbalance (in their
> parlance -- meaning the longs are on average no more or less liquid than the
> shorts). This would be true even if it reached the stage at which the
> barrier triggered, becuase we would still be trading it actively up to that
> point and would still be in compliance with the constraints.
>
> Further, if this were to happen, it would be after we had already cut the
> portfolio back substantially. I've looked at the position-weighted pos/dvol
> in our US MAPS portfolio since 20040101. Typically it is around [redacted] but
> both last summer and this fall, as we cut the portfolio, it came down to
> around [redacted] If we were to get to the stage where DB assumed control, we
> would surely have cut further by then. Let's say we got down to [redacted] -- then
> we are in the 80bps liquidation cost regime that Colin referenced
> (extrapolating from Fig 5 of their Market Impact paper).
>
> That Fig 5 is presumably predicated on 'standard' spreads. You can see the
> bhavior of our position-weighted average (spread/meanquote), evaluated at
> [redacted] daily, with
>
> [redacted]
>
> Historically the value has been around [redacted] i.e. a spread of [redacted] or

> [redacted] cents on a [redacted] stock. Last August it spiked to about twice that; in Oct
> 2008 it spiked to three times that. So far this November it is around
> [redacted] so still elevated by a factor of about two.
>
> Fig. 6 of the Market Impact paper suggests that liquidation cost is roughly
> linear in the spread, so we might expect the current liquidation cost to be
> more like 160 bp, not 80. This would in principle still cover us to a
> leverage of 62.
>
> With a leverage of 18 we are in principle covered up to a cost of 555 bp.
> Satish seemed to be content with 18:1 with, say, and 80 bp cost, but seems
> less comfortable with 18:1 with at 160 bp cost. I think we should first
> understand why this is so, since his own models suggest that there will still
> be plenty of leeway. Does he not believe his own models? Why not?
>
> But let's calculate a bit anyway. He accepts 18:1 with 80 bp, where really
> he's safe to 125:1. That's a factor of about 7. Applying that same factor
> of 7 to 160 bp yields (1/0.016)/7 = 9:1 . It is true that our recent
> leverage is between 5:1 and 6:1, so in principle we would be in compliance
> with this, but to me it seems to be too much of a giveup. On the day of
> 0.002 spread, we'd be at, say 240 bp liquidation cost --> 6:1, which is
> cutting it close; our actual leverage that day was 6.3:1 .
>
> So, I think we need to cut back on the factor of 7 safety margin. The
> following table shows what happens if we go to factors of 3, 4, and 5. The
> first column is the factor by which spreads exceed their 'normal' values.
> The second is the resulting liquidation cost in basis points (scaling
> linearly). The third column is the max leverage that liquidation cost
> allows. The next three columns are the max leverage with Satish factors of
> 3, 4, and 5 (all capped at 18).
>

> factor	bps	Vmax	saf3	saf4	saf5
> 1.00	80	125.0	18.0	18.0	18.0
> 1.25	100	100.0	18.0	18.0	18.0
> 1.50	120	83.3	18.0	18.0	16.7
> 1.75	140	71.4	18.0	17.9	14.3
> 2.00	160	62.5	18.0	15.6	12.5
> 2.25	180	55.6	18.0	13.9	11.1
> 2.50	200	50.0	16.7	12.5	10.0
> 2.75	220	45.5	15.2	11.4	9.1
> 3.00	240	41.7	13.9	10.4	8.3
> 3.25	260	38.5	12.8	9.6	7.7
> 3.50	280	35.7	11.9	8.9	7.1
> 3.75	300	33.3	11.1	8.3	6.7
> 4.00	320	31.2	10.4	7.8	6.2
> 4.25	340	29.4	9.8	7.4	5.9
> 4.50	360	27.8	9.3	6.9	5.6
> 4.75	380	26.3	8.8	6.6	5.3
> 5.00	400	25.0	8.3	6.2	5.0

—— = Redacted by the Permanent Subcommittee on Investigations

>
>
> It seems like he will want at least a factor of 4, since 3 does not result in
> reduced leverage for twice-average spreads. The factor of 4 would drop us to
> 15.6:1 right now.
>
> ---

>
> A minor issue is whether this factor should apply to the entire leverage
> curve (over all hedges), or whether we are only adjusting the central value,
> so that the max allowed leverage at [redacted] would still be [redacted] regardless of
> the spreads.
>
>
> -dk
>
>
>
>
>

To: Daniel Koranyi[dkoranyi@rentec.com]
Cc: Rob Biggar[rob@rentec.com]; George Heintzelman[georgeh@rentec.com]; Robert Mercer[mercer@rentec.com]; Adrienne[adrienne@rentec.com]; Thomas Fallon[tfallon@rentec.com]; Paul Broder[tpaul@rentec.com]
From: Peter Brown
Sent: Tue 8/23/2011 8:26:51 PM
Importance: Normal
Subject: US portfolio shift - overrides?

Yes, override when you can confidently do so without making a mistake
or causing problems for others who you are jumping ahead of.

-Peter

Daniel Koranyi writes:
>
> Rob, George:
>
> Management has decided to shift some portfolio from the Palomino
> loss-protected managed account to the Deutsche (DBAG) loss-protected managed
> accounts. The total amount of portfolio to shift, for now, is USD 4e9.
> This will be achieved by raising the target portfolio for the various dbc00x
> accounts, which will wind up at a leverage of around 12:1 (up from current
> 9.5 or so).
>
> I have built and kicked off standard series in XE and JP that will, combined,
> shift USD 1e9 of portfolio once they are installed and trading. The
> remainder of the shift (USD 3e9) will be in the US. I propose to leave
> snova/sliqd alone and do all the transfer in nova/liqd.
>
> I am fifth in line for a standard US series after the post-alphatest series,
> which is still in =wait status. The parameters to override in production in
> order to transfer the portfolio are, in the nova/liqd complex:
> [redacted]
>
>
>
>
> This is an increase of 1e9 for each of them relative to their current values.
>
>
> Peter or Bob, can you please advise Rob and George whether you want them to
> install these overrides in production immediately, or instead wait until the
> five US series are run and unwaited.
>
>
> -dk
>

▬▬ = Redacted by the Permanent Subcommittee on Investigations

Permanent Subcommittee on Investigations
EXHIBIT #5

INVESTMENT ADVISORY AGREEMENT

THIS AGREEMENT is made as of the 30th day of March, 2000, by and between RENAISSANCE TECHNOLOGIES CORP., a corporation organized under the laws of Delaware (the "Advisor"), and FRANCONIA EQUITIES LTD., an exempted company organized under the laws of Bermuda (the "Client").

The Client hereby engages Advisor to perform the investment management services described herein, and Advisor hereby accepts such engagement, pursuant to the following terms and conditions:

1. **Investment Management Services.** The Client hereby authorizes and appoints Advisor to manage the investment of all cash, commodities, securities and other assets comprising the investment portfolio placed under the supervision of Advisor by the Client (which portfolio, together with all additions, withdrawals, substitutions and alterations occurring during the term of this Agreement, is referred to herein as the "Account"). Advisor is authorized, without further approval by or notice to the Client, to make all investment decisions concerning the Account, including allocating any portion of the Account or the entire Account to other investment managers (the "Investment Managers"), and to further authorize such Investment Managers to make purchases and sales and otherwise to effect transactions in securities, commodities, currencies and other assets in the Account (including without limitation entering into short sales and securities lending activities). Advisor is authorized to sign, as attorney-in-fact on behalf of the Client, any documents and take any other actions which Advisor considers necessary or advisable in order to carry out the portfolio allocation or the trading for the Account, including but not limited to the following:

(a) to make all decisions relating to the allocation of the Account to the Investment Managers, including the selection of Investment Managers and amount of allocation, and to delegate such powers to Investment Managers as are necessary or advisable in order to carry out their duties;

(b) to effect (both directly or indirectly through Investment Managers) purchases and sales (including short sales) of (i) securities of any type whatsoever, denominated in any currency, whether or not issued by government entities, partnerships, trusts or corporations, (ii) any put or call options thereon (including the writing of options, whether covered or uncovered), and (iii) other securities and instruments consistent with the Client's investment policies and program;

(c) to make (both directly or indirectly through Investment Managers) all decisions relating to the manner, method and timing of investment transactions, and to select, or to authorize the Investment Managers to select, brokers and dealers for the execution, clearance and settlement of any transactions;

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(a) to make all decisions relating to the allocation of the Account to the Investment Managers, including the selection of Investment Managers and amount of allocation, and to delegate such powers to Investment Managers as are necessary or advisable in order to carry out their duties;

(b) to effect (both directly or indirectly through Investment Managers) purchases and sales (including short sales) of (i) securities of any type whatsoever, denominated in any currency, whether or not issued by government entities, partnerships, trusts or corporations, (ii) any put or call options thereon (including the writing of options, whether covered or uncovered), and (iii) other securities and instruments consistent with the Client's investment policies and program;

(c) to make (both directly or indirectly through Investment Managers) all decisions relating to the manner, method and timing of investment transactions, and to select, or to authorize the Investment Managers to select, brokers and dealers for the execution, clearance and settlement of any transactions;

(d) to trade (both directly or indirectly through Investment Managers) on margin, to borrow from banks, brokers or other financial institutions and to pledge assets of the Client in connection therewith;

(e) to direct (both directly or indirectly through Investment Managers) custodians to deliver funds or securities for the purpose of effecting transactions, and to instruct custodians to exercise or abstain from exercising any privilege or right attaching to such assets; and

(f) to make and execute, in the name and on behalf of the Client, all such documents (including, without limitation, customer agreements and other documents in connection with the establishment and maintenance of brokerage accounts) and to take all such other actions as the Investment Advisor considers necessary or advisable to carry out its investment management duties hereunder.

2. **Brokerage.** The Client hereby delegates to Advisor (which power may be further delegated to the Investment Managers) authority to designate the broker or brokers through whom all transactions on behalf of the Account will be made. Advisor (or the Investment Managers) will determine the rate or rates to be paid for brokerage services provided to the Account. In the course of selecting brokers, dealers, banks and financial intermediaries to effect transactions for the Account, Advisor (or the Investment Managers) may agree to such commissions, fees and other charges on behalf of the Account as it (or they) shall deem reasonable in the circumstances, taking into consideration all such factors as Advisor deems (or the Investment Managers deem) relevant, including the quality of research, execution and other services made available to it (or them). It is understood that the cost of such services will not necessarily represent the lowest costs available, that such services may not be used by Advisor (or the Investment Managers) for the exclusive benefit of the Account, and that Advisor is (or the Investment Managers are) under no obligation to combine or arrange orders so as to so reduce charges.

3. **Fees and Expenses.** (a) Advisor will not charge the Client a management or performance fee, it being understood that such fees are subsumed in the management and performance fees charged to Medallion Fund and Medallion USA, LP., and such additional affiliated funds which may from time to time indirectly own all of the shares of the Client.

(b) Advisor shall bear its own overhead and other internal operating costs. Operational expenses of the Client, such as interest, custodial, legal, audit and brokerage fees and any subscription or redemption charges imposed by funds in which the Client invests will be borne by the Client. The Client will also bear indirectly its proportionate share of the fees and expenses of the funds in which it invests. Organizational expenses and start-up costs of the Client will be borne by the Client and will be expensed as incurred.

4. **Investment Activities for the Account of Others.** (a) Advisor and its directors, employees and beneficial owners (and the Investment Managers and their directors, employees and

beneficial owners) may from time to time acquire and dispose of securities or other investment assets for their own accounts, for the accounts of their families, for the account of any entity in which they have a beneficial interest or for the accounts of others for whom they may provide investment advisory or other services (collectively, a "Managed Account"), notwithstanding the fact that the Client may have or may take an investment position for the Account; provided, however, that Advisor (or the Investment Managers) shall not cause the Client to purchase any asset from or sell any asset to Advisor (or the Investment Managers), or any of its (or their) partners or employees or any account or entity controlled by such persons, without the consent of the Client.

(b) It is understood that when Advisor determines (or the Investment Managers determine) that it would be appropriate for the Client and one or more Managed Accounts to participate in an investment opportunity, Advisor (or the Investment Managers) will seek to execute orders for the Client and for such Managed Accounts on an equitable basis. In such situations, Advisor (or the Investment Managers) may place orders for the Client and each Managed Account simultaneously, and if all such orders are not filled at the same price, Advisor (or the Investment Managers) may cause the Client and each Managed Account to pay or receive the average of the prices at which the orders were filled for the Client and all Managed Accounts. If all such orders cannot be fully executed under prevailing market conditions, Advisor (or the Investment Managers) may allocate the securities traded among the Client and the Managed Accounts in a manner which it considers (or they consider) equitable, taking into account the size of the order placed for the Client and each such Managed Account.

5. **Scope of Duties.** The Client recognizes that the opinions, recommendations and actions of Advisor will be based on advice and information deemed to be reliable, but not guaranteed by or to Advisor. Advisor shall have no duties or obligations to the Client pursuant to this Agreement other than as set forth herein, and Advisor shall not be liable to the Client for any act or omission in the absence of gross negligence or willful misconduct.

6. **Indemnification.** The Client shall indemnify Advisor, which shall include solely for purposes of this Section any of its directors, officers, and employees against and hold them harmless from any expense, loss, liability or damage arising out of any claim asserted or threatened to be asserted by any third party, in connection with Advisor's serving or having served as such pursuant to this Agreement; provided, however, that Advisor shall not be entitled to indemnification with respect to any expense, loss, liability or damage which was caused by its own gross negligence, willful misconduct or reckless disregard of its duties hereunder.

7. **Termination.** The Client or Advisor may terminate this Agreement at any time upon written notice, which shall be effective when received by the other party.

8. **Entire Agreement; Binding Effect; Assignment.** This Agreement represents the entire agreement among the parties, shall be binding upon and inure to the benefit of the parties hereto and their respective successors, and their rights and obligations hereunder shall not be

assignable, transferable or delegable without the written consent of the other party hereto. Any attempted assignment, transfer or delegation hereof without such consent shall be void.

9. **Waiver; Modification.** No provision of this Agreement may be waived or modified other than by a writing signed by the party to be charged with such waiver or modification. This Agreement constitutes the entire agreement between the Client and Advisor. Any supplement to this Agreement shall be in writing, signed by the parties hereto.

10. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York without giving effect to conflicts of laws.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the day and year first above written.

FRANCONIA EQUITIES LTD.

By: ________________________
Mark Silber
Vice President and Director

RENAISSANCE TECHNOLOGIES CORP.

By: ________________________
Mark Silber
Vice President

Deutsche Bank

Deutsche Bank Securities Inc.
31 West 52nd Street
New York, NY 10019

Telephone: 1-212-469-5000

March 14, 2002

FRANCONIA EQUITIES LTD.
C/o of Renaissance Technologies Corp.
800 Third Avenue
New York, NY 10022
Attn: Mark Silber / Carla Volpe Porter
Tel: (212) 486-6780
Fax: (212) 758-7136

"OUTPERFORMANCE" BARRIER OPTION TRANSACTION – Cash Settled, Linear Amortizing Premium – DBSI Reference No. 1244131

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the Transaction entered into between **DEUTSCHE BANK AG, LONDON BRANCH** ("Party A") and **FRANCONIA EQUITIES LTD.** ("Party B") on the Trade Date specified below (the "Transaction"). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below. This Confirmation constitutes the entire agreement and understanding of the parties with respect to the subject matter and terms of the Transaction and supersedes all prior or contemporaneous written or oral communications with respect thereto.

DEUTSCHE BANK AG IS NOT REGISTERED AS A BROKER DEALER UNDER THE U.S. SECURITIES EXCHANGE ACT OF 1934. DEUTSCHE BANK SECURITIES INC. ("DBSI" or "DESIGNATED AGENT") HAS ACTED SOLELY AS AGENT IN CONNECTION WITH THIS TRANSACTION AND HAS NO OBLIGATION, BY WAY OF ISSUANCE, ENDORSEMENT, GUARANTEE OR OTHERWISE WITH RESPECT TO THE PERFORMANCE OF EITHER PARTY UNDER THE TRANSACTION. DEUTSCHE BANK AG, LONDON BRANCH IS NOT A MEMBER OF THE SECURITIES INVESTOR PROTECTION CORPORATION (SIPC).

The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 1996 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc. are incorporated into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern. In the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern.

This Confirmation constitutes a "Confirmation" as referred to in, and supplements, forms a part of and is subject to, the ISDA Master Agreement, including the Credit Support Annex, if any, dated as of September 6, 2000 as amended and supplemented from time to time (the "Agreement"), between you and Deutsche Bank AG. All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

"Loss" payment measure and "Second Method" payment method shall apply to this Transaction.

The terms of the particular Transaction to which the Confirmation relates are as follows:

General Terms

Trade Date:	March 14, 2002
Option Style:	Call
Option Type:	American– Barrier Option
Buyer:	**Party B**
Seller:	**Party A**
Basket; Benchmark Shares:	Two specified accounts owned by Party A, one relating to the Basket, the other relating to the Benchmark Shares, each having the respective Basket Composition and Benchmark Share Composition provided in Annex I.

The **Benchmark Share Composition** shall be subject to adjustment (through Share additions and/or deletions) from time to time solely in connection with any "Benchmark Share Recomposition" (defined below).

The Basket shall be comprised of the Trading Basket and the Semi-fixed Basket (as defined below). For purposes of calculating Funding Costs (as defined below), the Basket will be subdivided into--

(i) A **"Trading Basket"**, the Share composition of which shall be comprised of the Designated Positions, as such term is defined in Section 2 of the Investment Advisory Agreement (consistent with the Investment Guidelines applicable to the Advisor--as described below); the Share positions within the Trading Basket shall be further subdivided into (A) **"Trading Basket Long Positions"**,(B) **"Trading Basket Actual Short Positions,** and (C)**"Trading Basket Synthetic Short Positions"** – designation of a Share position as a "Trading Basket Synthetic Short Position" shall not denote that such Share position is actually held "short", for applicable regulatory purposes (including application of U.S. Short Sale Rules) or otherwise; rather such designation as a "Synthetic Short Position" shall only have relevance for purposes of calculating and categorizing relevant Share positions for purposes of determining applicable Funding Costs; and

(ii) A **"Semi-fixed Basket"**, the Share composition of which is intended at all times to be equivalent to, and correspond to, the Share composition of the Benchmark Shares (as the latter is adjusted from time to time to reflect any corresponding Benchmark Recomposition).

Exchange:	N/A
Related Exchange(s):	N/A
Business Day:	New York

Transaction Details

Number of Options:	One
Notional Amount:	USD 3,000,000,000.00
Option Entitlement:	One Basket per Option
Strike Price:	100
Premium:	Initially, USD 375,000,000.00, of which USD 105,000,000.00 constitutes "Amortizable Premium". Premium is the sum of Amortizable Premium (initially, and throughout, USD 105,000,000.00) plus Fixed Premium (initially USD 270,000,000.00).
Premium Payment Date:	The third Business Day after the Trade Date.
Calculation Agent:	Designated Agent

Procedure for Exercise

Commencement Date of Exercise Period:	The Trade Date. For the avoidance of doubt, Buyer's designation of an Exercise Date shall thereby trigger the commencement of the Averaging Period on such Exercise Date.
Exercise Period:	The period commencing on, and including, the Trade Date up to, and including, the Scheduled Expiration Date.
Latest Exercise Time:	**5:00 p.m. (New York time)**, provided that no Early Termination Event has occurred.
Exercise Date:	The Exchange Business Day immediately following the date on which Seller confirms its receipt of the written notice of exercise to be provided by Buyer.
Expiration Date:	**March 14, 2005**, subject to Following Business Day Convention ("Scheduled Expiration Date") or such earlier date and time upon the occurrence of an Early Termination Event. Buyer shall effect option exercise, if at all, no later than the commencement of the Averaging Period relating to the Scheduled Expiration Date.
Automatic Exercise:	Applicable as at the Expiration Date to the extent that the value of the Cash Settlement Amount, as determined by the Calculation Agent, is a positive number.

Designated Agent's Telephone
Number, Facsimile Number
and Contact Details for Purposes
of Giving Notice to Seller:
Attn: Designated Agent–James Rowen
Tel: (212) 469-4990
Fax: (212) 469-4955

Valuation

Valuation Time:	As specified in ANNEX I for the relevant Exchange, subject to an Early Termination Event.
Valuation Date(s):	Any Exchange Business Day during the Exercise Period.
Final Valuation Date:	The last Exchange Business Day (i.e., the last Averaging Date) of the Averaging Period, subject to any Early Termination Event.
Averaging Period:	A period of four (4) consecutive Exchange Business Days (each being an Averaging Date), commencing on the relevant Exercise Date; provided that, if an Early Termination Event has occurred and the Seller has not received a Buyer Termination Notice (defined below) from the Buyer, the commencement of the Averaging Period, will be as determined by the Calculation Agent at such time.
Settlement Terms:	Cash Settlement
Net NAV Index Level	As of the Trade Date, the Strike Price, and as of any Valuation Date during the Exercise Period, an amount determined as follows: (i) Gross NAV Index Level **minus** Benchmark Index Level (ii) **plus 100**
Net NAV Amount:	As of the relevant Valuation Date, an amount equal to the product of (i) the Notional Amount and (ii) the Net NAV Index Level **minus** 100 **divided** by 100
Gross NAV Index Level:	As of the Trade Date, the Strike Price; and as of any Valuation Date during the Exercise Period, an amount (which may be a positive or negative number) determined as follows: (i) Strike Price **plus** (ii) Basket Base Performance **divided by** the Notional Amount and **multiplied by one hundred (100).**
Benchmark Index Level	As of any Valuation Date (i) Cumulative Benchmark Percentage **multiplied** by 100 **(ii) plus 100**

Barrier NAV Amount:	As of each Exchange Business Day during the Term of this Transaction, an amount equal to the Net NAV Amount **minus** the Total Amortized Premium.
Barrier NAV Index Level:	As of the Trade Date, the Strike Price; and as of any Valuation Date during the Exercise Period, an amount (which may be a positive or negative number) determined as follows: (i) Strike Price **plus** (ii) Barrier NAV Amount **divided by** the Notional Amount and **multiplied by one hundred (100)**
Settlement Price:	In connection with any exercise of this Option Transaction by Buyer the Share Pricing Method shall be the actual trade execution pricing for selling and/or acquiring the Shares composing the Trading Basket ("Share Execution Price").
Expiration Price:	91.00 Notwithstanding anything set forth herein to the contrary, if, at any time during the term of this Transaction, the Calculation Agent reasonably determines that the Barrier NAV Index Level is at or below 97.00 (the "Expiration Threshold Price") but above the Expiration Price, the Seller shall have the right to deliver to the Buyer an Early Expiration Notice (defined below) pursuant to the terms and conditions set forth herein.
Cash Settlement Amount:	With respect to a Valuation Date, the **greater of (1)** zero and (2) an amount, as calculated by the Calculation Agent, equal to the **sum of** (A)(i) Net NAV Index Level **minus** 100 (ii) **divided by** 100 (iii) **multiplied by** the Notional Amount **plus** (B) the Premium Settlement Amount (if any) (defined below).
Cash Settlement Payment Date:	With respect to an Exercise Date, or Early Termination Date, **three (3)** Exchange Business Days after the Final Valuation Date.
Adjustments For Potential Adjustment Events:	Calculation Agent Adjustment (as defined below)
Consequences of Merger Events:	Calculation Agent Adjustment (as defined below)
Nationalization or Insolvency:	Calculation Agent Adjustment (as defined below)
Calculation Agent Adjustment:	For purposes of Adjustments for Potential Adjustment Events, Consequences of Merger Events and Nationalization or Insolvency, all with respect to the relevant Shares composing the Basket from time to time, the Calculation Agent will make such adjustments to the Share price, the then applicable Basket Base Performance, the Net NAV Index Level and any other

variable relevant to the exercise, settlement or payment terms of the Transaction, as the Calculation Agent determines appropriate in its good faith commercially reasonable judgment, with reference (as deemed appropriate) to any relevant adjustment rules and precedents in effect for any primary options exchange for exchange-traded options contracts on the relevant affected Shares and in consultation with Party B.

Additional Terms – Early Expiration Event/Early Termination Event

The following additional terms shall apply to this Transaction.

1. General. This Transaction constitutes a Barrier Option. In addition, this Transaction will be deemed to have, and will, expire on the date and at the time on which a valid Early Expiration Notice, which is not subsequently revoked in accordance with the provisions set forth below, is promptly delivered to the Buyer by the Seller ("Early Termination Event" and "Early Termination Date", respectively).

Early Expiration Event. Notwithstanding anything set forth herein to the contrary, if, at any time during the term of this Transaction, the Calculation Agent reasonably determines that the Barrier NAV Index Level is less than or equal to the Expiration Threshold Price, an Early Expiration Event shall be deemed to have occurred.

Upon the occurrence of an Early Expiration Event, the Seller shall have the right, but not the obligation, to deliver to the Buyer, promptly after the occurrence of such Early Expiration Event, an Early Expiration Notice (defined below).

"Early Expiration Notice" shall mean a notice in the form of Annex II hereto, or other communication of the details included in the form attached hereto as Annex II, delivered by the Seller to the Buyer by telephone or facsimile communication as determined appropriate under the circumstances by Seller, whereby Seller has made its best efforts (i) to place such telephone call to Buyer and (ii) to transmit such Notice by facsimile communication and (iii) by e-mail, in all cases between the hours of 9 a.m. and 5 p.m. (New York time) on any Exchange Business Day and irrespective of whether such notice or communication is actually received by Buyer. **The Early Expiration Notice may be delivered prior to (but in immediate anticipation of) an Early Expiration Event and the Seller reserves the right to revoke such Early Expiration Notice (including any Buyer Termination Notice delivered in connection therewith) if the Calculation Agent determines that the Barrier NAV Index Level is above the Expiration Threshold Price; unless the Buyer has notified the Seller of its intention not to deliver the Buyer Termination Notice, in which case the Early Expiration Notice will remain in effect.**

If the Seller has delivered an Early Expiration Notice to the Buyer, the Buyer shall promptly (i) provide the Seller with a notice in the form specified in Annex III (the "Buyer Termination Notice") or (ii) inform the Seller of its intention not to provide the Seller with the Buyer Termination Notice.

If an Early Termination Event has occurred and the Buyer either fails promptly to act in accordance with the preceding paragraph or informs the Seller of its intention not to provide the Seller with the Buyer Termination Notice, the Seller shall, on the applicable Cash Settlement Payment Date, pay to the Buyer the Cash Settlement Amount, if any, in accordance with the Valuation and Settlement Terms set forth above for this Transaction.

If the Buyer delivers to the Seller the Buyer Termination Notice and such notice is not subsequently revoked in accordance with the provisions set forth above, (i) the Buyer (or an affiliate of the Buyer reasonably acceptable to the Seller) shall promptly sell and transfer to the Seller and the Seller shall acquire from the Buyer (or an affiliate of the Buyer reasonably acceptable to the Seller) shares in the absolute number and type corresponding to (A) the short positions included within the Trading Basket

Actual Short Positions, and (B) the short positions designated as the Trading Basket Synthetic Short Positions, at such time (the "Transferred Short Position Shares"), in consideration of the then current market value (as may be reasonably adjusted by the Calculation Agent) of such shares (the "Short Position Consideration" and the "Short Position Sale", respectively), (ii) simultaneously, the Seller shall promptly sell and transfer to the Buyer (or an affiliate of the Buyer reasonably acceptable to the Seller) and the Buyer (or an affiliate of the Buyer reasonably acceptable to the Seller) shall acquire from the Seller all of the long positions included within the Trading Basket Long Positions at the time of such transfer (the "Transferred Long Position Shares"), in consideration of an amount (the "Long Position Consideration") equal to the greater of (A) the sum of the respective market values (as may be reasonably adjusted by the Calculation Agent) of each of the Transferred Long Position Shares at the time transferred to the Buyer pursuant to this paragraph, and (B) the minimum amount that would have been received by the Seller upon a sale of all of the Transferred Long Position Shares that would cause the Barrier NAV Index Level to be equal, immediately following such sale, and assuming that the Short Position Sale were effected immediately prior to such sale, to the Expiration Price, and (iii) the Cash Settlement Amount will be computed based on the Short Position Consideration and the Long Position Consideration pursuant to subsections (i) and (ii) above, respectively.

2. Further Definitions:

"Premium Settlement Amount" means the original Premium **minus** the Total Amortized Premium **minus** **USD 100,000.00 (the advisory fee).**

"Total Amortized Premium" means the sum of the Amortized Daily Premium for each calendar day from but excluding the Trade Date to and including the **earliest of** any date of determination, the Exercise Date, the scheduled Expiration Date and/or the Early Termination Date.

"Amortized Daily Premium" means Amortizable Premium **divided** by the total number of days in the Exercise Period.

The Basket--

"Basket Base Performance" means the sum of (i) Basket Gains and Losses **plus** (ii) Basket Income and Expenses.

"Basket Gains and Losses" means (i) realized and unrealized gains in respect of the Shares composing the Basket from time to time **minus** (ii) realized and unrealized losses in respect of the Shares composing the Basket from time to time.

"Basket Income and Expenses" means (i) the sum of (A) dividend income (determined based on ex-dividend dates which have occurred within the Exercise Period) net of any tax withheld at source as a result of the occurrence of any of the events described in the "Additional Tax Event" provisions set forth below **plus** (B) interest income (on an accrual basis); **plus** (C) the product of (x) the Rebate Share Value **multiplied** by (y) either the Debit Rate less the applicable Spread (as specified in Schedule B below) in respect of the current Notional (as defined in Schedules A and B below) or, in the case of any Hard-to-Borrow Shares, the actual rebate rate received **plus** (D) Total Amortized Premium (as of any date of determination) **plus** (E) total interest income received and receivable at the Debit Rate **minus** 25 basis points (0.25%) on the Basket Credit Balance (as defined below) **minus** (ii) the sum of (A) total accrued and paid interest expense at the Debit Rate **plus** the applicable Spread (as specified in Schedule A below) in respect of the current Notional (from and including Trade Date to and including the relevant determination date) on the Basket Debit Balance (defined below) **plus** (B) Benchmark Funding Costs (defined below) **plus** (C) dividend costs (determined based on ex-dividend dates which have then occurred within the Exercise Period), net of any tax withheld at source as a result of the occurrence of any of the events described in the "Additional Tax Event" provisions set forth below **plus** (D) interest expenses excluding accrued interest expenses on Basket Debit Balance **plus** (E) other expenses enumerated in the Basket/Benchmark Performance Report.

"Basket/Benchmark Performance Report" means a periodic transaction report prepared and compiled by the Calculation Agent, based on transaction information and pricing received from the Investment Advisor setting forth (among other things) the Basket Base Performance, Benchmark Value and any Benchmark Share Recomposition for the relevant Valuation Date. The most current Basket Performance Report as of any date shall be available to Buyer upon request.

"Debit Rate" means as of any day the **FEDOPEN Rate** for such day (or if such day is not a Business Day as of the preceding Business Day) determined by reference to the **FEDOPEN Index** as published by the Federal Reserve and as disseminated via Bloomberg.

"Hard-to-Borrow Shares" means, as determined by the Calculation Agent, any Shares comprising the Basket from time to time for which the market rebate rate is lower than the normal rebate rate received on "general collateral" shares in connection with a theoretical stock borrow arrangement.

Funding Costs (All Funding Cost determinations shall be made on a Share "settlement date" basis) --

"Basket Debit Balance" means to the extent that the aggregate of: (i) "cost basis" of the Trading Basket Long Positions, **plus** (ii) cumulative realized losses on any Basket Shares, **minus** (iii) cumulative realized gains on any Basket Shares, **plus** (iv) the absolute value of the Rebate Share Value **minus** (v) the absolute value of the actual sale price(s) for the Synthetic Short Positions and the Actual Short Positions **exceeds** the Premium.

"Basket Credit Balance" means to the extent that the Premium **exceeds** the aggregate of: (i) "cost basis" of the Trading Basket Long Positions, **plus** (ii) cumulative realized losses on any Basket Shares, **minus** (iii) cumulative realized gains on any Basket Shares, **plus** (iv) the absolute value of the Rebate Share Value **minus** (v) the absolute value of the actual sale price(s) for the Synthetic Short Positions and the Actual Short Positions.

"Benchmark Funding Costs" means the **product of the Net Benchmark Cost Basis of all Benchmark Shares, from time to time, multiplied by 13 basis points per annum, calculated on an A/365 day basis.**

"Net Benchmark Cost Basis" means (i) the "cost basis" of all Benchmark Shares, from time to time, **minus** (ii) the actual sale price(s) of Basket Shares from time to time comprising the Trading Basket Synthetic Short Positions.

"Rebate Share Value" means (i) the market value from time to time of the Trading Basket Synthetic Short Positions **plus** (ii) the market value from time to time of the Trading Basket Actual Short Positions.

"Trading Basket Actual Short Position(s)" ("Actual Short Positions") means held as actual "short" positions in the Trading Basket from time to time.

"Trading Basket Synthetic Short Position(s)" ("Synthetic Short Positions") means those Basket Share positions from time to time in the Trading Basket which are so designated for purposes of determining applicable Funding Costs, which designation shall in no event imply that the particular Share position is actually held "short" in the Basket.

The Benchmark--Benchmark Shares--

"Benchmark Closing Value" means, as of any Valuation Date, the market value of the Benchmark Closing Shares (defined below)--including any non-reinvested cash proceeds relating to any liquidation of Benchmark Opening Shares (defined below) relating to such then current Valuation Date-- all as determined based on the then current Exchange Business Day closing prices, and any actual Share execution prices (including any Benchmark Share Recompositions) for all Share trades executed prior to the opening of trading on the relevant Exchange on the immediately following Valuation Date, in all cases using the Share Pricing Method set forth on Annex I hereto.

"Benchmark Opening Value" means the Benchmark Closing Value for the immediately preceding Valuation Date, with such adjustments as deemed appropriate by the Calculation Agent to take account of any Basket Share Recomposition.

"Benchmark Opening Shares" means, for purposes of calculating the Benchmark Opening Value on any Valuation Date, the Benchmark Closing Shares included in the calculation of the Benchmark Closing Value for the immediately preceding Valuation Date.

"Benchmark Closing Shares" means, for purposes of calculating the Benchmark Closing Value on any Valuation Date, the Benchmark Opening Shares, with such adjustments (additions and deletions) to reflect any Share trading activity for the daily period: (i) from and after the end of the determination period for calculating, the Benchmark Opening Value for such current Valuation Date, (ii) through the period ending immediately prior to the official scheduled opening of trading on the relevant Exchange on such current Valuation Date.

"Benchmark Value Change" ("Daily BVC") means, as determined as of any Valuation Date: (i) the Benchmark Closing Value **minus** the Benchmark Opening Value (ii) **plus** aggregate dividend amounts for any Benchmark Shares which have gone "ex dividend" on such Valuation Date.

"Benchmark Share Recomposition" means an election from time to time by the Investment Advisor (defined below) in consultation with the Calculation Agent to change the composition of the Benchmark Shares (through additions and/or deletions of Benchmark Shares). Any such Benchmark Recomposition may occur without the consent of the Buyer, provided that Seller shall give Buyer prior notice of such event, and each such Benchmark Recomposition shall be reflected in the Basket/Benchmark Performance Report.

"Cumulative Benchmark Value Change" ("Cumulative BVC") means, as determined as of any Valuation Date, the sum of all the Daily BVC values up to and including the relevant Valuation Date.

"Cumulative Benchmark Percentage" (or "Cumulative BP") means as determined as of each Valuation Date, the Cumulative BVC **divided** by the Notional Amount.

SCHEDULES --

For purposes of "Schedule A" and "Schedule B" below, the term "Notional" shall mean, as of the relevant date of determination, the aggregate sum of (1) the absolute value of the market value of positions held long and (2) the absolute value of the market value of positions held short, as determined by the Calculation Agent in respect of all transactions of a similar type to this Transaction (i.e., any Outperformance Barrier Option Transaction in respect of which the underlying Basket is managed by the same Investment Advisor as defined below) entered into between Buyer and Seller as of such relevant date of determination. The Spread in Schedule A and Schedule B may be adjusted from time to time by mutual consent of Party A and Party B, acting in good faith and in a commercially reasonable manner.

Schedule A (long)

Level	Notional	Spread
Level 1	Under 1 billion	30 basis points
Level 2	> = 1 billion < 1.5 billion	28 basis points
Level 3	> = 1.5 billion < 2 billion	25 basis points
Level 4	> = 2 billion	23 basis points

Schedule B (short)

Level	Notional	Spread
Level 1	Under 1 billion	30 basis points
Level 2	> = 1 billion < 1.5 billion	28 basis points
Level 3	> = 1.5 billion < 2 billion	25 basis points
Level 4	> = 2 billion	23 basis points

Additional Representations:

Buyer and Seller each make (and as indicated, Buyer makes) the following additional representations:

(i) it is entering into the Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise and no other person has an interest herein.

(ii) it has, in connection with the Transaction (a) the knowledge and sophistication to independently appraise and understand the financial and legal terms and conditions of the Transaction and to assume the economic consequences and risks thereof and has, in fact, done so as a result of arm's length dealings with the other party; (b) to the extent necessary, consulted with its own independent financial, legal or other advisors and has made its own investment, hedging and trading decisions in connection with the Transaction based upon its own judgment and the advice of such advisors and not upon any view expressed by the other party; (c) not relied upon any representation (whether written or oral) of the other party, other than the representations expressly set forth hereunder and is not in any fiduciary relationship with the other party; (d) not obtained from the other party (directly or indirectly through any other person) any advice, counsel or assurances as to the expected or projected success, profitability, performance, results or benefits of the Transaction; and (e) determined to its satisfaction whether or not the rates, prices or amounts and other economic terms of the Transaction and the indicative quotations (if any) provided by the other party reflect those in the relevant market for similar transactions.

(iii) it is not a private customer (as defined in the Rules of The Securities and Futures Authority).

(iv) it understands that the offer and sale of the Options(s) constituting the Transaction is intended to be exempt from registration under the US Securities Act of 1933, as amended (the "Securities Act"), by virtue of Section 4(2) thereof. In furtherance thereof, it represents and warrants that (a) it is experienced in investing in or otherwise entering into options and other financial instruments similar to the Transaction and has determined that the Transaction is a suitable investment for it, and (b) it is an institution which qualifies as an "accredited investor" or "qualified institutional buyer" as such terms are defined under relevant regulations promulgated under the Securities Act.

(v) Buyer understands and specifically acknowledges and agrees that the composition of the Basket and the Benchmark Shares as well as the Basket Base Performance and Benchmark Value Change (and Cumulative Benchmark Performance) shall be under the sole discretionary trading authority of **Renaissance Technologies Corp.** (the "Investment Advisor"), an investment advisor independent of Seller, which Investment Advisor will manage the composition of the Basket and the Benchmark Shares for the account of Seller from time to time pursuant to the Investment Objectives, Guidelines and Restrictions set forth in (and the further terms of) an Investment Advisory Agreement dated as of **March 14, 2002** between Seller (or its specified affiliate) and the Investment Advisor ("Advisor Agreement"). A copy of such Advisor Agreement has been previously made available to, and has been reviewed by, Buyer. Buyer has obtained all the information it desires regarding the Investment Advisor. Buyer agrees and acknowledges that neither Seller nor the Designated Agent take any responsibility for such information. The Buyer has made an independent judgment of the experience and expertise of the

Investment Advisor.

If Applicable: (vi) Buyer is a "foreign person" for purposes of Section 7701(a) of the Internal Revenue Code of 1986, as amended.

Additional Provisions:

Investment Advisor: Buyer acknowledges that the Investment Advisor has been engaged by Seller to manage the Basket on a discretionary basis for the account of Seller. While Seller shall in the normal course of its business review Investment Advisor's compliance with the Investment Objectives, Guidelines and Restrictions, Seller shall have no liability to Buyer – and Buyer hereby waives any rights of action against Seller – in connection with Investment Advisor's non-compliance with said Investment Objectives, Guidelines and Restrictions – or any other terms of the Advisor Agreement. Other than as provided above, Buyer agrees that it shall not contact directly the Investment Advisor regarding the terms or subject matter of this Transaction.

Tax Conditions

Change in Definition of Indemnifiable Tax: Solely for the purposes of this Transaction, the term Indemnifiable Tax will be defined to exclude any tax imposed on, any payment under this Transaction that is based on, related to, in respect of, or measured by, in whole or in part, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket.

Additional Tax Event: If during the term of the Transaction (and solely with respect to this Transaction), as a result of any event described in clauses (x) or (y) of Section 5(b)(ii) of the Agreement, Party A determines (in its sole good faith determination, with prompt notification to Party B) that it is under an obligation to withhold or remit any tax on account of, or relating to, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket (and in such circumstance will withhold or remit such tax as required), or otherwise receives dividends on such Shares net of withholding tax, due to the relationship between Party A and Party B as the respective Seller and Buyer under this Transaction, where such withholding or remittance would impact, directly or indirectly, the Net NAV Index Level, then Party B shall be the sole Affected Party.

GOVERNING LAW: THIS CONFIRMATION WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK (WITHOUT REFERENCE TO CHOICE OF LAW DOCTRINE).

The time of dealing will be confirmed by Party A upon written request.

Deutsche Bank AG, London Branch is regulated by the Securities and Futures Authority.

Account Details:

Payment to **Party A**:	The Bank of NY ABA 021-000-018 Account # 8900-353570 Account Deutsche Bank
Payment to **Party B**:	**[To be advised]**

Contact Particulars for Party A:

Confirmations: Telephone: Fax No.:	Tarana Oommen (212) 469-2786 (212) 469-5220
Payments/Fixings: Telephone: Fax No.:	Natalie Bates (212) 469-5862 (212) 469-4992
Basket Base Performance; Net NAV Index Levels; Basket Performance Reports: Telephone: Fax No.:	 Thomas E. Kerns/Vince Pfalzer (212) 469-4928 (212) 469-4994
Early Expiration Event/Notice: Telephone: Fax No.:	James Rowen/Julian Sale (212) 469-4990 (212) 469-4955

Contact Particulars for Party B:

Early Expiration Event/Notice:	Peter Brown Bob Mercer	Mike O'Rourke Mark Silber Carla Volpe Porter Bruce Yablon
Telephone: Fax:	(631) 444-7000 (631) 689-4495	(212) 486 -6780 (212) 758-7136
Basket Base Performance; Net NAV Index Levels; Basket Performance Reports: Telephone: Fax No.:	 Mike O'Rourke Scott Chinsky (212) 486-6780 (212) 486-7291	
Confirmations: Telephone: Fax No.:	Mark Silber / Carla Volpe Porter / Bruce Yablon (212) 486-6780 (212)758-7136	

Each Party has agreed to make payments to the other in accordance with this Confirmation. Please confirm that the foregoing correctly sets forth the terms of our agreement by sending a return executed acknowledgment hereof to such effect to the attention of **Tarana Oommen, Structured Equities Group (Fax No. (212) 469-5220)**.

We are very pleased to have concluded this Transaction with you.

Regards,

DEUTSCHE BANK AG LONDON

By:
Name: ~~James Rowen~~ Julian Sale
Title: Attorney-in-Fact

By:
Name: Tarana Oommen
Title: Attorney-in-Fact

Reviewed By:

KA
Keith Angell

Julian Sale

DEUTSCHE BANK SECURITIES INC.,
acting solely as Agent in connection with this Transaction

By:
Name: ~~James Rowen~~ Julian Sale
Title: Managing Director

By:
Name: Tarana Oommen
Title: Vice President

Confirmed and Acknowledged as of the date first above written:

FRANCONIA EQUITIES LTD.

By:
Name: MARK SYLBER
Title: DIRECTOR

MOSEL EQUITIES L.P.

LIMITED PARTNERSHIP AGREEMENT

October 26, 2007

TABLE OF CONTENTS

MOSEL EQUITIES L.P.

LIMITED PARTNERSHIP AGREEMENT

This Limited Partnership Agreement is made effective as of the 26th day of October, 2007 by and among the person whose name is subscribed at the end hereof as general partner and those persons whose names are subscribed at the end hereof as limited partners.

ARTICLE I.

DEFINITIONS

For purposes of this Agreement:

"Act" means the Delaware Revised Uniform Limited Partnership Act, as in effect on the date hereof, and as amended from time to time, or any successor law.

"Agreement" means this Limited Partnership Agreement, as amended from time to time.

"Capital Account" means with respect to each Partner the capital account established and maintained on behalf of such Partner as described in Section 3.3.

"Certificate" means the certificate of limited partnership referred to in Section 2.1.

"Code" means the Internal Revenue Code of 1986, as amended and as hereafter amended, or any successor law.

"Fiscal Period" means the period which starts on October 26, 2007 and thereafter each period which starts on the day immediately following the last day of the preceding Fiscal Period, and which ends on the first to occur of (a) the last day of any fiscal quarter, or (b) any other date as of which any withdrawal or distribution of capital is made by or to any Partners or as of which a contribution to capital is accepted by the Partnership from any new or existing Partner, other than any withdrawal, distribution or contribution which does not result in any change of any Partner's Partnership Percentage.

"Fiscal Year" means each period commencing on January 1 of each year and ending on December 31 of each year (or on the date of a final distribution pursuant to Section 6.1(a)(iii)), unless the General Partner shall elect another fiscal year for the Partnership which is a permissible tax year under the Code.

"General Partner" means Renaissance Technologies LLC, a corporation organized under the laws of the State of Delaware, or any successor to the business of the General Partner.

"Limited Partner" means each of Medallion Fund L.P., Medallion Associates L.P., Medallion International Ltd., Medallion USA L.P., Medallion Capital Investments Ltd. and Medallion RMP Fund L.P., and any other person executing this Agreement as a Limited Partner until the entire limited partnership interest of any such person has been withdrawn pursuant to Section 5.5 or a substitute Limited Partner or Partners are admitted with respect to such person's entire limited partnership interest.

"Net Assets" means the total value, as determined by the General Partner in accordance with Section 7.2, of all assets of the Partnership (including any net unrealized appreciation or depreciation of securities held directly by the Partnership and accrued interest and dividends receivable net of withholding taxes), less an amount equal to all accrued debts, liabilities and obligations of the Partnership (including any reserves for contingencies established by the General Partner.

"Net Loss" means the excess of the Net Assets on the first day of a Fiscal Period over the Net Assets on the last day of the same Fiscal Period, after excluding in each case the effects of additional capital contributions, withdrawals or distributions during the period.

"Net Profit" means the excess of the Net Assets on the last day of a Fiscal Period over the Net Assets on the first day of the same Fiscal Period, after excluding in each case the effects of additional capital contributions, withdrawals or distributions during the period.

"Partner" means the General Partner or any of the Limited Partners, except as otherwise expressly provided herein, and "Partners" means the General Partner and all of the Limited Partners.

"Partnership" means the limited partnership governed by this Agreement.

"Partnership Percentage" means a percentage established for each Partner on the Partnership's books as of the first day of each Fiscal Period. The Partnership Percentage of a Partner for a Fiscal Period shall be determined by dividing the amount of the Partner's Capital Account as of the beginning of the Fiscal Period (after adjustment for any contributions to the capital of the Partnership which are effective on such date) by the sum of the Capital Accounts of all of the Partners as of the beginning of the Fiscal Period (after adjustment for any contributions to the capital of the Partnership which are effective on such date). The sum of the Partnership Percentages of all Partners for each Fiscal Period shall equal one hundred percent (100%).

ARTICLE II.

ORGANIZATION

2.1 Formation of Limited Partnership.

(a) The Certificate of Limited Partnership was filed with the Secretary of State of Delaware and the Partnership formed under and pursuant to the Act on October 26, 2007.

(b) The General Partner shall execute, acknowledge and file any amendments to the Certificate as may be required by the Act and any other instruments, documents and certificates which, in the opinion of the Partnership's legal counsel, may from time to time be required by the laws of the United States of America, the State of Delaware or any other jurisdiction in which the Partnership shall determine to do business, or any political subdivision or agency thereof, or which such legal counsel may deem necessary or appropriate to effectuate, implement and continue the valid and subsisting existence and business of the Partnership. Any required amendment to the Certificate shall be filed by the General Partner promptly following the event requiring said amendment. All amendments may be signed either personally or by an attorney-in-fact.

2.2 Name of Partnership.

The name of the Partnership shall be Mosel Equities L.P. or such other name as the General Partner may hereafter adopt upon causing an amendment to the Certificate to be filed with the Secretary of State of the State of Delaware. The Partnership shall have the exclusive ownership and right to use the Partnership name so long as the Partnership continues, despite the withdrawal, expulsion, resignation or removal of any Partner, but upon the Partnership's termination, the Partnership shall assign such name and the goodwill attached thereto to the General Partner.

2.3 Registered Office and Agent.

The Partnership shall have its registered office at 1209 Orange Street, City of Wilmington, County of New Castle or at such other place as the General Partner may designate from time to time, and its initial registered agent in Delaware shall be Corporation Trust Company.

2.4 Objectives of Partnership.

The objectives of the Partnership shall be to purchase, sell (including short sales), invest, trade and deal in securities and other financial instruments, including options or other derivative instruments, and to engage in financial transactions relating thereto.

2.5 Actions by Partnership.

The Partnership may execute, deliver and perform all contracts, agreements and other undertakings and engage in all activities and transactions as may in the opinion of the General Partner be necessary or advisable to carry out the foregoing objectives.

ARTICLE III.

CAPITAL

3.1 Contributions to Capital.

(a) The General Partner may permit any Partner, including any additional Partner admitted pursuant to Section 5.1, to make additional capital contributions. No other contribution to the capital of the Partnership may be made by any Partner unless such contribution shall have been approved in advance in writing by the General Partner.

(b) Except as otherwise permitted by the General Partner, all contributions to the capital of the Partnership by any Partner shall be payable in cash or in such securities which the General Partner may agree to accept on behalf of the Partnership.

3.2 Rights of Partners in Capital.

(a) No Partner shall be entitled to interest on his contributions to the capital of the Partnership.

(b) No Partner shall have the right to distributions or the return of any contribution to the capital of the Partnership except (i) upon withdrawal of such Partner pursuant to Section 5.5, (ii) upon the dissolution of the Partnership pursuant to Section 6.1 or (iii) as provided in Section 3.6. The entitlement to any such return at such time shall be limited to the value of the Capital Account of the Partner. The General Partner shall not be liable for the return of any such amounts.

3.3 Capital Accounts.

(a) The Partnership shall maintain a separate Capital Account for each Partner.

(b) Each Partner's Capital Account shall have an initial balance equal to the amount of cash and the value of any securities constituting such Partner's initial contribution to the capital of the Partnership.

(c) Each Partner's Capital Account shall be increased by the sum of (i) the amount of any additional contributions by such Partner to the capital of the Partnership pursuant to Section 3.1, plus (ii) the portion of any Net Profit allocated to such Partner's Capital Account pursuant to Section 3.4.

(d) Each Partner's Capital Account shall be reduced by the sum of (i) the amount of any withdrawals or distributions to such Partner pursuant to Sections 3.6, 5.5 or 6.1, plus (ii) the portion of any Net Loss allocated to such Partner's Capital Account pursuant to Section 3.4.

3.4 Allocation of Net Profit and Net Loss.

As of the last day of each Fiscal Period, any Net Profit or Net Loss for the Fiscal Period shall be allocated among and credited to or debited against the Capital Accounts of the Partners in proportion to their respective Partnership Percentages for the Fiscal Period.

3.5 Allocations for Income Tax Purposes.

In each Fiscal Year, items of income, deduction, gain, loss or credit that are recognized for income tax purposes shall be allocated among the Partners, General and Limited, in such manner as to reflect equitably amounts credited to or debited against each Partner's Capital Account, whether in such Fiscal Year or in prior Fiscal Years. To this end, the Partnership shall establish and maintain records which shall show the extent to which the Capital Account of each Partner shall, as of the last day of each Fiscal Year, be comprised of amounts which have not been reflected in the taxable income of such Partner. To the extent deemed by the General Partner to be feasible and equitable, taxable income and gains in each Fiscal Year shall be allocated among the Partners who have enjoyed the related credits, and items of deduction, loss and credit in each Fiscal Year shall be allocated among the Partners who have borne the burden of the related debits. Taxable gain or loss realized from the sale of securities which were contributed in kind by a Partner (other than gain which was recognized by such contributing Partner upon such contribution pursuant to Section 721(b) of the Code) shall be allocated to the contributing Partner to the extent required under Section 704(c) of the Code and the regulations promulgated thereunder.

3.6 Distributions.

The General Partner may make distributions in its discretion. All distributions pursuant to this Section 3.6 shall be made to the Partners pro rata in proportion to their Partnership Percentages.

ARTICLE IV.

MANAGEMENT

4.1 Rights, Duties and Powers of the General Partner.

(a) Subject to the terms and conditions of this Agreement, the General Partner shall have complete and exclusive responsibility for managing and administering the affairs of the Partnership, and shall have the power and authority to do all things necessary or proper to carry out its duties hereunder.

(b) Without limiting the generality of the General Partner's duties and obligations hereunder, the General Partner shall have full power and authority:

(i) to open, maintain and close bank accounts and custodial accounts for the Partnership and draw checks and other orders for the payment of money;

(ii) to receive from Partners contributions to the capital of the Partnership;

(iii) to pay all expenses relating to the organization of the Partnership.

(iv) to engage such attorneys, accountants and other professional advisers and consultants as the General Partner may deem necessary or advisable for the affairs of the Partnership;

(v) to maintain the books and records of the Partnership, and cause to be prepared an annual audited balance sheet and income statement and periodic unaudited financial statements;

(vi) to disburse payments or distributions to Partners and to third parties to pay the expenses of the Partnership and as otherwise provided for in this Agreement;

(vii) to commence or defend litigation that pertains to the Partnership or any Partnership assets;

(viii) to cause the Partnership, if and to the extent the General Partner deems such insurance advisable, to purchase or bear the cost of any insurance covering the potential liabilities of the Partnership, the General Partner and their partners, officers, employees and agents;

(ix) in the normal course of the Partnership's business and for any Partnership purpose, including without limitation payment of the Partnership's operating expenses, to cause the Partnership to borrow money and make, issue, accept, endorse and execute promissory notes, drafts, bills of exchange, guarantees and other instruments and evidences of indebtedness, and secure the payment thereof by mortgage, pledge or assignment of or security interest in all or any part of the securities and other property then owned or thereafter acquired by the Partnership; and

(x) subject to the other terms and provisions of this Agreement, to execute, deliver and perform such contracts, agreements and other undertakings, and to engage in all activities and transactions, as it may deem necessary or advisable for, or as may be incidental to, the conduct of the business contemplated by this Section 4.1, including, without in any manner limiting the generality of the foregoing, contracts, agreements, undertakings and transactions with any Partner or with any other person, firm or corporation having any business, financial or other relationship with any Partner or Partners.

(c) The General Partner shall be the tax matters partner for purposes of Section 6231(a)(7) of the Code. Each Partner agrees not to treat, on its personal U.S. federal income tax return or in any claim for a refund, any item of income, gain, loss, deduction or credit in a manner inconsistent with the treatment of such item by the Partnership. The General Partner shall have the exclusive authority and discretion to make any elections required or permitted to be made by the Partnership under any provisions of the Code or any other revenue laws.

4.2 Investment Management.

(a) The General Partner shall have complete and exclusive responsibility for all investment and investment management decisions to be undertaken on behalf of the Partnership and shall have the power and authority to do all things necessary or proper to carry out its duties hereunder.

(b) Without limiting the generality of the General Partner's duties and obligations hereunder, the General Partner shall have full power and authority, at the expense of the Partnership:

(i) to purchase, sell, exchange, lend, trade and otherwise deal in and with investments and other property of the Partnership;

(ii) to make all decisions relating to the manner, method and timing of investment and trading transactions, to select brokers for the execution, clearance and settlement of any transactions (including, subject to applicable federal securities laws, principal and agency cross transactions with one or more brokers) on such terms as the General Partner considers appropriate, and to grant limited discretionary authorization to such persons with respect to price, time and other terms of investment and trading transactions;

(iii) to make all decisions relating to the investment of Partnership assets in other investment vehicles (including entities managed or advised by an affiliate of the General Partner) on such terms as the General Partner considers appropriate;

(iv) to cause investments owned by the Partnership to be registered in the Partnership's name, in the name of a nominee or other fiduciary, or to be held in street name in a Partnership account, as the General Partner, in its sole discretion, shall determine;

(v) to trade on margin, to borrow from banks or other financial institutions, and to pledge Partnership assets as collateral therefor;

(vi) to enter into repurchase agreements, reverse repurchase agreements, short sales, or other such arrangements with respect to Partnership assets;

(vii) to open and maintain bank accounts and brokerage accounts on behalf of the Partnership and to pay the customary fees and charges applicable to transactions in all such accounts;

(viii) to arrange for the custody of portfolio securities and other assets acquired or held on behalf of the Partnership, to direct custodians to deliver funds or Investments for the purpose of effecting transactions, and to instruct custodians to exercise or abstain from exercising any right or privilege attaching to assets; and

(ix) to engage (directly or indirectly through investments in pooled investment vehicles) investment managers and other financial advisors and consultants as the General Partner may deem necessary or advisable in connection with the investment activities of the Partnership and to compensate such persons for their services from the assets and/or profits of the Partnership.

(c) In the course of selecting brokers for execution, clearance and settlement of transactions for the Partnership, the General Partner may agree to such commissions, fees and other charges on behalf of the Partnership as it shall deem reasonable in the circumstances, taking into account all such factors as it deems relevant and proper under the circumstances, including the value of any products or services (as described by the General Partner in written disclosures to Limited Partners from time to time, as the same may be modified from time to time) provided by the broker or paid for by the broker (either by direct or reimbursement payments or by commissions, or by mark-ups or credits, or by any other means), whether within or without the safe-harbor of Section 28(e) under the Securities Exchange Act of 1934; it being understood that, none of such products or services need to be for the benefit or exclusive benefit of the Partnership, the cost of the services of the broker (*e.g.*, commissions) related to such products or services need not represent the lowest cost available, the Broker shall be under no obligation to combine or arrange orders so as to obtain reduced charges, and that all of the foregoing is subject to any more limiting or expansive written disclosures given to Limited Partners by the General Partner from time to time, as the same may be modified from time to time.

4.3 Delegation of Duties

(a) The General Partner may delegate to any person or persons any of the duties, powers and authority vested in it hereunder on such terms and conditions as it may consider appropriate.

4.4 Rights of Limited Partners.

Except as otherwise provided in this Agreement, the Limited Partners shall take no part in the management or control of the Partnership's business. Limited Partners shall have no right or authority to act for the Partnership or to vote on matters other than the matters set forth in this Agreement or as required by applicable law. Except as otherwise provided by law, the liability of each Limited Partner is limited to the amount of his capital contributions (plus any accretions in value thereto prior to withdrawal).

4.5 Other Activities of Partners.

(a) The General Partner shall not be required to devote full time to the affairs of the Partnership, but shall devote such time as may be reasonably required therefor.

(b) Each Partner agrees that any other Partner (and any partner, director, officer, shareholder, affiliate or employee of any Partner) may engage in or possess an interest in other business ventures or commercial dealings of every kind and description, independently or with others, including, but not limited to, management of other accounts, investment in, or financing, acquisition and disposition of, securities, investment and management counseling, brokerage services, serving as director, officer, adviser or agent of any other company, partner of any partnership, or trustee of any trust, or entering into any other commercial arrangements, whether or not any such activities may conflict with any interest of the parties with respect to the Partnership. The Partners expressly agree that neither the General Partner nor the Limited Partners shall have any rights in or to such activities, or any profits derived therefrom, as a result of this Agreement. Without in any way limiting the foregoing, each Partner hereby acknowledges that: (i) neither the General Partner, any Limited Partners, nor their respective partners, directors, officers, shareholders, affiliates or employees shall have any obligation or responsibility to disclose or refer any of the investment or other opportunities obtained through activities contemplated by this Section 4.5(b) to the General Partner or the Limited Partners, but may refer the same to any other party or keep such opportunities for their own benefit; and (ii) the General Partner, the Limited Partners and their respective partners, directors, officers, shareholders, affiliates and employees are hereby authorized to engage in activities contemplated by this Section 4.5(b) with, or to purchase, sell or otherwise deal or invest in securities issued by, companies in which the Partnership might from time to time invest or be able to invest or otherwise have any interest in, without the consent or approval of the Partnership or any other Partner.

(c) The parties hereto hereby waive, and covenant not to sue on the basis of, any law (statutory, common law or otherwise) respecting the rights and obligations of the Partners *inter se* which is or may be inconsistent with this Section 4.5.

4.6 Duty of Care; Indemnification.

(a) Neither the General Partner nor its officers, directors, employees, shareholders, or affiliates shall be liable, responsible or accountable in damages or otherwise to the Partnership or any of its Partners, successors, assignees or transferees for any loss or damage occasioned by any acts or omissions in the performance of its services under this Agreement, unless such loss or damage is due to the gross negligence, fraud, recklessness or willful misconduct of the General Partner or its respective officers, directors, employees, shareholders, or affiliates. Moreover, neither the General Partner, nor its officers, directors, employees, shareholders, or affiliates, shall have any liability to the Partnership or any of its Partners, successors, assignees or transferees for any losses or damages suffered due to the action or inaction of any agent retained by the Partnership, whether through negligence, dishonesty or otherwise, provided that the agent was selected by the General Partner without gross negligence, fraud, recklessness or willful misconduct or as otherwise required by law. The General Partner may consult with counsel and accountants in respect of the Partnership's affairs and be fully protected and justified in any action or inaction which is taken in accordance with the advice or opinion of such persons, provided that they were selected with reasonable care.

(b) The General Partner (which shall include for this purpose each director, officer, employee or agent of, or any person who controls, the General Partner, and their executors, heirs, assigns, successors or other legal representatives) shall be indemnified to the full extent permitted by law by the Partnership (but not the Partners individually) against any cost, expense (including attorneys' fees), judgment or liability reasonably incurred by or imposed upon it in connection with any action, suit or proceeding (including any proceeding before any administrative or legislative body or agency) to which it may be made a party or otherwise be involved or with which it shall be threatened by reason of being or having been the General Partner; provided, however, that the General Partner shall not be so indemnified to the extent such cost, expense, judgment or liability shall have been finally determined in a decision on the merits in any such action, suit or proceeding to have been incurred or suffered by the General Partner by reason of willful misfeasance, bad faith, gross negligence, or reckless disregard of the duties involved in the conduct of the General Partner's office. The right to indemnification granted by this Section 4.6 shall be in addition to any rights to which the General Partner may otherwise be entitled and shall inure to the benefit of the successors or assigns of such General Partner. The Partnership shall pay the expenses incurred by the General Partner in defending a civil or criminal action, suit or proceeding in advance of the final disposition of such action, suit or proceeding, upon receipt of an undertaking by the General Partner to repay such payment if there shall be an adjudication or determination that it is not entitled to indemnification as provided herein. The General Partner may not satisfy any right of indemnity or reimbursement granted in this Section 4.6 or to which it may be otherwise entitled except out of the assets of the Partnership, and no Partner shall be personally liable with respect to any such claim for indemnity or reimbursement. The General Partner may obtain appropriate insurance on behalf of the Partnership to secure the Partnership's obligations hereunder.

(c) All rights to indemnification permitted in this Agreement and payment of associated expenses shall not be affected by the termination and dissolution of the Partnership or the removal, withdrawal, insolvency, bankruptcy, termination, or dissolution of the General Partner or Limited Partners.

ARTICLE V.

ADMISSIONS, TRANSFERS AND WITHDRAWALS

5.1 Admission of Limited Partners.

The General Partner may admit additional Limited Partners at any time, in which event the required capital contribution of any such additional Limited Partner shall be determined by the General Partner, subject to Section 3.1(b).

5.2 Admission of Additional General Partner.

The General Partner may admit one or more additional general partners, who may be natural persons, partnerships or companies, to the Partnership only if such action is approved by the affirmative vote of all Limited Partners.

5.3 Transfer of Interests of Limited Partners.

No transfer or assignment of, or pledge of or grant of a security interest in, any Limited Partner's interest in the Partnership, whether voluntary or involuntary, shall be valid or effective, and no transferee shall become a substituted Limited Partner, unless the prior written consent of the General Partner has been obtained, which consent may be granted or refused in its sole discretion. Until approved by the General Partner, any successor to the interest of a Limited Partner shall be entitled to the allocations and distributions attributable to such interest and to withdraw such interest as provided in Section 5.5 but shall not have any of the other rights of a Limited Partner.

5.4 Transfer of Interest of General Partner.

The General Partner may not transfer its interest as General Partner in the Partnership other than with the approval of all of the Limited Partners.

5.5 Withdrawal of Interests of Partners.

(a) The interest of a Partner in the Partnership may not be withdrawn from the Partnership prior to its dissolution except (i) in whole or in part effective as of the end of any Fiscal Year upon at least ninety (90) days written notice to the General Partner or (ii) with the prior written consent of the General Partner.

(b) The General Partner may at any time require any Partner to withdraw from the Partnership in whole or in part.

(c) A withdrawing Partner shall be entitled to receive the balance of such Partner's Capital Account as of the date of withdrawal, which shall be paid to the withdrawing Partner, at the election of the General Partner, either (i) without interest within ninety (90) days after the effective date of withdrawal, or (ii) with interest at the London Interbank Offered Rate for thirty (30) day deposits of $1,000,000 as quoted in The Wall Street Journal from the effective date of the withdrawal until paid, in equal annual installments over a period of not more than three (3) years from the date of withdrawal. A withdrawn Partner shall not share in the income, gains and losses of the Partnership or have any other rights as a Partner after the effective date of the withdrawal except as provided in this Section 5.5(c).

ARTICLE VI.

LIQUIDATION

6.1 Liquidation of Partnership Assets.

(a) Upon dissolution of the Partnership, the General Partner shall promptly liquidate the business and administrative affairs of the Partnership, except that if the General Partner is unable to perform this function, a liquidator elected by Limited Partners whose Partnership Percentages represent more than fifty percent (50%) of the aggregate Partnership Percentages of all Limited Partners shall liquidate the business and administrative affairs of the Partnership. Net Profit and Net Loss during the Fiscal Periods which include the period of liquidation shall be allocated pursuant to Article III. The proceeds from liquidation shall be divided in the following manner:

(i) the debts, liabilities and obligations of the Partnership, other than debts to Partners, and the expenses of liquidation (including legal and accounting expenses incurred in connection therewith), up to and including the date that distribution of the Partnership's assets to the Partners has been completed, shall first be paid;

(ii) such debts as are owing to the Partners shall next be paid; and

(iii) the Partners shall next be paid amounts pro rata in accordance with, and up to the positive balances of their respective Capital Accounts, as adjusted pursuant to Article III to reflect allocations for the Fiscal Period ending on the date of the distributions under this Section 6.1(a)(iii).

(b) Anything in this Section 6.1 to the contrary notwithstanding, the General Partner or liquidator may distribute ratably in-kind rather than in cash, upon dissolution, any assets of the Partnership; provided, however, that if any in-kind distribution is to be made, (i) the assets distributed in kind shall be valued by the General Partner in good faith as of the actual date of their distribution, and charged as so valued and distributed against amounts to be paid under Section 6.1(a) above, and (ii) any gain or loss (as computed for book purposes) attributable to property distributed in-kind shall be included in the Net Profit or Net Loss for the Fiscal Period ending on the date of such distribution.

ARTICLE VII.

ACCOUNTING AND VALUATIONS; BOOKS AND RECORDS

7.1 Accounting and Reports.

(a) The Partnership may adopt for tax accounting purposes any accounting method which the General Partner shall decide in its sole discretion is in the best interests of the Partnership and which is permissible for U.S. federal income tax purposes.

(b) As soon as practicable after the end of each taxable year, the General Partner shall furnish to each Limited Partner such information as may be required to enable each Limited Partner properly to report for federal and state income tax purposes his distributive share of each Partnership item of income, gain, loss, deduction or credit for such year.

7.2 Determinations by General Partner.

(a) All matters concerning the determination and allocation among the Partners of the amounts to be determined and allocated pursuant to Section 3.4 hereof, and the items of income, gain, deduction, loss and credit to be determined and allocated pursuant to Section 3.5 hereof, including any taxes thereon and accounting procedures applicable thereto, shall be determined by the General Partner unless specifically and expressly otherwise provided for by the provisions of this Agreement, and such determinations and allocations shall be final and binding on all the Partners.

(b) The General Partner may make such adjustments to the computation of Net Profit or Net Loss, or any component items comprising either of the foregoing, as it considers appropriate to reflect fairly and accurately the financial results of the Partnership and the intended allocation thereof among the Partners.

7.3 Books and Records.

The General Partner shall keep books and records pertaining to the Partnership's affairs showing all of its assets and liabilities, receipts and disbursements, realized income, gains and losses, Partners' Capital Accounts and all transactions entered into by the Partnership. Such books and records of the Partnership shall be kept at its principal office, and all Partners and their representatives shall at all reasonable times have free access thereto for the purpose of inspecting or copying the same.

ARTICLE VIII.

GENERAL PROVISIONS

8.1 Amendment of Partnership Agreement.

(a) This Agreement may be amended, in whole or in part, only with the written consent of (i) the General Partner and (ii) all of the Limited Partners.

8.2 Notices.

Notices which may or are required to be given under this Agreement by any party to another shall be given by hand delivery or by registered or certified mail, return receipt requested, and shall be addressed to the respective parties hereto at their addresses as set forth on Exhibit A hereto or to such other addresses as may be designated by any party hereto by notice addressed to the General Partner in the case of notice given by any Limited Partner, and to each of the Limited Partners in the case of notice given by the General Partner. Notices shall be deemed to have been given when delivered by hand or on the date indicated as the date of receipt on the return receipt.

8.3 Agreement Binding Upon Successors and Assigns.

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, but the rights and obligations of the General Partner hereunder shall not be assignable, transferable or delegable except as provided in Sections 5.2 and 5.4, and any attempted assignment, transfer or delegation thereof which is not made pursuant to the terms of Section 5.2 or Section 5.4 shall be void.

service of process in any action arising out of this Agreement by the mailing thereof by registered or certified mail, return receipt requested, to such Partner's address set forth in the Schedule of Partners. In any action to enforce any provision of this Agreement, the prevailing party shall be entitled to recover all expenses, including reasonable attorneys fees, incurred in connection therewith.

8.5 Not for Benefit of Creditors.

The provisions of this Agreement are intended only for the regulation of relations among Partners and between Partners and former or prospective Partners and the Partnership. This Agreement is not intended for the benefit of non-Partner creditors and no rights are granted to non-Partner creditors under this Agreement.

8.6 Consents.

Any and all consents, agreements or approvals provided for or permitted by this Agreement shall be in writing and a signed copy thereof shall be filed and kept with the books of the Partnership.

8.7 Miscellaneous.

(a) The captions and titles preceding the text of each Section hereof shall be disregarded in the construction of this Agreement.

(b) This Agreement may be executed in counterparts, each of which shall be deemed to be an original hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

GENERAL PARTNER:

RENAISSANCE TECHNOLOGIES LLC.

By: ______________________
MARK SILBER
VICE PRESIDENT

LIMITED PARTNERS:

MEDALLION FUND L.P.
By: Renaissance Technologies LLC.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION ASSOCIATES L.P.
By: Renaissance Technologies LLC.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION USA L.P.
By: Renaissance Technologies LLC.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION RMP FUND L.P.
By: Renaissance Technologies LLC.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION INTERNATIONAL LTD.

By: ______________________
Mark Silber, Director

MEDALLION CAPITAL INVESTMENTS, LTD.

By: ______________________
Mark Silber, Director

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EXHIBIT A

Addresses of Partners for Notices

Partner	Address
Medallion Fund L.P.	c/o Renaissance Technologies LLC. 800 Third Avenue New York, New York 10022
Medallion Associates L.P.	c/o Renaissance Technologies LLC. 800 Third Avenue New York, New York 10022
Medallion USA L.P.	c/o Renaissance Technologies LLC. 800 Third Avenue New York, New York 10022
Medallion RMP Fund L.P.	c/o Renaissance Technologies LLC. 800 Third Avenue New York, New York 10022
Medallion International Ltd.	c/o MQ Services Ltd. Chancery Hall, 52 Reid Street Hamilton HM12, Bermuda
Medallion Capital Investments Ltd.	c/o MQ Services Ltd. Chancery Hall, 52 Reid Street Hamilton HM12, Bermuda

Execution Copy

AMENDED & RESTATED INVESTMENT ADVISORY AGREEMENT

AGREEMENT dated as of **November 16, 2007** (the "Agreement") between **Deutsche Bank AG London** (the "Client"), and **Renaissance Technologies LLC (f/k/a Renaissance Technologies Corp.)** (the "Advisor").

In consideration of the premises and mutual promises hereinafter set forth, the parties hereto agree as follows:

1. Appointment of the Advisor.

(a) Client hereby appoints the Advisor as the exclusive manager of a separately managed account containing a designated portion of the Client's proprietary portfolio (the "*Account*") upon the terms hereinafter contained and in accordance with Client's investment guidelines and restrictions until its appointment shall be terminated as hereinafter provided, and the Advisor hereby accepts such appointment and agrees to assume the obligations and duties set forth herein. Client's Investment Guidelines and Restrictions are as set forth on Appendix I hereto, as may be subsequently amended from time to time by written agreement between Client and the Advisor (the "Investment Guidelines"). The Account may be divided into one or more sub-accounts (each, a "Sub-Account") and Appendix I hereto shall provide for the percentage allocation applicable to each such Sub-Account (allowing for fractional investments), *provided that* any new Sub-Account shall only be included in the Account at the request of the Client. Each Sub-Account may be further sub-divided into (i) one or more "Trading Accounts" where the rate of interest on borrowed funds shall be set daily (the "Floating Rate") and (ii) one or more "Term Accounts" where the rate of interest on borrowed funds shall be a non-Floating Rate. Upon the establishment or liquidation of any Sub-Account, Client shall amend Appendix I so as to: (i) include, if appropriate, specific Investment Guidelines with respect to the Sub-Accounts then included in the Account; and (ii) re-allocate the percentages applicable to all Sub-Accounts in the Account at that time. Furthermore, the Advisor shall, at its discretion, allocate the investments within each Sub-Account to Trading Accounts and Term Accounts (allowing for fractional investments), provided that such allocation of investments to Trading Accounts and Term Accounts will be effected in the same manner in respect of all then outstanding Sub-Accounts.

(b) The fees and compensation of the Advisor for the performance of its duties under this Agreement ("*Advisor Fees*") are as set forth in the Fee Letter entered into between Advisor and Client attached hereto as Appendix II. The terms and provisions of such Fee Letter are incorporated herein by reference.

(c) Until the termination of this Agreement, the Client shall ensure, whether by obtaining credit or making cash deposits to the Account, that the assets and credit available in the Account shall at all times be sufficient to permit the Advisor to trade on behalf of the Client up to the limits contemplated by the Investment Guidelines.

(d) Nothing in this Agreement shall be deemed or construed to convey to Advisor an ownership interest in the Account.

2. Functions, Powers, Duties and Obligations of the Advisor.

During the continuance of its appointment the Advisor shall, subject to compliance with the Investment Guidelines, have full power, authority and right to:

a) supervise and direct the investment and reinvestment of all assets in the Account, and engage in such transactions on behalf of the Client's Account as appropriate, in Advisor's discretion and without prior consultation with the Client, subject only to the terms of this Agreement, in any and all forms of securities or other property, including, without limitation, derivatives, options, futures and commodities, as permitted by the Investment Guidelines; provided, however, that at any time the Client may reject the purchase or sale of certain securities directed for investment to the Account by the Advisor prior to the actual execution thereof, but all transactions so directed to the Account by the Advisor (whether or not actually executed) shall be referred to as "Designated Positions". For purposes of determining the performance of the Account, any Sub-Account or any Designated Positions, the prices of transactions in securities not actually executed will be within market parameters, if applicable, based on the time such transaction would have been executed had they not been rejected by the Client.

b) hold temporary cash balances in the Account or invest such temporary cash balances in money market funds or comparable short-term investments as specifically directed by the Client, with interest thereon credited to the Account;

c) prepare or procure the preparation of reports on the Account's investment performance and such other matters, as further provided herein;

d) select and place orders with brokers and dealers to execute Account transactions, as further provided herein; and

e) provide such other services in connection with the management of the Account by mutual consent of the Client and the Advisor.

The Advisor shall keep or cause to be kept on behalf of the Client's Account such books, records, statements and accounts as may be necessary to evidence a complete record of all transactions carried out by the Advisor for the Account; and shall permit the Client and its employees and agents to inspect such books, records and statements at all reasonable times.

In exercising rights and carrying out its duties hereunder the Advisor is authorized to act for the Account and on the Client's behalf either itself or in part through its authorized agents as it shall determine; *provided, however*, that the appointment of any agent shall not relieve the Advisor of its responsibilities or liabilities hereunder.

The Advisor is authorized but shall not be required, to tender or convert any securities in the Account; to execute instruments with regard to such securities; to endorse, transfer or deliver such securities. Unless directed by Client, the Advisor shall not execute waivers or consents with regard to any securities in the Account or exercise rights or consent to any class action, plan of reorganization, merger, combination, consolidation, liquidation or similar plan with reference to such securities.

The authorities herein contained are continuing ones and shall remain in full force and effect until revoked by termination of this Agreement as hereinafter provided, but such revocation shall not affect any liability in any way resulting from transactions initiated prior to such revocation.

3. Trade Process Procedures.

a) Daily Trade Blotter File. No later than at the close of business (i.e., 5:00 p.m. New York Time) on each "Exchange Business Day" (as defined in the 1996 ISDA Equity Derivatives Definitions and with respect to the primary Exchange(s) on which the equity securities or Underlying Securities (as defined in the Investment Guidelines) in the Account trade), the Advisor shall deliver via facsimile or electronic transmission to the relevant Client Contact a Trade Blotter File setting forth for each transaction effected by the Advisor for the Account on such Exchange Business Day the following:

(i) the Ticker (or other security identifier);

(ii) the quantity and transaction price (gross basis);

(iii) commission or any other transaction fee, if available;

(iv) the name of the third party executing broker (if any); and

(v) transaction type (buy, sell, short, cover, etc.).

The Trade Blotter File shall be delivered to the Client in mutually agreed format/medium.

b) Short Sales. Prior to effecting any short sales in any security for the Account, the Advisor shall obtain from the authorized designee of the Client short sale borrowing capability, it being understood and agreed that securities borrowing transactions to cover short sales shall be the responsibility of the Client. Advisor shall effect all short sales and all other securities sales for the Client's Account in full compliance with all applicable short sale rules under Federal securities law and regulations and the rules of the relevant securities exchange.

c) Third Party Brokers. The Advisor shall execute trades in or for the Account only with those brokers identified on Appendix III hereto. Appendix III may, from time to time, be amended by mutual agreement of the parties hereto, such agreement not to be unreasonably withheld. Notwithstanding any provision regarding the Advisor's authority hereunder to act on behalf of the Client, any documentation required in connection with establishing such brokerage account shall be reviewed and approved by the Client prior to execution, such approval not be unreasonably withheld.

d) Equity Position Limitations. The Advisor specifically agrees and acknowledges that (i) U.S. and foreign securities and banking laws applicable to Client may limit from time to time the trading decisions of Advisor in respect of the Account; (ii) specifically (by way of example) pursuant to applicable U.S. banking laws and regulations the Client is subject to general limitations on holding a class of the outstanding voting equity securities or any class of equity securities voting and non-voting of any U.S. company; and (iii) under relevant U.S. and foreign banking and securities laws, generally any equity position of a particular issuer held in the Account will be aggregated with equity positions of such issuer held in other proprietary account(s) of the Client for purposes of determining compliance with such banking laws.

e) Regulatory Compliance. The Advisor specifically agrees and acknowledges that it may, from time to time, be necessary or advisable, in order to maintain compliance with U.S. or non-U.S. applicable law or maintain compliance with this Agreement, to liquidate certain positions in the Account, or take other remedial actions. The Advisor agrees to comply promptly with any Client directions in this regard, subject to Section 8(c) below.

4. Services of the Advisor Not Exclusive.

The services of the Advisor to the Client hereunder are not to be deemed exclusive and the Advisor shall be free to render similar services to others and to retain for its own use and benefit all fees or other moneys payable thereby and the Advisor shall not be deemed to be affected with notice of or to be under any duty to disclose to the Client any fact or thing which comes to the notice of the Advisor or any employee or agent of the Advisor in the course of the Advisor rendering similar services to others or in the course of its business in any other capacity or in any manner whatsoever otherwise than in the course of carrying out its duties hereunder. Nothing in this Agreement shall limit or restrict the right of any directors, officers or employees of the Advisor to engage in any other business or to devote his time and attention in part to the management or other aspects of any other business, whether of a similar or dissimilar nature. The Advisor may aggregate purchases or sales of securities for the Account with purchases or sales of the same securities by other clients of the Advisor, *provided* that Advisor first discloses to, and obtains approval of, Client regarding Advisor's allocation procedures. The Advisor agrees that in the event that purchases or sales of securities for the Account shall coincide with purchases or sales of the same securities by other clients of the Advisor, the Advisor will make such allocation in a manner believed by the Advisor to be equitable to each client.

Instructions to execute securities transactions may be placed by the Advisor with brokers, dealers and banks who supply research to the Advisor and such research may be used by the Advisor in advising other clients of the Advisor.

5. Indemnification.

Each party hereto (as applicable, the "Indemnifying Party") agrees to indemnify, defend and hold harmless the other party (the "Indemnified Party") and its officers, directors, shareholders, employees, affiliates and agents from and against all demands, claims, liabilities, damages, expenses (including legal fees and disbursements) and losses (collectively, "Claims") resulting directly from any misconduct or failure to act by the Indemnifying Party that results in any material breach by the Indemnifying Party of any of the representations, warranties or agreements of the Indemnifying Party contained in this Agreement and the Appendices annexed hereto.

6. Agency Cross Transactions.

The Advisor shall be permitted to effect transactions between the Client's Account and any other account for which the Advisor acts as investment advisor. In connection with such transactions, the Advisor may act as broker for, receive commissions from, and have a potentially conflicting division of loyalties and responsibilities regarding, both parties to such transactions. The foregoing permission may be revoked at any time by written notice from the Client to the Advisor.

7. Assignment.

This Agreement may not be assigned without the prior written consent of the non-assigning party and any purported assignment without such consent shall be void and of no effect. Neither party shall unreasonably withhold consent to any proposed assignment of this Agreement by the other party to any of its affiliates. In the event that a party wishes to assign this Agreement that party must provide to the non-assigning party such documents as the non-assigning party may reasonably request in connection with the assignment and shall allow a reasonable time during which the non-assigning party may review any such documents.

8. Termination.

a) The management services provided for herein shall continue in full force and effect until terminated by one of the parties hereto as provided below.

b) This Agreement may be terminated by either party upon **sixty (60)** Exchange Business Days' notice to the other party, subject to the remaining provisions of this Section 8.

c) In the event the Client notifies Advisor in writing either that (i) the securities and other investments in the Account, Advisor's management activities, or any Account transaction is reasonably determined by the Client, in good faith, to be in violation of the Investment Guidelines (an "*Investment Guideline Violation*"), or (ii) the Client has reasonably determined in good faith that it is necessary or advisable to liquidate certain positions in the Account, or take other remedial actions, in order to maintain compliance with applicable law or to maintain compliance with this Agreement (a "*Compliance Violation*"), the Advisor shall (in the event of an Investment Guideline Violation) cause the conditions constituting such Investment Guideline Violation to cease to exist, and (in the event of a Compliance Violation) effect either the liquidation of the positions to which the Compliance Violation relates, or take such other remedial action as the Client may direct. In connection with any such Compliance Violation or Investment Guideline Violation, Advisor shall take such remedial steps within such time periods as Client shall direct in its written "Violation" notice to Advisor; and Client agrees that it shall act in a commercially reasonable manner, consistent with the specific circumstances, in setting any such remedial action and remedial time periods in connection with any such Violations.

If the conditions constituting such Investment Guideline Violation or Compliance Violation continue to exist after the time set for remedial action by Advisor has expired, the Client shall be entitled upon written notice to the Advisor to immediately assume management of the affected Sub-Account, whereupon that portion of this Agreement relating to such affected Sub-Account shall be terminated.

d) Upon the occurrence of an *"Early Termination Event"* (as defined in any confirmation for an option transaction referencing a Sub-Account), the Client shall be entitled to immediately assume management of the affected Sub-Account, whereupon this Agreement shall be of no force or effect with regard to the affected Sub-Account, but shall remain in full force and effect with regard to the remaining Sub-Account(s) in the Account, unless the affected Sub-Account is the only Sub-Account remaining in the Account, in which case the Client shall be entitled to immediately assume management of the Account and this Agreement shall be immediately terminated. In connection therewith, Client shall commence an orderly liquidation and reduction to USD cash of the assets in the affected Sub-Account(s) (a "Liquidation") over a four consecutive Exchange Business Day period, commencing on the Early Termination Date (as defined in any confirmation for an option transaction referencing a Sub-Account) or promptly thereafter. Any Liquidation shall be effected in an "equal dollar weighted" manner in approximately equal proportions (i.e., approximately 25% of the affected Sub-Account per Exchange Business Day) over such period, with the Client giving due regard to effecting proportionate reductions of any economic long positions and economic short positions, unless the Client and the Advisor agree on another commercially reasonable manner. In the event of timely receipt by the Client from the option buyer of a *"Buyer Termination Notice"* (as defined in any confirmation for an option transaction referencing a Sub-Account), the transfer of assets described in any such notice shall occur on the Early Termination Date.

e) For the purpose of this Section 8 if notice is being delivered with respect to a Compliance Violation or Investment Guideline Violation, such notice shall be delivered to the relevant person(s) specified in the Notices information below and shall specify the investment positions and/or other circumstances with respect to which the Compliance Violation or Investment Guidelines Violation relates, and in all events, notice shall be deemed to be received on the Exchange Business Day that it is received by the Advisor if such notice has been received by 10:00 A.M. on such Exchange Business Day. If notice is received after 10:00 A.M. on an Exchange Business Day it shall be deemed to have been received on the following Exchange Business Day.

f) Upon the occurrence of an option exercise by the option buyer under an option transaction or other termination of an option transaction (other than by reason of an Early Termination Event as referenced in Section 8(d) above), this Agreement, inasmuch as it relates to a Sub-Account to which such option relates shall be of no force or effect on the *Cash Settlement Payment Date* (as defined in the confirmation for an option transaction referencing such Sub-Account) following the occurrence of such option exercise. However, this Agreement shall continue to be of full force and effect with regard to the remainder of the Sub-Account(s) not affected by the option exercise or other termination of that option transaction, unless such event results in the liquidation of the entire Account, in which case, after such liquidation of the entire Account by the Advisor, the Client shall be entitled to immediately assume management of the Account and this Agreement shall be immediately terminated. In connection with any such option transaction exercise (or other option termination), Advisor shall commence a Liquidation of the affected Sub-Account over a four consecutive Exchange Business Day period, commencing on the Exercise Date (as defined in the confirmation for the option transaction relating to such Sub-Account) or promptly thereafter. Any Liquidation shall be effected in an "equal dollar weighted" manner in approximately equal proportions (i.e., approximately 25% of the affected Sub-Account per Exchange Business Day) over such period, unless the Client and the Advisor agree on another commercially reasonable manner. In conducting the Liquidation, the Advisor shall give due regard to effecting proportionate reductions of any economic long positions and economic short positions.

g) Unless previously terminated pursuant to the provisions of this Section 8, this Agreement shall terminate on May 10, 2010.

h) In connection with any partial liquidation of the Account, the Client shall, in good faith and in a commercially reasonable manner, make the appropriate changes in the Investment Guidelines to accurately reflect such partial liquidation of the Account. In addition, the Advisor shall, consistent with the annexed Investment Guidelines, thereafter strictly limit its trading activities for the affected Sub-Account to risk reducing trades in a manner that preserves or increases the dollar neutrality, with the overall objective of preserving, at a minimum, the then current mark-to-market value of the affected Sub-Account. Such "risk reducing" trading strategy shall remain in effect with respect to such Sub-Account for the remaining term of this Agreement, unless and until Client, by subsequent written notice to the Advisor, instructs Advisor to recommence "normal" trading activities under this Agreement.

i) Upon termination of this Agreement the Client shall resume control of the Account, without further liability or responsibility of the Advisor therefor.

9. Confidentiality.

(a) Subject to the provisions of Section 9(b) below, neither of the parties hereto shall, except under compulsion of any applicable law or regulation made thereunder or as required by the regulatory authorities of any jurisdiction in which transactions on behalf of the Account are effected or regulated (hereafter "Regulatory Mandated Disclosure"), either before or after the termination of this Agreement disclose to any person not authorized by the relevant party to receive the same any confidential information relating to such party or to the affairs of such party of which the party disclosing the same shall have become possessed during the period of this Agreement and such party shall use all reasonable efforts to prevent any such disclosure as aforesaid. Without in any way limiting the generality of the foregoing, before acting upon a request for any Regulatory Mandated Disclosure, a party shall (i) immediately notify the other party of the existence, terms and circumstances surrounding such request; (ii) consult with such other party on the advisability of taking legally available steps to resist or narrow such request; and (iii) if such Regulatory Mandated Disclosure is required, exercise such party's best efforts to obtain reasonable assurance that confidential treatment will be afforded.

The term "confidential information" shall include (without limitation) the existence of, and contents of, the Trade Restrictions List (referenced on Appendix I hereto) delivered by Client to Advisor from time to time. The Advisor acknowledges its obligations under applicable law, including federal and state laws, not to disclose, or otherwise effect trades based on, material non-public information. Without limiting the responsibilities and agreements of the Advisor under this Section 9, the Advisor specifically agrees with Client that it shall not utilize, directly or indirectly, any Trade Restrictions List as basis for trading or otherwise investing in (either through the Account or by means of any other independent trading or advisory activities of the Advisor) any securities included on such Trade Restrictions List.

The Client further specifically agrees that, other than by reason of Regulatory Mandated Disclosure, (i) except with the prior written consent of the Advisor it shall not disclose to any third party the terms of the Advisor-directed trading strategies (including the nature and content of the Account) contemplated under this Agreement (as evidenced by the annexed Investment Guidelines and related transaction reports); and (ii) it shall not establish or engage in any form of trading strategy or strategies, for its own (or any affiliate's) account--or for the account of any third party--which by virtue of Client's knowledge of Advisor's trading strategies provided for in this Agreement could be deemed to materially replicate any aspect of such Advisor trading strategy.

(b) Notwithstanding anything to the contrary in this Agreement, except as otherwise hereinafter set forth in this Section 9(b), the parties hereto agree and acknowledge that the structure and tax aspects of the Account, any Sub-Account, this Agreement, any transaction effected pursuant to this Agreement and any option referencing the Account or any Sub-Account, and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Account, any Sub-Account, this Agreement, any transaction effected pursuant to this Agreement and any option referencing the Account or any Sub-Account and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party it may have received in connection with this Agreement, including, without limitation, that such party has entered into this Agreement with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of this Agreement. Notwithstanding the foregoing, either party may disclose any such confidential information if required by law or any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

10. Miscellaneous.

a) No failure on the part of either party to exercise, and no delay on its part in exercising, any right or remedy under this Agreement will operate as a waiver thereof nor will any single or partial exercise of any right or remedy preclude any other or further exercise thereof or the exercise of any other right or remedy. The rights and remedies provided in this Agreement are cumulative and not exclusive of any rights or remedies provided by law.

b) This Agreement may only be amended by the written agreement of the parties hereto.

c) The illegality, invalidity or unenforceability of any provision of this Agreement under the law of any jurisdiction shall not affect its legality, validity or enforceability under the law of any other jurisdiction nor the legality, validity or enforceability of any other provision.

d) Unless otherwise specified, any notice given hereunder shall be in writing and shall be served by hand (or courier service) at, or by being sent by facsimile or other electronic transmission to the office of the addressee identified herein or in the relevant schedule hereto or such other address as to which either party shall have given written notice to the other party hereto. Any such notice shall be deemed duly served at the time of delivery, as evidenced by a delivery receipt (if delivered by hand or by courier service), or at the time of receipt (if served by facsimile transmission or other transmission). The Advisor may rely and shall be protected in acting upon any written instruction or communication believed by it to be genuine and to have been signed by the proper party or parties.

e) The Advisor will forward to the Client a list of names and specimen signatures of persons authorized to act on behalf of the Account. The Client will forward from time to time a list of names and specimen signatures of persons authorized to act on behalf of the Client. The

Advisor and/or the Client, as applicable, will provide to the other party a revised list of names and specimen signatures of persons authorized to act on behalf of the Account or Client whenever such authorized persons change.

f) Notwithstanding anything to the contrary contained in this Agreement, the Client agrees that any amounts owed or liabilities incurred by the Advisor in respect of any transactions contemplated by this Agreement, will be satisfied solely from the Advisor's assets. Without limiting the generality of the foregoing, in no event shall this Agreement give the Client recourse, whether by setoff or otherwise, with respect to any such amounts owed or liabilities incurred, to or against any assets of any person or entity other than the Advisor.

g) Notwithstanding anything to the contrary contained in this Agreement, absent any material breach of the terms of this Agreement, the Advisor will not be liable to the Client for any losses, damages, costs, expenses, or other liabilities arising in connection with their activities and services hereunder.

h) Notices. All notice information for the relevant party must be sent in accordance with the information set forth below unless otherwise instructed by such party:

Deutsche Bank AG, London Branch
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Attn: Satish Ramakrishna/
Tel: (212) 212-250-4990
Fax: (212)212-797-9361

Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022

Attn: Mark Silber / Carla Volpe Porter
Stephen Daffron
Tel: (212) 486-6780
Fax: (212) 758-7136
Email: Mark@rentec.com
Carla@rentec.com
sdaffron@rentec.com

Attn: Peter Brown / Bob Mercer
Tel: (631) 444-7000
Fax: (631) 689-4495
Email: Peter@rentec.com
Mercer@rentec.com

Attn: Thomas Kerns / Scott Chinsky
Tel: (212) 486-6780
Fax: (212) 486-7291
Email: TKerns@rentec.com
Scott@rentec.com

11. Representations and Warranties

Each of the parties (or the specified party, as the case may be) represents, warrants, and agrees with the other party that:

(a) It is duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation and has all requisite power and authority to own its property, to conduct its business as currently conducted and to execute and deliver, and to perform its obligations under, this Agreement.

(b) This Agreement has been duly authorized, executed and delivered by it and constitutes a legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms.

(c) No permits, licenses, franchises, approvals, authorizations, qualifications or consents of, or registrations or filings with, governmental authorities are required in connection with the execution or delivery by such party of, or the performance by such party of its obligations under, this Agreement, except for such as have been obtained and are in full force and effect.

(d) The execution and delivery of, and the performance by such party of its obligations under, this Agreement do not and will not result in a breach or constitute a violation of, conflict with, or constitute a default under, the certificate of incorporation or bylaws of such party or any agreement or instrument to which it is a party or by which it or any of its property is bound, which breach, violation, conflict or default could have a materially adverse effect on its ability to perform its obligations under this Agreement.

(e) No actions, proceedings or claims are pending or, to the knowledge of such party, threatened against such party or any of its property that could affect the validity or enforceability of this Agreement or that could have a materially adverse effect on the ability of such party to perform its obligations under this Agreement.

(f) Client represents and covenants that it is and will remain for the term of this Agreement a "qualified eligible person" as such term is defined in Rule 4.7 under the Commodity Exchange Act. Client hereby consents to the Account being treated as an "exempt account" pursuant to the provisions of Rule 4.7

12. Amendment and Restatement.

The parties agree that this Agreement amends and restates in its entirety the Investment Advisory Agreement dated as of December 21, 2006, between Client and Advisor (the "Existing Agreement"). The parties hereto acknowledge and agree that this Agreement does not constitute a novation or termination of the Existing Agreement or any transactions thereunder and the Existing Agreement and the transactions thereunder are in all respects continuing (as amended and restated hereby) with only the terms thereof being modified as provided in this Agreement.

13. Governing Law.

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS ENTERED INTO AND TO BE PERFORMED ENTIRELY WITHIN THE STATE.

14. Client Receipt of Advisor's Brochure

The Client hereby acknowledges receipt of the Advisor's current Form ADV Part II or brochure statement in lieu thereof.

PURSUANT TO AN EXEMPTION FROM THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH ACCOUNTS OF QUALIFIED ELIGIBLE PERSONS, THIS ACCOUNT DOCUMENTATION IS NOT REQUIRED TO BE, AND HAS NOT BEEN, FILED WITH THE COMMISSION. THE COMMODITY FUTURES TRADING COMMISSION DOES NOT PASS UPON THE MERITS OF PARTICIPATING IN A TRADING PROGRAM OR UPON THE ADEQUACY OR ACCURACY OF COMMODITY TRADING ADVISOR DISCLOSURE. CONSEQUENTLY, THE COMMODITY FUTURES TRADING COMMISSION HAS NOT REVIEWED OR APPROVED THIS TRADING PROGRAM OR THIS ACOUNT DOCUMENT.

IN WITNESS WHEREOF, this Agreement has been entered into the day and year first above written.

DEUTSCHE BANK AG LONDON

By: Satish Ramakrishna

Name: Satish Ramakrishna

Title: Attorney-in-Fact

By:

Name:

Title: Attorney-in-Fact

RENAISSANCE TECHNOLOGIES LLC

By:

Name: Mark Silber

Title: Vice President

EXHIBIT A

APPENDIX I

Investment Guidelines and Restrictions

A. Account: Investment Guidelines

For purposes of calculations under the Investment Guidelines, all Positions (defined below) shall be valued in USD (converted, if necessary, using the then-applicable relevant FX rate of conversion). The Delta (defined below) of a Position shall be calculated by the Calculation Agent and may be adjusted within reason when such Position has a negative gamma.

1) **Sub-Account Composition:** Any Sub-Account shall be comprised of the following types of securities only: equity securities in a company listed on a recognized exchange, depositary receipts listed on a securities exchange in the United States of America, OTC derivatives, index futures, exchange-traded funds, other equity linked securities (other than OTC derivatives, index futures, and exchange-traded funds), interest rate and currency transactions, or any other financial instruments that may be agreed to between the parties, together with any cash balances from time to time, together with such other securities and assets arising by reason of any Potential Adjustment Events or Merger Events in respect of Positions comprising such Sub-Account from time to time. Derivative Instruments with a negative gamma can only be included in the Sub-Account if entered into with an affiliate of the Client or as otherwise agreed by the parties.

Table 1

	A	B	C	D
Sub Account (M)	9.3951%	90,000,000	18	32,490,000
Sub Account (N)	41.7561%	400,000,000	18	126,400,000
Sub Account (O)	18.7902%	180,000,000	18	43,920,000
Sub Account (P)	5.2195%	50,000,000	18	9,950,000
Sub Account (Q)	15.5530%	243,000,000	18	76,788,000
Sub Account (R)	9.2860%	300,000,000	18	138,000,000

2) Allocations:

Percentage allocations applicable to each Sub Account are set forth in Table 1 Column A.

3) General strategy: Long/Short Statistical Arbitrage

4) Definitions:

a) "Underlying Security" or "U" shall mean any one of the following:

i) an equity security in a company listed on a recognized exchange (e.g., IBM common stock);
ii) an equity index (e.g., the S&P500 Index); or
iii) an exchange-traded fund (e.g., the SPDR fund), the value of which is linked to the prices of the equity securities comprising a specified index or basket of equity securities).

b) "Position" means either:

  i) a long or short direct holding in an Underlying Security (an "Actual Position"); or
  ii) an interest whose value is derived from an Underlying Security, whether by conversion, exchange, exercise or otherwise (a "Derivative Position");

c) "Notional Shares" with respect to any Position means (i) in the case of an Actual Position, the number of shares (long or short) and (ii) in the case of a Derivative Position, the number of shares of the Underlying Security into which the Derivative Position is convertible, exchangeable, exercisable or otherwise related. In all cases, Notional Shares shall be expressed as a positive number.

d) The "Delta" of a Position means the ratio of A over B where:

  i) "A" = the actual number of shares in an Underlying Security that would be expected to have the same change in value as the expected change in value of the Position given a small increase in the price of the Underlying Security assuming all other variables remain constant. A will be positive for an increase in value and A will be negative for a decrease in value; and

  ii) "B" = the Notional Shares of such Position.

  For the avoidance of doubt, the Delta of a long Actual Position is +1, and of a short Actual Position is -1.

e) "Exposure" (Delta-adjusted value) with respect to any Position means the product of (i) Delta, (ii) the Notional Shares and (iii) the share price of the Underlying Security, with the share price of U converted to USD using the prevailing exchange rate if such price is quoted in a currency other than USD.

f) For each U:

  i) The "Term Position Set" of U shall consist of all Positions in the Term Basket with the same U.

  ii) The "Trading Position Set" of U shall consist of all Positions in the Trading Basket with the same U.

  iii) The "Position Set" of U shall consist of the union of the Trading Position Set and the Term Position Set of such U.

  iv) "Actual Trading Gross" shall mean the sum of the absolute values of the Exposures of all Actual Positions in the Trading Position Set of U;

  v) "Actual Term Gross" shall mean the sum of the absolute values of the Exposures of all Actual Positions in the Term Position Set of U;

  vi) "Derivative Trading Gross" shall mean the sum of the absolute values of the Exposures of all Derivative Positions in the Trading Position Set of U;

  vii) "Derivative Term Gross" shall mean the sum of the absolute values of the Exposures of all Derivative Positions in the Term Position Set of U;

  viii) "Actual Trading Net" shall mean the algebraic sum of the Exposures of all Actual Positions in the Trading Position Set of U;

  ix) "Actual Term Net" shall mean the algebraic sum of the Exposures of all Actual Positions in the

Term Position Set of U;

x) "Derivative Trading Net" shall mean the algebraic sum of the Exposures of all Derivative Positions in the Trading Position Set of U;

xi) "Derivative Term Net" shall mean the algebraic sum of the Exposures of all Derivative Positions in the Term Position Set of U; and

xii) "Total Net" shall mean the algebraic sum of Actual Trading Net, Derivative Trading Net, Actual Term Net and Derivative Term Net.

5) <u>Exposure Guidelines</u>

a) ***"Total Gross Trading Exposure"*** shall not exceed the lesser of (i) USD 26,000,000,000 and (ii) the sum of the products obtained by multiplying Table 1 Column C and the corresponding Sub Account Capital Available for each existing Sub Account, as may be adjusted from time to time by mutual consent of the Client and the Advisor,

where ***"Total Gross Trading Exposure"*** shall mean the greatest of:

(i) the sum over all Us of the absolute value of Actual Trading Net;
(ii) the sum over all Us of the Derivative Trading Gross;
(iii) the sum over all Us of the absolute value of the quantity (A+B), where A is the Actual Trading Net, and B is the Derivative Trading Net.

b) ***"Total Gross Term Exposure"*** shall not exceed the lesser of (i) USD 6,000,000,000 and (ii) the sum of the products obtained by multiplying Table 1 Column C and the corresponding Sub Account Capital Available for each existing Sub Account, as may be adjusted from time to time by mutual consent of the Client and the Advisor,

where: ***"Total Gross Term Exposure"*** shall mean the greatest of:
(i) the sum over all Us of the absolute value of Actual Term Net;
(ii) the sum over all Us of the Derivative Term Gross;
(iii) the sum over all Us of the absolute value of the quantity (A+B), where A is the Actual Term Net, and B is the Derivative Term Net;
each of the foregoing determined based on the cost of the Us in all Positions in the Term Baskets, not the market value.

c) ***"Capital Needed"*** shall always be less than or equal to the Capital Available,

where: ***"Capital Available"*** shall mean the sum of the Sub Account Capital Available for all existing Sub-Accounts, where the "Sub Account Capital Available" for each Sub-Account shall be the sum of
(i) The amount set forth in Table 1 Column B (defined as the **Sub Account *Initial Capital Available***);
(ii) the aggregate realized and unrealized gains on all Positions in the Sub-Account minus the aggregate realized and unrealized losses in respect of all Positions in such Sub-Account; and
(iii) the sum in such Sub-Account, expressed in USD, of (A) dividend income (determined based on ex-dividend dates) net of any tax withheld, if necessary, <u>plus</u> (B) interest income and any short rebates (on an accrual basis), <u>plus</u> (C) any other income accrued or realized in the Account, <u>minus</u> (D) payments in lieu of dividends (determined based on ex-dividend dates) grossed up for any dividend withholding taxes, if necessary, <u>minus</u> (E) interest expense and finance charges,

minus (F) other expenses agreed by the Client and Advisor from time to time, including, without limitation, the Advisor Fees.

For the avoidance of doubt, the sum of (ii) and (iii) (defined as the **Sub Account *Additional Capital Available***) should equal the true economic increase or decrease in the value in each existing Sub-Account.

and ***"Capital Needed"*** shall mean the sum of

(i) ***"Alpha"*** multiplied by the sum over all Us of the absolute value of the Total Net; and

(ii) ***"Beta"*** multiplied by the absolute value of the sum over all Us of the Total Net;

where:

(i) ***"Alpha"*** shall mean 0.0453216, and

(ii) ***"Beta"*** shall mean 0.2046784

6) **Position Guidelines**

"Current Barrier" shall mean, on each day the Capital Available **minus** the sum of all the amounts set forth in Table 1 Column D.

a) For each U, the absolute value of the Total Net shall be less than 40% of the Current Barrier.

b) For each U, the absolute value of the Total Net shall not exceed the greater of:

i) Three (3) times the average "daily dollar trading volume" in U, as measured over the ten previous Exchange Business Days, with the daily dollar trading volume for each day defined as the product of (i) the daily share trading volume on such day, and (ii) the day's closing price (expressed in USD); and

ii) 5% of Capital Available.

c) For each Industry, the absolute value of ***"Dollar Value per Industry"*** shall not exceed 100% of the Current Barrier where:

"Dollar Value per Industry" shall mean, with respect to each industry group to which the relevant Us are allocated (as defined by a mutually agreed upon model), the sum of the Total Net for all Us in that industry group.

d) For each sector, the absolute value of ***"Dollar Value per Sector"*** shall not exceed 125% of the Current Barrier where:

"Dollar Value per Sector" shall mean, with respect to each sector group to which the relevant Us are allocated (as defined by a mutually agreed upon model), the sum of the Total Net for all Us in that sector group.

e) The ***"Issuer Position"*** for any U shall not be greater than 3% of an issuer's total outstanding shares (and 2% in the case of ADR's, GDR's or similar of U.K. issuers) where:

"Issuer Position" for a U shall equal the algebraic sum of the number of shares in all Positions in such U in the Position Set, exclusive of Positions that are Derivative Instruments with negative Delta.

The above percentages may be adjusted from time to time by mutual consent of the Client and the Advisor.

B. Additional Trading Restrictions Applicable to Account

Hot and New Issues - Advisor shall not invest for the Account in securities the offering of which constitute "hot issues," or "new Issues" in accordance with NASD IM-2110-1 or any successor rule thereto adopted by NASD Regulation, Inc.

Restriction Level	Category	Permissible Activities
1.	***Full Restriction***	*As quickly as practicable (but no later than the close of business on the second Exchange Business Day on the relevant Exchange after a security initially appears on the Trade Restricted List), Advisor, defined below, is permitted, upon notice to the Client Service Representative, defined below, to eliminate exposure to the issuer of such security by selling all or any pre-existing long position or buying-in all or any pre-existing short position, at then-current market prices, (a) in ordinary market transactions or (b) in a transaction with an Unaffiliated Account, defined below, provided that securities transferred in (b) are not transferred back to the Account in a single transaction or series of transactions. After two Exchange Business Days on the relevant Exchange following notice of the restriction, the position will be frozen and the Advisor will be prohibited from trading the security until it is removed from the Trade Restricted List.*
2.	**Offering**	No trades are permitted without prior approval of the Client Service Representative (for the periods required by Regulation M, and other applicable laws, rules and regulations and policies of Deutsche Bank AG and its affiliates).
5.	***Affiliate Related***	*Advisor may, upon notice to the Client Service Representative, sell a pre-existing long position, sell short and/or buy-in a pre-existing short position. Such transactions should be executed at then-current market prices in accordance with the provisions of (a) and (b) in "Full Restriction".*
7.	**DB Investment**	No trades are permitted from the time the security goes on the Trade Restricted List.

Definitions:

Advisor: The investment advisor that has been retained by Deutsche Bank AG London to manage the Account.

Client Service Representative: Any officer of the Client (or its specified Affiliate) designated as such by the Client.

Trade Restricted List: The list of securities in which trading is restricted as provided by Deutsche Bank's Compliance Department from time to time.

Unaffiliated Account: An account managed by Advisor in which no Deutsche Bank entity has any beneficial interest.

APPENDIX II

November 16, 2007

Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022

Dear Sirs:

With respect to the Amended and Restated Investment Advisory Agreement between **Deutsche Bank AG, London Branch**, ("Client") and **Renaissance Technologies LLC** (the *"Advisor"*), dated November 16, 2007 (the *"Agreement"*), the Advisor will receive a management fee of **USD 6,316,200** the *"Fee"*), of which USD 4,815,000 has already been paid by Client to Advisor.

The Fee shall be paid three (3) Exchange Business Days after the execution of the Agreement.

Very truly yours,

DEUTSCHE BANK AG LONDON

By: ____________________
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By: ____________________
Name:
Title: Attorney-in-Fact

Agreed and Accepted:

RENAISSANCE TECHNOLOGIES LLC

By: ____________________
Name: Mark Silber
Title: Vice President

APPENDIX III

[List of Third Party Brokers pursuant to Section 3(c)]

NYSEARCA
Bloomberg
DOT
Jeffries Execution Services
NASDAQ
Instinet LLC

From: Mark J Hamilton <mark.j.hamilton@db.com>
Sent: Friday, December 21, 2007 6:35 AM
To: nicholas@rentec.com
Cc: Andrew Townend; Ben Lane; cconnor@rentec.com; eqtraders@rentec.com; Kevin Helton; scott@rentec.com
Subject: Re: Buy Back Request

Importance: Low

Nick

Trade as below
thx

DBAG London (NY) Rentech MAPS
HYBRID TRADE CONFIRMATION T/D 21-Dec-2007

BGHT 52,806 ABG.MC EUR 24.68480 GR 24.73417 NET V/D 28-Dec

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Global Markets Equity - Trading
Deutsche Bank
Phone:+44 20 7 545 5932
Email: mark.j.hamilton@db.com

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Nicholas Croce
<nicholas@rentec.c
om>
To
Mark J Hamilton/DMGCON/DMG
21/12/2007 10:14 UK/DeuBa@DBEMEA
cc
scott@rentec.com,
eqtraders@rentec.com,
cconnor@rentec.com, Ben
Lane/db/dbcom@DBEMEA, Kevin
Helton/db/dbcom@DBEMEA, Andrew
Townend/db/dbcom@DBEMEA
Subject
Re: Buy Back Request

Permanent Subcommittee on Investigations
EXHIBIT #10

Mark,

Please buy to cover 52,806 shs AGB.SM and send us the execution. Also note we already bought 2,229 shs and shorted 305 shs on the day.

thanks, Nick

Mark J Hamilton wrote:
> Good Morning,
>
> We've been unable to maintain a borrow to fully cover your following
> short position.
> Please confirm your willingness to buy this position back as we're
> exposed
to
> being bought in (any cost / short sale fines will be passed on) Due
> to the illiquidity of this stock at present I must also ask you not to
> short any more.
>
> Outstanding position to buy back.
>
> Qty Ric Sedol
>
> 54,730 ABG.MC 7174823
>
>
>
> Best regards,
> Mark
>
>
> ============================
> Global Markets Equity - Trading
> Deutsche Bank
> Phone:+44 20 7 545 5932
> Email: mark.j.hamilton@db.com
>
> ============================
> ---
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From: Jim Rowen <jrowen@rentec.com>
Sent: Tuesday, February 05, 2008 1:44 PM
To: Adrienne Browning
Subject: Re: UK MAPS

Importance: Low

excellent- and close to what this older guy remembers

Adrienne Browning wrote:
>
> not sure this is helpful, but its what I got....
>
>
> Adrienne S. Browning
> Managing Director, Tax Counsel
> 212 250 2610 (phone)
> 212 797 0325 (fax)
>
> ______________________________________
> Circular 230 Disclosure: To ensure compliance with requirements
> imposed by the IRS, we inform you that any tax advice contained in
> this communication (including any attachments) was not intended or
> written to be used, and cannot be used, for the purpose of (i)
> avoiding penalties under the Internal Revenue Code or (ii) promoting,
> marketing or recommending to another party any transaction or matter
> addressed herein.
>
> ----- Forwarded by Adrienne Browning/db/dbcom on 02/05/2008 01:41 PM
> -----
> *Steven Purvis/db/dbcom@DBEMEA*
>
> 02/05/2008 01:38 PM
>
>
> To
> Adrienne Browning/db/dbcom@DBAMERICAS cc
>
> Subject
> Re: do you remember..........Link
> <Notes:///85256C3A0015FA3E/38D46BF5E8F08834852564B500129B2C/5FC7F34381
> C7327B852573E6005C9268>
>
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>

Permanent Subcommittee on Investigations
EXHIBIT #11

>
>
>
> Adrienne,
>
> I remember little these days. All seems to blur into one!
>
> However, what you describe faced some general objection where DB could
> be argued to have been effectively fronting for an unregulated fund,
> i.e trading carried ostensibly in the name of DB as counterparty but
> the reality being that a third party fund was (a) actively trading and
> (b) DB on limited risk and (c) manager only partially subject to DB
> oversight. Not thought a good idea then and following the Soc. Gen,
> fiasco i imagine there would be even more twitching now
>
> In the context of trading UK & Irish Securities, it is the old Stamp
> Duty trap: need to be careful in picking up physical stock to hedge
> out CFD's and the order in which that happens. If trading existing
> synthetics should not be a problem but since nobody was clear on how
> it all would work and who the liability could fall on UK/Irish stuff
> was excluded anyway.
>
>
>
>
> Regards
>
>
>
> Steven
>
>
>
>
> *Adrienne Browning/db/dbcom@DBAMERICAS*
>
> 05/02/2008 17:00
>
>
> To
> Steven Purvis/db/dbcom@DBEMEA
> cc
>
> Subject
> do you remember..........
>
>
>
>
>
>
>

>
> what the analysis was for the following proposal: a MAPS (managed
> account) option, where the underlying assets were CFDs traded by
> DBL/UK. DBL would hire an investment advisor to trade the account,
> the assets of which are CFDs, and write an option on the account to a
> hedge fund. It is my understanding that we didn't do the trade due to
> UK regulatory/tax restrictions. Do you recall the rationale?
>
> Adrienne S. Browning
> Managing Director, Tax Counsel
> 212 250 2610 (phone)
> 212 797 0325 (fax)
>
> ____
> Circular 230 Disclosure: To ensure compliance with requirements
> imposed by the IRS, we inform you that any tax advice contained in
> this communication (including any attachments) was not intended or
> written to be used, and cannot be used, for the purpose of (i)
> avoiding penalties under the Internal Revenue Code or (ii) promoting,
> marketing or recommending to another party any transaction or matter
> addressed herein.
>
>
> ---
>
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--
James S. Rowen
Chief Operating Officer
Renaissance Technologies
800 Third Avenue, 35 Fl
New York, N.Y. 10022-7604
212-829-4492 (direct)

Deutsche Bank Maps
New Process/Procedures
As of May 15, 2008

Overview

The product offered by Deutsche Bank known as MAPS is being restructured in a number of ways; contractually, operationally (reporting and reconciliation) and economically. This document will detail the difference between the old and new as well as dictate any new development that would be required to accommodate the new product offering from an operational and accounting perspective. There are other changes with regards to the option confirms and investment management agreements (e.g., trading guidelines) and liquidation procedures that are not within scope of this document.

Old MAPS Structure vs. New MAPS structure

First, it is important to note what has not changed:

- Renaissance Technologies LLC is hired by Deutsche Bank to manage a DB Proprietary account based on a strategy implemented by Renaissance subject to certain negotiated trading guidelines.
- Deutsche Bank AG has written barrier options whereby the value is derived from the relative performance of this trading strategy. Franconia Equities Ltd and Mosel Equities LP (Medallion entities) have purchased these barrier options.
- These facts have NOT changed, (although certain trading guidelines have been renegotiated).

The following table highlights the important structural, operational and economic (financing) differences between the old and new structures:

ITEM	OLD	NEW	Comments
Option structure			
Option Style	American	European	Old style can be exercised at any time. New style is only exercisable at the expiration date. There are certain circumstances that allow for early termination, most of which requires the forfeiture of non-refundable premium (see below).
Premium	Bifurcated; Fixed and Amortizable	Bifurcated: Initial Intrinsic Value and Optionality Value	The value of the option is increased by the initial intrinsic value upon payment of premium. The Optionality Value is a non-refundable premium that is amortized over the life of the option
Strike Price	100	100	
Barrier	NO CHANGE	NO CHANGE	
Notification Level	Exists	Does not exist	
Underlying	Allocated NAV of the Trading Strategy	Performance of separate portfolios underlying each option	Each execution is ultimately allocated to each option (assuming multiple options) based on an allocation methodology (see below)
Production			
Trade Executions	NO CHANGE	NO CHANGE	
Trade File sent to Fund Accounting/Operations and DB	Unallocated (one account)	Allocated to sub-accounts underlying each option	Standard allocation algorithm derived by Fund Accounting. May be changed at RTLLC discretion.
Production operations (corp actions, etc)	NO CHANGE	NO CHANGE	

Fund Accounting			
Premium	NO CHANGE	NO CHANGE	While the different components of the premium do affect the valuation of the options, the accounting for the option premium on Mosel's books will not change (The new "Optionality Value" portion of the premium is amortized straight line over the life of the option, just like the Amortizable Premium in the old structure)
Valuation	Intrinsic value is based solely on the performance of the underlying strategy	Intrinsic value is based on "Initial Intrinsic Value" (see above) *plus* the performance of the underlying strategy	
Optionality Value ("OV")	Not Applicable	The amount of premium deemed to be derived from the interest component of the option	Formula agreed to by Rentec and DB calculated using the Anticipated Leverage Amount (see below)
Term Rate	Not Applicable	Rate used to calculate OV	Negotiated rate
Fund Operations			
Management/Performance Fee	Management Fee amount negotiated b/w Rentec and DB and paid upon exercise of the option	Performance Fee Rate negotiated b/w Rentec and DB. Fee is calculated; Rate * performance in excess of agreed benchmark. Fee is paid (and expensed) directly by the underlying sub-accounts on annual anniversary dates (effects intrinsic value)	Performance fee rate is tentatively set at 5%. Benchmark index is TBD
Cash Settlement Amount upon exercise	Intrinsic value plus premium minus management fee	Intrinsic value	
Cash Settlement Amount if DB early terminates without cause	Intrinsic value plus premium minus management fee	Intrinsic value plus any unamortized Optionality Value	
Cash Settlement Amount at other early termination events (not a knock out)	Intrinsic value plus premium minus management fee	Intrinsic value	
Anticipated Leverage Amount ("ALA")	Not Applicable	The amount of anticipated debit balance used to calculate Optionality Value	Negotiated b/w Rentec and DB
Debit Financing	Debit Balance[1] in the account * Fed Funds + 23 bps [1]Debit = Account debit minus premium	Debit Balance[1] in the account * Fed Funds + 23 bps [1]Debit = Account debit minus Initial Intrinsic Value minus Anticipated Leverage Amount	

Short Rebates/Fees	Aggregate Short Market Value ("SMV") * Fed Funds – 23 bps	**If SMV > ALA then** [(SMV – ALA) * (Fed Funds – 23 bps)] + ALA * (Term Rate – 23 bps) **ELSE** ALA * (Term Rate – 23 bps)	Both calculations are adjusted for rates on Hard-to-Borrow securities
Financing of International Securities	Through Swap	Initially no change – through swap. Eventually international securities will be executed as cash trades directly into the prop account and not in swap.	Financing rates on eventual currency balances TBD
Pink sheet executions. Occasionally the strategy attempts to trade securities that need to be manually booked by the DB swap desk (not electronically through Arina)	DB Swap desk will insert any manual executions into the Arina system for clearance and settlement. There is currently no process in place to communicate these trades to Rentec (results in a T+1 break that is rectified)	DB Swap desk will insert any manual executions into the Arina system for clearance and settlement. In addition they will communicate with the Rentec Fund Operations team who in turn will allocate those trades to different sub-accts underlying each option. Rentec will process this file in Total Return and also send the allocation file back to DB for processing	Happens Infrequently
Fractional Shares	NO CHANGE	Adjustments are required by Rentec Fund Operations group	All executions will be allocated to each sub-account by the Production process (see above) and should not result in fractional shares. However, fractional shares may arise from corporate actions or other adjustments. Rentech Fund Operations team will monitor the sub-accounts daily and will adjust to eliminate any unnecessary fractional shares. These adjustments will be communicated to DB.
Portfolio rebalancing due to Option Exercise	Not Applicable	Rebalancing required	Rentec Fund Operations group will reallocate the positions in the sub-account underlying the exercised option to the remaining options based on their relative cash settlement amounts as of COB the night of the Final Valuation Date (as per the option confirm) using the closing prices for each security on that date. This rebalancing will be communicated to DB. **SUBJECT TO ADJUSTMENT BY RTLLC.**
Portfolio rebalancing due to a new Option being purchased	Not Applicable	Rebalancing required	Rentec Fund Operations group will reallocate the positions in each sub-account underlying all options (including the new option) based on there relative cash settlement amounts of existing options and the premium paid on the new option. This rebalancing will be communicated to DB. **SUBJECT TO ADJUSTMENT BY RTLLC.**

Periodic Portfolio Rebalancing	Not Applicable	Rebalancing available	RTLLC may, at times, rebalance each underlying sub-account for any reason. This rebalancing would be driven by RTLLC and could be based on any criteria.
Short against the box	Not Applicable	Situations may arise where a security may be allocated to different sub-accounts resulting in different ownership proportions than other securities. This may in turn result in one or more sub-accounts being short a security and other sub-accounts being long the same security.	The Fund Operations group will monitor this situation daily and, where appropriate, journal positions from one sub-account to another as deemed necessary to eliminate this "cross sub-account short against the box". Otherwise financing calculations will be impacted that may result in unnecessary cost increases. This rebalancing will be communicated to DB
Communication of sub-account portfolios	Not Applicable	The Production group will occasionally need to have access to the portfolios within each sub-account.	A process needs to be developed to send data files to Production detailing the underlying positions in each sub-account.

From: Satish Ramakrishna <satish.ramakrishna@db.com>
Sent: Monday, June 16, 2008 4:12 PM
To: jrowen@rentec.com
Cc: Mark Haas; Frank X Nelson
Subject: Language
Attachments: C8488176.jpg

Importance: Low

Jim:

Please let me know your thoughts.

- Stagggering options: You wish to stagger options once every 3 months. My suggestion is that you stagger options by NAV also, so there is at least **6** points in NAV difference between different options. We of course can (though this is not something we would like to do) always refuse to trade with you if the NAVs are too close - this would also mean that you strategy has not done well since the last option trade and should make sense to you too.

- Limit on initial notional per option. You need 3.6 bln (so 200 mln USD premium) - we are fine with this with the NAV differential as above.

- NAV > Initial NAV + 5.5 (i.e., you have made at least 50% on the initial investment)

Leverage Framed in terms of capital needed Cure period

18-19 0.25%>(Cap Needed - Cap Available)/TGE >0 3d

19-20 0.50%>(Cap Needed - Cap Available)/TGEV >0.25% 2d

> 21 (Cap Needed - Cap Available)/TGE >0.50% immediate take over of portfolio

- NAV + 5.5 > Initial NAV (i.e., you have made less than 50% on the initial investment, but more than 0)

Leverage Framed in terms of capital needed Cure period

>18 (Cap Needed - Cap Available)/TGE >0 24 hrs

> 21 (Cap Needed - Cap Available)/TGE>0.50% immediate take over of portfolio

- NAV <= Initial NAV

your proposal => if NAV hits 95, we immediately take over the portfolio

my counter => if NAV hits 97.7, we immediately take over the portfolio (no 30d period etc)

Permanent Subcommittee on Investigations
EXHIBIT #13

MH052229
RT-PSI-00054256

- Otherwise, 5d cure periods for general guideline (all but the above) are OK, with the caveat that if >3 are breached together, then the cure period is 2d.

All the above is business days, not calendar days.

Best Regards,
Satish Ramakrishna
Deutsche Bank AG, London
Global Markets Equity
Global Prime Finance Risk & Complex Prime Finance
1342, 60 Wall Street, New York
+ 1 212 250 4928 New York
+ 1 [redacted]
+ 1. 212 250 4142/4051 Asst: Magdalena Pisarczyk

[redacted] = Redacted by the Permanent Subcommittee on Investigations

---

From: CN=Satish Ramakrishna/OU=db/O=dbcom
To: CN=Axel Niemann/OU=db/O=dbcom@DBAPAC
cn=axel niemann/ou=db/o=dbcom@dbamericas
Date: Jun 17 2008 20:39:37
Subject: Re: What we need coded on PEAS apart from guidelines

Ok, let's talk. The upfront premium is not formally part of the NAV, however, you will notice that barriers are similarly moved down. The premium is like the amortizable premium in the earlier maps deal.

Best Regards,
Satish Ramakrishna
Deutsche Bank AG, London
Global Markets Equity
Global Prime Finance Risk & Complex Prime Finance
1342, 60 Wall Street, New York
+ 1 212 250 4928 New York
+ 1 [redacted]
+ 1. 212 250 4142/4051 Asst: Magdalena Pisarczyk

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: Axel Niemann
Sent: 06/18/2008 08:03 AM ZE8
To: Satish Ramakrishna
Subject: Re: What we need coded on PEAS apart from guidelines

I do not agree. At least from the last confirm I've seen, the realized funding is included in the NAV. Nothing is paid to us upfront. We only have a windfall gain IF the option knocks out and we don't have the to pay them back the future estimated funding.
Other than that, we have no exposure to longer term rates, only overnight funding spraeds as usual pb.

Axel Niemann
Deutsche Bank AG
Global Markets Equity
Global Prime Finance Risk & Complex Prime Finance
+852 2203 6491 (Hong Kong Office)
+[redacted]

(Embedded image moved to file: pic21590.jpg)Voted No.1 Global Prime Broker

Satish Ramakrishna/db/dbcom@DBAMERICAS
06/18/2008 12:54 AM

To: Parag Patel/NewYork/DBNA/DeuBa@DBEMEA, Axel Niemann/db/dbcom@DBAPAC, Bolon Wong/ext/dbcom@DBAmericas, Enrique Espinoza/db/dbcom@DBAMERICAS
cc: Eamon McCooey/db/dbcom@DBAmericas, Frank X Nelson/db/dbcom@DBAMERICAS
Subject

What we need coded on PEAS apart from
guidelines

Strike is 100
Proposed Tenor: 2y
Let's say interest rates are fixed 2%
Premium: 100
anticipated leverage amt: (say) 600

The anticipated leverage amt is not randomly chosen. It is chosen so that the funding cost (which we will call the "optionality value") on the long side, which is (ignore funding spread)

600 x 2% x 2y = 24

is between 20%-25% of the initial premium (100 in the above).

Initial NAV: 108.436

this is because the funding spread is 2.664 (= 24/100 x 11.1). Note that Initial NAV + initial "optionality value" = 111.1

Initial barrier: 99.7 + (11.1 - 2.664) = 106.136
Knockout barrier: 94 + (11.1-2.664)

The optionality value declines every day as the funding is consumed. So if there were no performance in the account at all, but they did use the anticipated leverage,

- the NAV would creep up with short side rebate every day
- optionality value declines linearly every day to 0 on the expiry of the option
- the barrier creeps up - in NAV points, barrier = 99.7 + (Premium - Optionality Value)/Anticipated Leverage Notional and Optionality Value keeps falling each day, hence ...

Short side -

The long side financed amt is paid to us immediately at start
The short side financing - they receive a rebate rate = 2% (the agreed long side rate) - borrow cost, and this payment is at the end of the option..

We hence have interest rate risk in the mismatch of payment dates that will need to be hedged each time. The value of the "remaining part" (unrealized part) of this swap needs to be included in any unwind calculation of the trade.

Performance fees -
we need a calculator to deduct the performance fees off the NAV every day, with an opportunity to correct once a quarter.

IN ADDITION -

if they leverage more than the long side amount that we anticipated
(which they might), we need to decrement the NAV to account for the funding on
that portion. That will need some connection with Eamon's calculator - I don't
want PEAS to build another funding calculator - EAMON - WE MIGHT NEED A FEED
HERE

Things we need built
Optionality Value (in NAV points)
NAV at any time (including funding decrement on excess balances as well
as
Notification Barrier at any time
Value of unrealized part of swap

Axel, Parag - Any points to add?

[redacted] = **Redacted by the Permanent Subcommittee on Investigations**

Best Regards,
Satish Ramakrishna
Deutsche Bank AG, London
Global Markets Equity
Global Prime Finance Risk & Complex Prime Finance
1342, 60 Wall Street, New York
+ 1 212 250 4928 New York
+ 1 [redacted]
+ 1. 212 250 4142/4051 Asst: Magdalena Pisarczyk

(Embedded image moved to file: pic28130.jpg)Voted No.1 Global Prime Broker

Equity Prime Services Deutsche Bank

25-Jun-2008 04:31 am
Page 1 of 1

Managed Account Products

Option Account Profile
94150051 - DBAG MAPS Rentech Mosel Equities LP Option Account 1
As Of: 24-Jun-2008

Net NAV Index: 119.77
Percent to Barrier: 24.74

Net Asset Value

	Current Value	Change	Previous Value
Unrealized P/(L)	18,736,821.27	1,458,484.99	17,278,336.28
Realized P/(L)	478,500,357.41	5,326,294.61	473,174,062.80
Dividend Income	30,704,584.49	81,674.72	30,622,909.77
Dividend Expense	(16,455,718.57)	80,607.47	(16,536,326.04)
Bond Interest Income	0.00	0.00	0.00
Bond Interest Expense	0.00	0.00	0.00
Financing Interest Income	0.00	0.00	0.00
Financing Interest Expense	(27,959,989.34)	(99,755.06)	(27,860,234.28)
Short Rebates	25,321,257.15	76,132.05	25,245,125.09
Stock Loan Fees	0.00	0.00	0.00
Transaction Charges	(2,751,726.87)	0.00	(2,751,726.87)
Management Fees	0.00	0.00	0.00
Other P/(L)	0.00	0.00	0.00
Financial Differential	27,574,702.05	126,489.46	27,448,212.59
Net Asset Value:	533,670,287.58	7,049,928.24	526,620,359.34

Barrier Information

Barrier Index Level	6.00	Current Value to Barrier	668,095,585.53
Barrier Value	162,000,000.00	Current Percent to Barrier	24.74

Option Information

Notional Limit	2,700,000,000.00	Strike Price	100.00
Start Date	19-Nov-2007	Expiration Date	14-Nov-2010
Premium %	11.11	Premium Amount	299,999,999.70
Premium Amortization %	5.11	Amortizable Premium	137,999,999.70
Daily Amortization Amount	126,489.46	Fixed Premium	162,000,000.00
Total Amortization To Date	27,574,702.05	Cash Settlement Amount	806,095,585.23

* All data is based on Trade Date information.

Permanent Subcommittee on Investigations
EXHIBIT #15

From: CN=Eamon McCooey/OU=db/O=dbcom
To: CN=Michael Ginelli/OU=db/O=dbcom@DBAmericascn=michael ginelli/ou=db/o=dbcom@dbamericas
Received(Date): Jun 25 2008 07:39:06
Subject: Re: Tentative: MAPS Working Group - Wednesday Sessions @ 3 PM - JuneMeetings

Mike,

I just don't think that will fly with Renaissance I will speak to Frank and Satish today to garner their opinions. The reason is what happens if one option is near breaching the barrier and they want to reallocate trades from that options to others that are at capacity while still being under the 33bn GMV threshold. Based on prior conversations they want to keep their flexibility around allocations.

Regards,
Eamon McCooey
Deutsche Bank Securities Inc.
Global Markets
Global Prime Finance
(212) 250-6856 - Office
[redacted]
(212) 250-6852 - Group Line

▬ = Redacted by the Permanent Subcommittee on Investigations

Michael Ginelli/db/dbcom
06/25/2008 07:31 AM

To Eamon McCooey/db/dbcom@DBAmericas
cc

Subject
Re: Tentative: MAPS Working Group - Wednesday Sessions @ 3 PM - June Meetings

Ok. I have asked Parag to dial in. He and I spoke this morning. He suggested capping the notional limit at the option level rather than across the maps account. So rather than 33 bn for RenTec maps, you would have 6 bn for option 1, 7 bn for option 2, etc... It would be referenced in the Inv Mgmt agreement as being set per options. I am not sure that suggestion works, what do you think?

From: Eamon McCooey
Sent: 06/25/2008 07:25 AM EDT
To: Michael Ginelli
Subject: Tentative: MAPS Working Group - Wednesday Sessions @ 3 PM - June Meetings

From: Apollo Wong </O=GWEISS/OU=HTFD/CN=RECIPIENTS/CN=AWONG>
Sent: Thursday, July 10, 2008 4:06 PM
To: David Betten <dbetten@gweiss.com>
Subject: FW: George Weiss MAPS Investment Guidelines- PLEASE READ

From: Apollo Wong
Sent: Wednesday, July 09, 2008 3:56 PM
To: Susan Sevigny; Pierce Archer
Cc: Jennifer DeBeatham
Subject: RE: George Weiss MAPS Investment Guidelines- PLEASE READ

OK, thanks.

From: Susan Sevigny
Sent: Wednesday, July 09, 2008 3:56 PM
To: Apollo Wong; Pierce Archer
Cc: Jennifer DeBeatham
Subject: RE: George Weiss MAPS Investment Guidelines- PLEASE READ

I spoke with Joe Sclafani @ Wims. He will be able to do the crosses requested under Rule 11 & Rule 12 in the AM—not today. Tks, Susan

Susan C. Sevigny
Assistant Treasurer
George Weiss Associates, Inc.
One State Street-20th floor
Hartford, CT 06103
860-240-8954
scsevigny@gweiss.com

From: Apollo Wong
Sent: Wednesday, July 09, 2008 3:36 PM
To: Pierce Archer; Susan Sevigny
Subject: FW: George Weiss MAPS Investment Guidelines- PLEASE READ

Susan,
Please transfer all the positions mentioned in Rule 11 and Rule 12 to OGI account from the MAPS account. Thanks.
Apollo

From: Enrique Espinoza [mailto:enrique.espinoza@db.com]
Sent: Tuesday, July 08, 2008 11:57 AM
To: Apollo Wong
Cc: Satish Ramakrishna; Rafael Rojas; Joe Genovese
Subject: George Weiss MAPS Investment Guidelines- PLEASE READ

Hi Apollo,

Hope everything is fine. We see that your MAPS book is breaching some investment guidelines. We need you to comply with the investment guidelines as soon as possible.
Thanks.

Kind Regards,
Enrique

Enrique Espinoza, CFA
Deutsche Bank Securities Inc.
Global Markets Equity
Global Prime Finance Risk
60 Wall Street, 13th Floor
New York, NY 1005-2836
+1 212-250-2152
+44-(0)-20754-52644
enrique.espinoza@db.com

From: Eamon McCooey <eamon.mccooey@db.com>
Sent: Wednesday, July 30, 2008 9:31 AM
To: tkerns@rentec.com
Cc: Frank X Nelson; Jim Rowen; Peter Brophy; Satish Ramakrishna; jmayers@rentec.com
Subject: Re: Optionality Value
Attachments: C6766005.gif; C6011705.gif; graycol.gif; pic25411.gif; ecblank.gif

Importance: Low

Tom,

We have proposed your suggestion to McKee with regards to defining the Optionality Value and instead deriving the Option Cost Factor in the Option Confirmation. McKee has voiced no objections to the change [and has inserted the concept of Option Cost Factor in the new drafts] but Peter has raised some concerns that the new formula does not really flow well as it pertains to the Option Settlement Amount B calculation.

As we discussed the concern for changing the formula was to ensure that the Optionality Value as a percentage of the Total Premium was kept in a narrow band of approximately 20-21% and by defining the value it would always ensure that this ratio was maintained.

However, when you look at the calculation for the Cash Settlement Amount B, Peter's concern is that since optionality value is now a defined value that the concept of substitute term rate and term rate do not flow very well in terms of the calculation. We suggested that keeping the formula the existing way and instead manage the "Initial Leverage" value to ensure that the optionality value stays within the defined % ratio. For example, if the term rates go from 3% to 6% the Initial Leverage would be reduced from $600mm to $300mm. I understand you are away but if you want to call in for 5 minutes to discuss both Peter and myself are available.

The **greater of** (i) zero, and an amount determined as follows: (ii) the sum of (a):

$$\left(NAV\,Index\ Level - Strike\ Price\right) \times \frac{Notional\ Amount}{100}$$

plus (b) the Optionality Value, **plus** (c) the **greater of** (x) zero, and (y) an amount determined as follows:

$$Optionality\ Value \times \left(Substitute\ Term\ Rate - Term\ Rate\right) \times \frac{Remaining\ Tenor}{365}$$

Regards,
Eamon McCooey
Deutsche Bank Securities Inc.
Global Markets
Global Prime Finance
(212) 250-6856 - Office
[redacted]
(212) 250-6852 - Group Line

▬ = **Redacted by the Permanent Subcommittee on Investigations**

Permanent Subcommittee on Investigations
EXHIBIT #18

Thomas Kerns <tkerns@rentec.com>

Thomas Kerns
<tkerns@rentec.com>

07/25/2008 12:00 PM

ToEamon McCooey/db/dbcom@DBAmericas, Peter Brophy/db/dbcom@DBAmericas, Frank X Nelson/db/dbcom@DBAMERICAS, Satish Ramakrishna/db/dbcom@DBAMERICAS

ccJim Rowen <jrowen@rentec.com>

SubjectOptionality Value

Gents

This has been bugging me, so I thought I'd give it one more go....

First, a recap:
Currently we have a number of known variables and one unknown variable that we need to solve for
Known: Anticipated Leverage, Term Rate, Debit Spread and Tenor
Unknown: Optionality Value

The current formula is OV = (AL * (TR + DS)*Tenor) / (365+(TR * Tenor)).
In other parts of the confirm the concepts of Optionality Value and Anticipated Leverage are integral in the calculation of debit and rebate financing

While this formula will give a desired result at the current interest levels, as interest rates increase (and we could potentially require a longer dated option) the Optionality Value could get prohibitively high even to the point of exceeding the total amount of premium.

I played around with other formulas but still came up against the same conundrum (I have never typed that word before).

Also, using a flat amount for Optionality Value does not work because of the concerns regarding the other financing calculations.

That's the recap....here is the idea.....

We talked about creating an Anticipated Leverage number (now call Initial leverage) based on a flat OV amount, but we thought that the resulting number was not representative of "leverage" and therefore would not work. BUT what if we left leverage out of the calculation altogether and used the formula that is in the confirm to create a number that we called the Option Cost Factor, or some other phrase the depicts that it was used to derive the initial cost of the option. The OV does represent a cost to us as this amount will amortize over the life of the option, so the concept of a "cost factor" is plausible.

The derived formula is as follows; instead of solving for the unknown OV, we actually negotiate a flat OV amount and the Option Cost Factor (which replaces the AL) becomes the unknown variable that we solve for. The resulting formula is as follows (unless someone smarter than me can reduce it):

Option Cost Factor = Optionality Value / (((Term Rate + Debit Spread) * Tenor) / (365+(Term Rate * Tenor)))

I believe this solves our two concerns. By setting the Optionality Value to a negotiated amount we can ensure that the number does not eat up too much of the premium and we can then replace the concept of Anticipated Leverage with the concept of an "Option Cost Factor" and which replaces the term "Anticipated Leverage" with "Option Cost Factor" throughout the confirm. Therefore all of the other financing calculations will work.

I ran this by Dan, Jim and Jonathan who are all ok with it. Your thoughts?????? Can we run this by MN?
TK

EXCERPT

GPF Business Development
CTB Program Portfolio

Permanent Subcommittee on Investigations
EXHIBIT #19

Global Prime Finance
September, 2008

A Passion to Perform.
Deutsche Bank

DB-PSI 00116157

Deutsche Bank GPF Business Development - CTB Program Portfolio	Product Development: Eamon McCooey	Month Sep-2008 Overall status:

Portfolio Summary	Portfolio Commentary
Global Prime Finance Change the Bank Programs.	Due to recent market conditions, we have focused some efforts on research and tactical developments to circumvent regulatory and reputational risks.

2008 Achievements Completed to Date	
Fidelity Action Compare released for golden source announcement data: Issues have been discovered with "golden source" due to operational workflow disconnects. Event Repository project to mitigate these issues: Qtr 1 2009	R
Client Rep Workstation: workflows released: (Prod) US and Intl Margin requirements validation and approval.	G
dbX security data integrity monitoring, and internal Margin equity change report released.	G
PB GO (version 1.4), Global On boarding application for new client opportunities has been released. Functionality includes online ORF, credit, legal and transition pipelines with MI reporting. This is the final 1.X release	G
Securities Lending Agent Lender disclosure feeds for RWA calculations have been implemented to comply with Basel II requirements.	G
Short without locate report in production. Report was regulatory requirement.	G
Tri-Party infrastructure completed. Dividend Capital and Proshares are the first two live Swap clients. Analytic will be the first live PB client (ETA: May 19th)	G
UCITS III product build-out with risk guidelines and monitoring has been implemented for Equity and Fixed Income clients. Advent Capital first client expected to go live in Q2.	G
MIS Pack (IPB Europe) Tactical developments completed, additional developments will be performed through the Global MIS project	G
Balance Sheet substantiation reports to close audit points in London.	G
Asset Services Stock Record and automatic calculation of manufactured positions for dividend processing.	G
SL Desk reporting for client position SLAM cross reference.	G
Asset Services: PB dividends automation - improved payment on payment date from 65% to 90%	G
Asset Services: Delivery of notifications lite in Asia and Europe.	G
Asset Services: Claims manager for UK business	G
Asset Services: Delivered tactical stock record for automating manual tasks within CA lifecycle.	G
Asset Services: Open Span automation for DBNY's International dividend balancing and closing process.	G
Upcoming Achievements	
Client Rep Workstation: Workflow releases include Non Receipts and Unfunded Currencies. (UAT) Tech Short alerts, Intl receipts, Alert Tasks, CSW Coverage	
Geneva conversion continues with less than 10 to convert and about 20 in parallel.	A
GlobalPrime 3.0 release with Reporting and Sec Lending enhancements with Technical infrastructure changes including Single Sign On.	
Eclipse de-commissioning: Decommissioning of the legacy international PB platform. Once Geneva migration is completed, Eclipse will be continued to be utilized by Operations for Fail management.	A
dbX Margin New ROR Conversion continues with a total 440 out of 551 relationships (79.9%) migrated to the new ROR	
FRM: London Algo initial release	
Multi-MAPS: re-engineering of MAPS product	A
PB GO future releases includes connectivity Paragon, functional enhancements, a Dashboard with MI and a client Pricing calculator.	

Deutsche Bank
GPF Business Development - CTB Program Portfolio

Product Development: Eamon McCooey

Month Sep-2008
Overall status:

Program Status, Costs and Comments

								TOTAL	2,198,560	17,442,640	Cost figures are represented in Euro
Current Program	Business Sponsor	Program Manager	Program State	Status	Confidence Level	Planned	Fcast / Actual	Variance	MF Costs	YTD Costs	Program Comments
Asset Optimization	T Fisher	R Marshall	Analysis		MED	Dec-08	Dec-08	0 Days	32,000	183,000	Consolidated from Rehypo and Depo projects
Client Service Workstation	C Perlman	M Ginelli	Development		MED	Dec-08	Dec-08	0 Days	269,000	2,297,000	
Data Integrity DBX	C Caruso	E McCooey	Development		LOW	Sep-08	Sep-08	0 Days	-	147,000	Update as of June 2008
Eclipse Decommissioning	J Dorman	M Ginelli	Development		HIGH	Jul-08	Oct-08	+69 Days	12,000	1,185,000	
FRM Cash & Liquidity Management	K Harrison	D Copans	Analysis		HIGH	Dec-08	Dec-08	0 Days	30,000	122,000	
Geneva Implementation	P Brophy	A Mandelbaum	Conversion	A	HIGH	Jun-08	Nov-08	+131 Days	559,000	2,778,000	
GFC Pricing Rules of the Road	K Harrison	D Copans	Analysis		MED	Dec-08	Dec-08	0 Days	2,000	71,000	
GlobalPrime Platform	E McCooey	P Yerrill	Development		MED	Aug-08	Nov-08	+92 Days	247,000	1,768,000	
GlobalPrime Securities Lending Portal	K Babbit	P Marshall	Development		MED	Oct-08	Dec-08	+68 Days	-	-	
GlobalPrime SLAM	A Byrne	P Marshall	Development		MED	Dec-08	Dec-08	0 Days	-	-	
GlobalPrime Trade Manager	M Haas	C Gulino	Analysis		MED	Apr-09	Apr-09	0 Days	62,000	342,000	
GME Asset Services	T Fisher	N Scott	Development	A	MED	Dec-08	-	0 Days	247,300	2,331,540	
GME Global Prime Finance Operations	S Palaniappan	T Fisher	Development	A	LOW	Dec-08	-	0 Days	164,260	1,218,100	
GPF: Operating Mode	C East	R Cairns	Development		MED	-	-	0 Days	-	92,000	Update as of June 2008
Information Security	C Caruso	C Gulino	Development		LOW	Dec-08	Dec-08	0 Days	-	287,000	Update as of August 2008
U.S. Inventory Management	P Busby	R Marshall	Development		HIGH	Dec-08	Dec-08	0 Days	59,000	157,000	
Multi MAPS Product	M Haas	E McCooey	Development		MED	Sep-08	Sep-08	0 Days		254,000	
Margin New ROR	F Nelson	W Shih	Conversion		MED	Dec-08	Dec-08	0 Days	206,000	905,000	
MIS	J Dewey	D Copans	Analysis		MED			0 Days	N/A	N/A	
PB-GO	D Dirvin	M Ginelli	Development	A	MED	Dec-08	Dec-08	0 Days	114,000	1,048,000	
Portfolio Margin	E McCooey	V Pfalzer	Development		MED	Jul-08	Oct-08	+69 Days	-	-	
Sec Lending Risk Monitoring	E McCooey	D Copans	Development		HIGH	Jul-08	Jul-08	0 Days	5,000	25,000	
Short Charging	E McCooey	D Copans	Analysis		MED	Oct-08	Oct-08	0 Days	15,000	80,000	
Quality and Stability	E McCooey	M LaMorte	Development		HIGH	Dec-08	Dec-08	0 Days	207,000	2,146,000	
New Projects	Business Sponsor	Program Manager	Program State	Status	Confidence Level	Planned	Fcast / Actual	Variance	MF Costs	YTD Costs	Program Comments
iDelta Future State	J Hammond	TBD	NEW		LOW			0 Days	N/A	N/A	New Approved Program
dbX Margin Indebtedness Allocation			NEW		MED			0 Days	N/A	N/A	
Project Changes	Business Sponsor	Program Manager	Change	Status	Confidence Level	Planned	Fcast / Actual	Variance	MF Costs	YTD Costs	Program Comments
Global Perfection	M Haas	C Foley	ON HOLD		HIGH	Aug-08	Aug-08	0 Days	0	14,000	On Hold pending prioritization.
Agent Autoborrow	T Fisher	D Copans	ON HOLD		MED			0 Days	0	5,000	Replace with a tactical approach for Short Charging.
GlobalPrime Corporate Actions	T Fisher	C Gulino	ON HOLD		LOW	Sep-08	Sep-08	0 Days	0	34,000	On Hold pending resource commitment.
International Inventory Management	B Sofoluwe	R Marshall	ON HOLD		LOW	Dec-08		0 Days	0	84,000	On Hold pending resource commitment.
Online SWAP Manager	K Nealis	C Gulino	ON HOLD		LOW			0 Days	0	5,000	On Hold pending prioritization.
Self Funded '40 Act PB	C Caruso	M Ginelli	ON HOLD		LOW			0 Days	0	47,000	On Hold pending prioritization.
Completed Projects	Business Sponsor	Program Manager		Status		Actual Date				Costs	
Agent Lender Disclosure & Basel II compliance	J Hammond	D Copans	Completed	C							
RegSho Shorts-Locates	P Busby	D Copans	Completed	C							
Bank Loans: Prime Brokerage	T Fisher	S Kempton	Completed	C						56,000	
MIS Pack (IPB Europe)	C East	R Baxter	Completed	C						N/A	Future developments in the New GPF MIS Program

Deutsche Bank
GPF Business Development - CTB Program Portfolio

Product Development: Eamon McCooey

Month	Sep-2008
Overall status:	

Project Status: Legend for Project Scope Timelines

Milestone- is a checkpoint along the way in the workstream. Milestones should be specified such that it is easy to ascertain whether or not a milestone has been reached. Ideally milestones also provide line managers with useful results – the milestone then becomes both a checkpoint and a deliverable.
Project Milestones – High Level

Projects with a significant Technology development component can use the following milestones :
- Project Identification and Initiation **(PI)**,
- Business Analysis and Specification **(BA)**,
- Technical Specification **(TS)**,
- Technical Development **(TD)**,
- Integration Test **(QA)**,
- User Acceptance Test **(UA)**,
- Go-Live **(GL)**,
- Post Deployment **(PD)**.

The color coding is a RAG status on the milestone and the current and next forward month.
- Red color begins when project milestone is one month over the planned period.
- Amber color begins when project milestone is between the planned period and under one month.
- Green color remains throughout the planned period.
- Blue color on the milestone and month indicates the milestone is complete.

Project Status: Level
(Level of Confidence)

Con Level LOW is the lowest confidence level, where dates require additional sizing and confirmation.
This level permits variability between 20 - 50%.

Level MED maintains a confidence level, where dates are committed and resources can be allocated.
Phase plans dates are refined to coincide with detailed scopes and release schedules. This level permits variability between 20 - 50%.

Level HIGH has the highest confidence level, where the project is fully supported, planned and resourced. Approved Project scope will affect the project plan.
This level permits variability between 10 - 20%.

Project Status: Issues and Risks

Issues
These differ from risks in that an issue will already be impacting progress, costs or benefits and action is required to bring the project back on track.
The text must summarize the issue and its impact, the action required to address the issue, and the owner of that action e.g.
- – Issue: UAT delayed by insufficient user resource
- – Action to address; hire 3 temps to backfill line resource

Risks
This section must be completed. Enter those risks that are rated as having greatest potential impact on the project goals. Areas to consider:
- – The plan itself may have aspects of risk (i.e. does it assume that the project is fully mobilized and running from Day One?)
- – Technical areas of high risk (i.e. is the technology new to us?)
- – Decisions that are critical for progress (i.e. are decisions sensitive and confidential and can they create difficulties for open communication?)
- – Resource requirement estimates (i.e. are estimates based on experience and does a systematic method of approach underpin the estimates?)
- – Access to resources is often uncertain in a project (i.e. is sufficient time planed for sign off of requirements by management?)

The text must summarize the risk and its impact, mitigating action and the owner of that action, e.g.
- – Risk: insufficient user resource to complete UAT on time

Project: New Multiple MAPS structure
Status: OPCO Submission

OpCo Sponsor: J Dorman / A Byrne
Business Sponsor: Frank Nelson
Product Manager: Eamon McCooey

Project State	Planned:	
Development	Forecast:	
	Current:	Sep-08

RAG	Prev	Curr
Progress:	A	A
Risks:		
Budget:		
Overall:		

Project Objectives

The object of this initiative is to provide a New Multiple MAPS structure that will more closely resemble a traditional options structure - premium risk. This new structure will require a major overhaul of our existing MAPS product / functionality such as the negotiation of new documentation, bifurcation of trading and risk across options / trading accounts, new MAPS defintions and calculations, new trade processing, CSR and risk management workflows.

Commentary

Project is already under way given the time sensitive nature of the project as well as the potential revenue risk

Project Benefits

Will enable us to more actively market this structure to new clients as well as protect existing revenue streams of the existing MAPS clients.

Business Impact

Prime Brokerage
Synthetic Equities

Infrastructure Impact

BAC
IT

Active Project Milestones	Level	J	F	M	A	M	J	J	A	S	O	N	D
Project Phase 1	MED												
Project Anlaysis	MED												
Technical Infrastructure	MED					TD	TD	TD	TD				
GFC development													
PEAS Development	MED												
PB Tool box development	MED												
Workflow / Playbook development	MED												
Project Phase 2													

Project Milestones A

Active Milestones	State	Commentary	RAG	Plan	Forecast	Var
Finalize Documentation	95%			16-May-08	31-Oct-08	+168 Days
Workflows / playbbooks	10%			31-May-08	30-Nov-08	+183 Days
						0 Days
						0 Days
						0 Days
						0 Days

Completed Milestones	Commentary	RAG	Plan	Actual	Var
Project Analysis - Phase 1	Complete	G			0 Days
IT development [GFC / PB / Risk]	Complete	G			0 Days
					0 Days
					0 Days
					0 Days

Issues and Risks

Issue	Action to address	Resp
Geneva development on existing MAPS structure	Need to complete	JF
Rentech's agreement on new File formats	Ability to process Geneva files	PB
Regulatory changes	No actions necessary	

Risk	Action to mitigate	Resp

Programme Costs / Benefits - Monthly Reporting Only Sep

Euro (K)	Current Month Plan	Current Month Actual	Current Month Var	YTD Plan	YTD Actual	YTD Var	Full Year 08 Plan	Full Year 08 F'cast	Full Year 08 Var
Total	0	154	0	0	254	0	0	0	0
Business	0	50	(50)	0	150	(150)	0		0
Technology	0	104	(104)	0	104	(104)	0		0
Hardware / Vendor	0	0	0	0		0	0		0
Operations	0	0	0	0		0	0		0
Miscellaneous	0		0	0		0			0

Annualized Benefits (See Benefits page for detail)	Full Year 08	Full Year 09
Total		25,000

Additional Commentary

DB-PSI 00116177

From: Apollo Wong <awong@gweiss.com>
Sent: Friday, October 10, 2008 5:14 PM
To: Rick Doucette <rdoucette@gweiss.com>
Subject: db maps account imbalance

just got a call from db claiming we have too much net long exposure in maps and want just to bring the porfolio back within 5% exposure within a week
maybe we can cross some position over to ybs next week

Sent from my iPhone3G

From: Jonathan Mayers <jmayers@rentec.com>
Date: 10/21/2008 09:13:19 AM
To: Frank X Nelson/db/dbcom@DBAMERICAS; Eamon McCooey/db/dbcom@DBAmericas; Peter Brophy/db/dbcom@DBAmericas; cn=frank x nelson/ou=db/o=dbcom@dbamericas
Subject: [Fwd: FW: DB/Rentec - Response to Issues Discussed on 10/16]

-------- Original Message --------
Subject: FW: DB/Rentec - Response to Issues Discussed on 10/16
Date: Mon, 20 Oct 2008 18:08:03 -0500
From: O'Brien, Michael P. <MPObrien@winston.com>
To: 'Jonathan Mayers' <jmayers@rentec.com>

word from Josh

Michael P. O'Brien
Partner

T: +1 (312) 558-8097

-----Original Message-----
From: Goldstein, Joshua [mailto:JGoldstein@MckeeNelson.com]
Sent: Monday, October 20, 2008 6:04 PM
To: O'Brien, Michael P.
Cc: Kopp, Steven
Subject: RE: DB/Rentec - Response to Issues Discussed on 10/16

Dear Michael,

A couple of comments regarding your email of Friday, October 17.

1) You have proposed 20 Exchange Business Days as the use-it-or-lose-it timing on the Advisor For Cause Termination Event. I'm sure you must realize that this is a huge departure from the 4 Exchange Business Days that you had reviewed in multiple earlier drafts (and please note that the clock started ticking, under the earlier drafts, from the time that the Advisor became aware of the facts giving rise to the breach - without regard to any 2- day cure the Client might have). In any event, expanding this to 20 Exchange Business Days does not work from a tax standpoint. 20 Exchange Business Days to make a termination decision under a 13-month option tilts the balance strongly in favor of viewing the accrual of this termination right into the effective conversion of the option into an American style option. Although we conveyed to you that we could give you another day - to 5 Exchange Business Days, unfortunately we cannot give you 20 days. In addition, for terminations such as breaches of confidentiality and representations, there seems to be no rational business reason that would require you to have more days to make a termination decision (particularly no business reason that would withstand our tax analysis).

2) I have spoken with DB about the Pricing Period adjustment which RenTech and you are rejecting. DB has expressed to me that you're position is the same one that you, me and my colleague Steve Kopp discussed on the phone last week: namely that you believe that because the Calculation Agent determines the Pricing Period, the basis risk that we identified does not exist. Perhaps there is a misunderstanding, but permit me to reiterate our position. The definition of Pricing Period states:

"In the event that the Buyer disputes the Calculation Agent's determination of the Pricing Period and can reasonably demonstrate that an investment manager could have liquidated and reduced to cash a portfolio substantially similar to the Basket in a shorter period subject to the same conditions considered by the Calculation Agent in determining the Pricing Period, then Buyer and Seller shall mutually determine in good faith any adjustment to the Pricing Period and the Pricing Period shall end on the last day of such adjusted period."

Suppose, for example, that the Confirmation is terminated on a Monday morning by Mosel because of a Credit Event Upon Merger in respect of DB. The Pricing Period would then be treated as having started at the time of such termination on Monday. However, the IAA would not automatically terminate and so DB, if it chose to terminate the IAA, would need to give three days notice to the Advisor that it was terminating the IAA without cause. The Advisor then has three days to decide whether it is going to control the Liquidation. After those three days pass, if the Advisor has not stated that it will control the Liquidation, then the Client may take control of the Account and commence the Liquidation. (Alternatively, the Advisor can notify DB on, say, Wednesday, that it is commencing a Liquidation.)

Thus, under this scenario, DB wouldn't be able to commence a Liquidation of the Account until three days after the Option terminated, on Thursday (assuming DB gave a termination without cause notice to the Advisor as soon as Mosel delivered a Buyer Termination Notice of the Option). However, the Pricing Period began on Monday. But suppose further that DB was able to completely liquidate the account on Thursday (in one Exchange Business Day). The Calculation Agent may state (although I don't know that they reasonably could) that the Pricing Period ran from Monday through Thursday. But the text of the Confirmation allows Mosel to dispute this determination - they can point out that the Liquidation could have been completed in one Exchange Business Day (because it actually was), and so they say that the Pricing Period should have started and ended on one Exchange Business Day, i.e. on Monday. Mosel could then argue that they believe that the Option should have been liquidated at market values reflecting where the market was on Monday rather than Thursday - leaving DB exposed to market movements (basis risk) from Tuesday through Thursday. This is the problem we are trying to eliminate. And of course it doesn't matter whether the actual Liquidation is one day, or several days, or a month, or whether, under the alternative scenario, the Advisor notifies DB on Wednesday that it is commencing a Liquidation (and actually conducts the Liquidation in one day or any other number of days). The same basis issue lurks in either of these scenarios.

Thus, even though the text says the Calculation Agent determines the Pricing Period, it also allows the option Buyer to challenge such determination. We are simply addressing that this dispute mechanism creates the basis risk that we want to mitigate.

Please let me know your thoughts.

Thank you,

Josh

Joshua J. Goldstein
Associate

McKee Nelson LLP
One Battery Park Plaza
New York, NY 10004
Phone: (917) 777-4378
Fax: (917) 777-4299
jgoldstein@mckeenelson.com

-----Original Message-----
From: O'Brien, Michael P. [mailto:MPObrien@winston.com]
Sent: Friday, October 17, 2008 3:06 PM
To: Goldstein, Joshua
Cc: 'Jonathan Mayers'
Subject: DB/Rentec - Response to Issues Discussed on 10/16

Josh:

This morning, I discussed with Jonathan the issues that we discussed yesterday afternoon concerning our latest comments on the outstanding points. Rentec's response on two of those issues is as follows:

1. Short Sale Liquidity Failure - Rentec is willing to accept DB's proposed approach with respect to creating Designated Positions on a transaction by transaction basis (in contrast to the "all or nothing" approach we proposed) to avoid a Short Sale Liquidity Failure. Thus our proposed change of 10/16 to the "Short Sale Liquidity Failure" rider can be ignored. Instead we propose to redraft slightly the parenthetical provision of the first sentence of the rider to read as follows:

"provided that, for purposes of this provision and in respect of any proposed short sale, the Client shall be deemed to have made sufficient shares available to support such short sale if the Client notifies Advisor that such short sale creates a Designated Position."

As discussed, our proposed addition of a new Section 2(b)(v) remains appropriate.

2. Section 8(d) - With respect to the lead in to Section 8(d), third paragraph of the DB proposed rider, Rentec is ok to withdraw the concept of the Advisor For Cause Termination Event but would propose to revise the relevant language to read:

"within twenty (20) Exchange Business Days of (x) in the case of (W) or (Y), attaining knowledge of the facts giving rise to the relevant breach or (y) in the case of (X), the occurrence of the Material Client Support Breach"

3. Pricing Period - I understand that Rentec is discussing directly with DB its concerns with the changes to this provision.

Please do not hesitate to contact me with any questions concerning the above.

Best regards

Michael P. O'Brien
Partner

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--
Jonathan Mayers
Renaissance Technologies LLC
800 Third Avenue, 35th floor
New York, New York 10022
tel (212)872-1614

EXCERPT

Bates No.	DB-PSI 00122458
Call Duration	32:19
Date of Call	November 7, 2008
Time Stamp	**Transcription**

08:47

	Mr. Ramakrishna: In that situation.. so that's the way option is supposed to work.. now what I've uh.. now this is meant... this is structured as an option because
	Mr. Broeksmit: Yeah for tax reasons **Mr. Ramakrishna:** For tax reasons but the.. the.. the option makes it clear that the premium is the only.... only commitment that the option holder has **Mr. Broeksmit:** Yeah umm hmm **Mr. Ramakrishna:** And so it's like a non-recourse strike **Mr. Broeksmit:** Yes

Permanent Subcommittee on Investigations
EXHIBIT #22a

EXCERPT

TRANSCRIPT OF AUDIO RECORDING PRODUCED TO THE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

Date:	November 6, 2008
Parties:	Jim Rowen, Peter Brown, Satish Ramakrishna and Deepak Agrawal
Bates:	DB-PSI 00122457

Peter Brown: … So I think your question is how would we react when some extraordinary thing happened that can't be so easily measured in market statistics? Is that accurate?

Satish Ramakrishna: Absolutely, yes.

Peter Brown: Well, the answer there is that we have a risk control department and we also have senior management, all of whom are quite tuned into what is going on in a qualitative sense in the market. Jim Rowen, here, is a perfect example. He spends a good fraction of his day calling around to various counterparties, some of whom we have relationships with and some of whom we don't, getting a sense of what is going on in the market. We then take that into account and it adjust the levels at which we run. So, for example – and now is a perfect example. October – and I think I can say this because it's going to be in the letter which I'm just writing. October was a record month for us. And, ah, we've done very well so far this month. It seems like an extremely – our models are functioning very well in this environment. Nonetheless, we are, they are, we are running at reduced levels and the reason we are running at reduced levels is precisely the reasons that you bring up. It's – there's still – it's not clear – we're still in unchartered territory here. We don't know exactly – is government intervention going on. This is new – the models don't see the government intervention but we do, and we are nervous that something could happen. As a result, right now the model would like to have very large portfolios, but we are running at reduced levels simply because of those qualitative extraordinary items you were talking about. So we have actually intervened and we do that from time to time when things like this happen.

Permanent Subcommittee on Investigations
EXHIBIT #22b

To: eamon.mccooey@db.com[eamon.mccooey@db.com]; Peter Brophy[peter.brophy@db.com]
Cc: Moetell, Mitch[MMoetell@winston.com]; Cohen, Edmund S.[ECohen@winston.com]; Jim Rowen[jrowen@rentec.com]; Jonathan Mayers[jmayers@rentec.com]; tkerns@rentec.com[tkerns@rentec.com]; 'DanielKoranyi'[dkoranyi@rentec.com]
From: O'Brien, Michael P.
Sent: Wed 12/10/2008 10:52:33 AM
Importance: Normal
Subject: FW: Test of representations

Eamon and Peter:

Please see Mitch's comment below.

Thanks

Michael P. O'Brien

Partner

T: +1 (312) 558-8097

WINSTON
& STRAWN
LLP

From: Moetell, Mitch

Permanent Subcommittee on Investigations
EXHIBIT #23

Sent: Wednesday, December 10, 2008 8:48 AM
To: O'Brien, Michael P.; Cohen, Edmund S.
Subject: RE: Test of representations

In the lead-in, instead of "...in support of your legal opinion," say "...in support of your legal opinion to Mosel and certain of its affiliates."

Thanks,

Mitch

From: O'Brien, Michael P.
Sent: Tuesday, December 09, 2008 11:24 PM
To: Moetell, Mitch; Cohen, Edmund S.
Subject: FW: Test of representations

Please see DB proposed reps below. Please let me know how you wish to respond to DB.
Best

From: Eamon McCooey [mailto:eamon.mccooey@db.com]
Sent: Tuesday, December 09, 2008 10:00 PM
To: O'Brien, Michael P.
Cc: peter.brophy@db.com; frank.x.nelson@db.com
Subject: Fw: Test of representations

Michael,

Please find listed below the proposed draft of the DB reps that we will make to Winston, please let me know if this format is acceptable.

Regards,
Eamon McCooey
Deutsche Bank Securities Inc.
Global Markets
Global Prime Finance
(212) 250-6856 - Office
[redacted]
(212) 250-6852 - Group Line

▬ = Redacted by the Permanent Subcommittee on Investigations

----- Forwarded by Eamon McCooey/db/dbcom on 12/09/2008 10:59 PM -----

Marcelo Riffaud/db/dbcom

12/09/2008 09:45 PM

To

frank.x.nelson@db.com, Eamon McCooey/db/dbcom@DBAmericas, Peter Brophy/db/dbcom@DBAmericas cc

marcelo.riffaud@db.com

Subject

Fw: Test of representations

Frank,
Here is the text of the rep letter for Winston. Please note that since we do not yet know the date of the option, the MIAA and the SIAA, we cannot date this or finalize this document. But that shouldn't be a problem, because it won't be required in final form until then -- which is the same day that we'll get their opinions.
Please show this to Winston. No doubt they will want to comment.

As to McKee's rep letter, they will likely want to draft their own as well, but we can do the same with their reps as I have done here.

_________START OF WINSTON REP LETTER___________________________

[ENTER DATE]

Winston and Strawn [Correct spelling]
[Address]

In connection with (a) the Outperformance Barrier Option Transaction between Deutsche Bank AG London ("DB") and Mosel Equities LP ("Mosel") dated [ ] (the "Option"), (b) the Master Investment Advisory Agreement between DB and Renaissance Technologies LLC ("Rentec") dated [ ] (the "MIAA"), and (c) the Supplemental Investment Advisory Agreement (the "SIAA") between DB and Rentec dated [ ] (the "SIAA" and together with the Option and the MIAA, the "Transaction Documents"), you have asked that we provide the following representations as part of the basis of support of your legal opinion.

Unless the context indicates otherwise, all capitalized terms used herein and not otherwise defined herein shall have the meanings provided in the

Transaction Documents.

DB represents and warrants as follows:

1. DB would not be willing to extend a loan commitment to Mosel in the amount that would be necessary to enable Mosel (as borrower) to trade positions in securities up to the limits set forth in the SIAA in an account owned by Mosel (as borrower) that was capitalized with an amount equal to the Sub-Account Initial Capital Available, if DB's recourse, as lender, were limited to the assets in that account; and

2. It will be operationally feasible for DB to create Designated Positions, both by not executing transactions directed by the Advisor and by unwinding or liquidating Effected Positions without the direction of the Advisor.

DEUTSCHE BANK AG LONDON

By: ____________________________________
Name:
Title:

By: ____________________________________
Name:
Title:

________________________END OF WINSTON REP LETTER____________________

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Marcelo Riffaud
Managing Director | Legal Department
Deutsche Bank AG | 60 Wall St. | New York, NY 10005
212.250.7628 (office) | [redacted] | 732.460.7183 (fax)

PRIVILEGED AND CONFIDENTIAL COMMUNICATION

Any tax advice contained in this email was not intended to be used, and cannot be used, by you (or any other taxpayer) to avoid penalties under the Internal Revenue Code of 1986, as amended.

EXECUTION COPY

MASTER INVESTMENT ADVISORY AGREEMENT

AGREEMENT dated as of December 15, 2008 (the "Agreement") between **Deutsche Bank AG London** (the "Client"), and **Renaissance Technologies LLC** (the "Advisor," and with the Client, each a "Party" and together, the "Parties").

In consideration of the premises and mutual promises hereinafter set forth, the parties hereto agree as follows:

1 Appointment of the Advisor.

(a) The Client hereby appoints the Advisor as the exclusive manager of a separately managed account containing a designated portion of the Client's proprietary portfolio (the "Account") upon the terms hereinafter contained and in accordance with the Client's Investment Guidelines and Compliance Restrictions as set forth on Appendix I hereto, (the "Master Investment Guidelines and Compliance Restrictions") and the Advisor hereby accepts such appointment and agrees to assume the obligations and duties set forth herein until its appointment shall be terminated as hereinafter provided. Any amendment to the Master Investment Guidelines and Compliance Restrictions must be in writing and signed by the Parties. At the request of the Client, the Account may be divided into one or more sub-accounts (each, a "Sub-Account"). With respect to any Sub-Account, further investment guidelines and compliance restrictions will be established under Supplemental Investment Guidelines and Compliance Restrictions ("Supplemental Investment Guidelines and Compliance Restrictions") pursuant to a Supplemental Agreement (as defined below). The Client may further sub-divide each Sub-Account into (i) one or more "Trading Accounts" and (ii) one or more "Term Accounts," as those terms are defined in the applicable Supplemental Agreement. Upon the establishment of any Sub-Account, the Parties shall execute a Sub-Account Supplemental Investment Advisory Agreement (a "Supplemental Agreement,") in the form attached hereto as Appendix II, so as to include, if appropriate, Supplemental Investment Guidelines and Compliance Restrictions with respect to such Sub-Account, and any other terms individually applicable to such Sub-Account.

(b) The fees and compensation of the Advisor for the performance of its duties under this Agreement are as set forth in the applicable Fee Letter (each, a "Fee Letter" and all such fees, collectively "Advisor Fees") entered into between the Advisor and the Client attached as an appendix to each Supplemental Agreement.

(c) Until the termination of this Agreement, and subject to the provisions of this Agreement permitting it to act otherwise, the Client shall provide, or cause to be provided, such services, maintain such reports and perform its obligations under this Agreement as is necessary to permit the Advisor to perform its obligations under this Agreement, subject to the limits contemplated by the Master Investment Guidelines and any applicable Supplemental Investment Guidelines.

(d) The Client owns all assets in the Account, is entitled to all income in respect thereof (other than income credited in respect of Designated Positions (as defined below)) and is responsible for all expenses in respect thereof (other than expenses debited in respect of Designated Positions) subject only to the obligations of the Client to the Advisor hereunder or under any Fee Letter. Nothing in this Agreement shall be deemed or construed to convey to the Advisor an ownership interest in the Account.

2 Functions, Powers, Duties and Obligations of the Advisor; Designated Positions.

(a) During the continuance of its appointment the Advisor shall, subject to compliance with the Master Investment Guidelines and Compliance Restrictions and any applicable Supplemental Investment Guidelines and Compliance Restrictions, have full power, authority and right to:

(i) supervise and direct the investment and reinvestment of all assets in the Account, and engage in such transactions on behalf of the Client's Account, in the Advisor's discretion and without prior consultation with the Client, subject only to the terms of this Agreement, in any and all forms of securities or other property, including, without limitation, derivatives, options, futures and commodities, as permitted by the Master Investment Guidelines and Compliance Restrictions and any applicable Supplemental Investment Guidelines and Compliance Restrictions (any transaction directed by the Advisor and actually executed on behalf of the Account pursuant to such directions being an "Effected Position"); provided, that any Effected Position that, at the time of its execution, results in an Investment Guidelines Violation or a Compliance Violation (as each term is defined below in Section 8(c)), shall remain an Effected Position unless and until liquidated;

(ii) hold temporary cash balances in the Account or invest such temporary cash balances in money market funds or comparable short-term investments with interest thereon credited to the Account and the applicable Sub-Account;

(iii) prepare or procure the preparation of reports on the Account's investment performance and such other matters, as further provided herein;

(iv) select and place orders with brokers and dealers to execute Account transactions, as further provided herein; and provide such other services in connection with the management of the Account by mutual consent of the Client and the Advisor.

The Advisor shall keep or cause to be kept on behalf of the Client's Account such books, records, statements and accounts as may be necessary to evidence a complete record of all transactions carried out by the Advisor for the Account; and shall permit the Client and its employees and agents to inspect such books, records and statements at all reasonable times.

In exercising rights and carrying out its duties hereunder the Advisor is authorized to act for the Account and on the Client's behalf either by itself or in part through its authorized agents as it shall determine; *provided, however*, that the appointment of any agent shall not relieve the Advisor of its responsibilities or liabilities hereunder. In managing the Account and exercising rights and carrying out its duties hereunder, the Advisor shall exercise the same care that it would exercise in handling similar matters for its own account, except as such standard of care may be otherwise modified by the express terms of this Agreement.

The Advisor is authorized but shall not be required (x) to tender or convert any securities in the Account, (y) to execute instruments with regard to such securities and (z) to endorse, transfer or deliver such securities. Unless directed by the Client, the Advisor shall not execute waivers or consents with regard to any securities in the Account, not exercise rights (including voting rights) with respect to such securities and not consent to any class action, plan of reorganization, merger, combination, consolidation, liquidation or similar plan with reference to such securities.

The authorities herein contained are continuing ones and shall remain in full force and effect until revoked by termination of this Agreement as hereinafter provided, but such revocation shall not affect any liability in any way resulting from transactions initiated prior to such revocation.

(b) Notwithstanding the power, authority and rights of the Advisor under Section 2(a), the Client shall retain the power to reject any transaction directed by the Advisor on behalf of the Account prior to the actual execution thereof and to unwind or liquidate any Effected Position without the direction of the Advisor. Upon the exercise of such power by the Client or otherwise as set out below, a transaction on behalf of the Account shall create (with the consequences set out below) a "Designated Position" if:

(i) such transaction is directed by the Advisor and is not executed in accordance with such directions as the result of instructions by the Client (other than inclusion on the Restricted List);

(ii) an Effected Position is unwound or liquidated by the Client without the direction of the Advisor;

(iii) such transaction is directed by the Advisor and is not executed in accordance with such directions as the result of the direct market access (or equivalent) execution system of the Client being inoperative;

(iv) such transaction is directed by the Advisor and is not executed in accordance with such instructions but Advisor receives notification from the Client that the transaction was executed; or

(v) such transaction is a Potential Short Sale (as defined in Section 8(d)) in respect of which the Client has provided to the Advisor an SSLF Designated Position Treatment Notice (as defined in Section 8(d)) and the Advisor confirms, during such Exchange Business Day, that the Advisor would have directed such Potential Short Sale on such Exchange Business Day as a transaction for the Account if the Client had actually made, or had caused to be made, available sufficient shares to support such Potential Short Sale.

Notwithstanding the foregoing a transaction directed by the Advisor shall not create a "Designated Position" and shall be given no effect under this Agreement if (x) the transaction is a short sale that is described in sub-clause 2(b)(i) above and, prior to direction by the Advisor, the Client had notified the Advisor that it did not have reasonable grounds to believe that the relevant security could be borrowed so that it could be delivered on the date delivery of such security would have been due in respect of such short sale, (y) the transaction is described in sub-clause 2(b)(iii) above and the Client has provided the Advisor notice that such execution system is or was inoperative, provided that if the Client provides such notice after the execution system becomes operative again, it must be provided no later than commencement of trading on the next Exchange Business Day (for the affected Exchange or Exchanges) after the Client has become aware of the existence of such transaction, or (z) the transaction, if executed in accordance with such directions, would have resulted in an Investment Guideline Violation or a Compliance Violation. In the event that the Advisor receives notice that the direct market access (or equivalent) execution system is inoperative (x) the Client may direct the Advisor to cancel, and upon such direction the Advisor will cancel, any open orders directed for execution through such system and such cancelled orders shall be given no effect under this Agreement and (y) until it receives notice that the system is operative, the Advisor will not direct new transactions on behalf of the Account for execution in such system.

A "Designated Position" represents the hypothetical position, and the results thereof, that would have existed in the Account if the transaction that created such Designated Position had been executed in accordance with the directions of the Advisor or if the Effected Position unwound or liquidated by the Client without the direction of the Advisor had not been so unwound or liquidated, as the case may be (Designated Positions and Effected Positions being "Advisor Positions"). A Designated Position shall be deemed liquidated only (x) if the Advisor notifies the Client that the Designated Position is to be deemed liquidated; (y) in connection with a Liquidation (as defined below) or (z) if the Designated Position would have caused, at any time, an Investment Guideline Violation or a Compliance Violation if the position had actually been an Effected Position at such time, in which case the Designated Position shall be deemed liquidated at the time such violation would have occurred.

The Client will maintain a record of Designated Positions and the performance thereof and any correspondence from the Client in respect of Designated Positions shall be sent to the Advisor in accordance with Section 11(g). For purposes of determining the performance of any Designated Positions in the Account or any Sub-Account, the prices associated with Designated Positions will be (X) in the case of a Designated Position created under any of sub-clauses (i), (iii), (iv) or (v) above, the initial price shall be within market parameters based on the time the transaction that created the Designated Position would have been executed, or (Y) in the case of a Designated Position created under sub-clause (ii) above, the initial price shall be at the price the initial Effected Position was unwound or liquidated if such Designated Position was established as a result of the unwinding or liquidation of an Effected Position; and the price associated with the deemed liquidation of a Designated Position shall be within market parameters, based on the time such liquidation is deemed to have occurred (in accordance with the preceding paragraph). Dividends and interest income and expenses shall be credited or debited, as applicable, during the tenure of a Designated Position.

(c) At any time the Account shall consist of the Advisor Positions outstanding at such time and any cash (or investments of such cash) then held in the Account.

3 Trade Process Procedures.

(a) Daily Trade Blotter File. No later than at the close of business (i.e., 5:00 p.m. New York Time) on each "Exchange Business Day" (as used herein, as defined in the 2002 ISDA Equity Derivatives Definitions and with respect to the primary Exchange(s) on which such equity securities or Underlying Securities (as defined in the Master Investment Guidelines and Compliance Restrictions or any applicable Supplemental Investment Guidelines and Compliance Restrictions) in the Account trade, provided that if the context does not relate to an equity security or Underlying Security, then the applicable primary Exchange shall be the New York Stock Exchange), the Advisor shall deliver via electronic transmission to the relevant Client contact specified in Section 11(g) below (or such other person as the Client may specify in writing) a "Trade Blotter File" setting forth for each Advisor Position occurring on such Exchange Business Day, the following:

(i) the Ticker (or other security identifier);

(ii) the quantity and transaction price (gross basis);

(iii) commission or any other transaction fee, if available;

(iv) the name of the third party executing broker (if any);

(v) the applicable Sub-Account or Sub-Accounts and if the trade is to be divided among multiple Sub-Accounts, the relevant allocation to each such Sub-Account; and,

(vi) transaction type (buy, long sale, short sale, etc.);

provided, further, at any time during the term of this Agreement, the Advisor shall provide, once every hour prior to the close of business during such Exchange Business Day, intra-day reports setting forth the information described in this Section 3(a).

The Trade Blotter File shall be delivered to the Client in mutually agreed format/medium.

(b) Short Sales. Prior to effecting any short sales in any security for the Account, the Advisor shall obtain, from the authorized designee of the Client, short sale borrowing capability, it being understood and agreed that securities borrowing transactions to cover short sales shall be the responsibility of the Client. The Advisor shall effect all short sales and all other securities sales for the Client's Account in full compliance with all applicable short sale rules under federal securities law and regulations and the rules of the relevant securities exchange.

(c) Third Party Brokers. Other than in respect of the investment of cash, the Advisor shall execute trades in or for the Account only with those brokers identified on Appendix III hereto. Appendix III may, from time to time, be amended in writing by mutual agreement of the parties hereto, such agreement not to be unreasonably withheld. Notwithstanding any provision regarding the Advisor's authority hereunder to act on behalf of the Client, any documentation required in connection with establishing such brokerage account shall be reviewed and approved by the Client prior to execution, such approval not to be unreasonably withheld.

(d) Equity Position Limitations. The Advisor specifically agrees and acknowledges that (i) U.S. and foreign securities and banking laws applicable to the Client may limit from time to time the trading decisions of the Advisor in respect of the Account; (ii) specifically (by way of example, and without any limitation) pursuant to applicable U.S. banking laws and regulations the Client is subject to general limitations on holding a class of the outstanding voting equity securities or any class of equity securities (voting and non-voting) of any U.S. company; and (iii) under relevant U.S. and foreign banking and securities laws, generally any equity position of a particular issuer held in the Account will be aggregated with equity positions of such issuer held in other proprietary account(s) of the Client for purposes of determining compliance with such banking laws. For purposes of this paragraph, the Client will notify the Advisor, from time to time, of such U.S. and foreign laws and regulations as may be applicable to the Client.

(e) Regulatory Compliance. The Advisor specifically agrees and acknowledges that it may, from time to time, be necessary or advisable, to the extent necessary to maintain compliance with U.S. or non-U.S. applicable law or to maintain compliance with this Agreement, to liquidate certain Advisor Positions or to take other remedial actions. The Advisor agrees to comply promptly with any Client directions in this regard, including, but not limited to, those arising out of Section 8(c)(iii) below.

4 Services of the Advisor Not Exclusive.

The services of the Advisor to the Client hereunder are not to be deemed exclusive and the Advisor shall be free to render similar services to others and to retain for its own use and benefit all fees or other moneys payable thereby and the Advisor shall not be deemed to be affected with notice of or to be under any duty to disclose to the Client any fact or thing which comes to the notice of the Advisor or any employee or agent of the Advisor in the course of the Advisor rendering similar services to others or in the course of its business in any other capacity or in any manner whatsoever otherwise than in the course of carrying out its duties hereunder. Nothing in this Agreement shall limit or restrict the right of any directors, officers or employees of the Advisor to engage in any other business or to devote his time and attention in part to the management or other aspects of any other business, whether of a similar or dissimilar nature. The Advisor may aggregate purchases or sales of securities for the Account with purchases or sales of the same securities by other clients of the Advisor, *provided* that the Advisor first discloses to, and obtains the approval of, the Client regarding the Advisor's allocation procedures. The Advisor agrees that in the event that purchases or sales of securities for the Account shall coincide with purchases or sales of the same securities by other clients of the Advisor, the Advisor will make such allocation in a manner believed by the Advisor to be equitable to each client.

Subject to Section 3(c), instructions to execute securities transactions may be placed by the Advisor with brokers, dealers and banks who supply services to the Advisor and such services may be used by the Advisor in advising other clients of the Advisor.

5 Indemnification.

Each Party (as applicable, the "Indemnifying Party") agrees to indemnify, defend and hold harmless the other Party (the "Indemnified Party") and its officers, directors, shareholders, employees, affiliates and agents from and against all demands, claims, liabilities, damages, expenses (including legal fees and disbursements) and losses (collectively, "Claims") to the extent resulting directly from, and subsequent to, any action or failure to act by the Indemnifying Party that results in any material breach by the Indemnifying Party of any of the representations, warranties or agreements of the Indemnifying Party contained in this Agreement and the Appendices annexed hereto. Notwithstanding the foregoing, the Indemnifying Party shall not be liable for any Claim resulting from its failure to act if the Indemnifying Party made good faith and commercially reasonable efforts to take the relevant action but was unable to timely effectuate such action as a result of market conditions or other circumstances beyond its control.

6 Agency Cross Transactions.

Solely for the benefit and for the best interest of the Client (and, for the avoidance of doubt, not with a principal purpose of benefiting itself or one of its other clients), the Advisor shall be permitted to effect transactions between the Client's Account and any other account for which the Advisor acts as investment advisor. In connection with such transactions, the Advisor may act as broker for, receive commissions from, and have a potentially conflicting division of loyalties and responsibilities regarding, both parties to such transactions. The foregoing permission may be revoked at any time by written notice from the Client to the Advisor. For the avoidance of doubt, the Advisor may at any time effect bilateral transfers of cash or securities between Sub-Accounts (i.e., journals).

7 Assignment.

This Agreement may not be assigned without the prior written consent of the non-assigning Party and any purported assignment without such consent shall be void and of no effect. Neither Party shall unreasonably withhold consent to any proposed assignment of this Agreement by the other Party to any of its affiliates. In the event that a Party wishes to assign this Agreement that party must provide to the non-assigning Party such documents as the non-assigning Party may reasonably request in connection with the assignment and shall allow a reasonable time during which the non-assigning Party may review any such documents.

8 Termination.

(a) This Master Agreement and the management services provided for herein shall continue in full force and effect until terminated by one of the parties hereto as provided below. Each Supplemental Agreement shall continue in full force and effect until the termination date set out therein unless earlier terminated (directly, or by terminating this Master Agreement) by one of the parties as provided below.

(b) Any Supplemental Agreement may be terminated by the Client, without cause, upon not less than three (3) Exchange Business Days prior written notice to the Advisor specifying the effective date of such termination, provided that the Client may not terminate more than one Supplemental Agreement, without cause, in any period of 20 consecutive Exchange Business Days (without giving effect to the adjustment of the termination date, pursuant to Section 9(a), as the result of the Advisor controlling and managing the Liquidation of the applicable Sub-Account). In the event only one Supplemental Agreement is in effect, the Client may terminate this Agreement concurrently with a termination of such Supplemental Agreement, by so specifying in the termination notice. In the event no Supplemental Agreement is in effect, the Client may terminate this Agreement immediately upon notice to the Advisor.

(c) This Agreement or any Supplemental Agreement may be terminated by the Client, for cause, upon delivery of written notice to the Advisor in the circumstance described in this Section 8(c). In the event this Agreement is terminated for cause under this Section 8(c), all Supplemental Agreements will terminate upon the termination of this Agreement.

(i) In the event that (A) the purchase, sale or holding of any security or other investment in the Account or a Sub-Account, any of the Advisor's management activities relating to the Account or a Sub-Account, or any transaction pursuant to this Agreement does not comply with Part A of Appendix I hereto (a "Master Investment Guidelines Violation") or any applicable investment guidelines pursuant to a Supplemental Investment Guidelines and Compliance Restrictions (a "Supplemental Investment Guidelines Violation" and, together with a Master Investment Guidelines Violation, an "Investment Guidelines Violation") and (B) the Advisor, acting in good faith and on a best efforts basis, fails to remedy the Investment Guidelines Violation not later than the relevant cure period, if any, described below after the Advisor knows or should have known of such Investment Guidelines Violation, then (X) in the case of a Supplemental Investment Guidelines Violation, the Client shall be entitled to immediately (or at any commercially reasonable time thereafter) terminate the Supplemental Agreement for the affected Sub-

Account, upon delivery of written notice to the Advisor, and (Y) in the case of a Master Investment Guidelines Violation, the Client shall be entitled to immediately (or at any commercially reasonable time thereafter) terminate this Agreement (and all Supplemental Agreements), upon delivery of written notice to the Advisor. Notwithstanding the foregoing, to the extent it is practicable for the Advisor to remedy an Investment Guideline Violation sooner than the applicable cure period specified below, the Advisor shall so remedy as soon as is practicable. For the avoidance of doubt, if no cure period for a given Investment Guidelines Violation is specified herein (including, for the avoidance of doubt, in any applicable Supplemental Agreement), the Client shall immediately be permitted to exercise its rights under clauses (X) or (Y) of this Section 8(c)(i) following the occurrence of such Investment Guideline Violation.

For purposes of this Section 8(c)(i), if the Investment Guidelines Violation is due to a breach of Position Guidelines "a", "b", "c", "d" or "e" as defined in Part A.2 of the Master Investment Guidelines: the cure period shall be five Trading Days, provided, however, that if there are more than three breaches of such Position Guidelines (for the avoidance of doubt, if there are multiple breaches of the same Position Guideline, each individual breach counts as a separate breach) continuing simultaneously, the cure period shall be two Trading Days.

(ii) The Advisor shall immediately notify the Client in the event that there is a violation of a Compliance Restriction described in Part B of Appendix I hereto (a "Master Compliance Violation") or any Compliance Restriction stated in any Supplemental Investment Guidelines and Compliance Restrictions (a "Supplemental Compliance Violation" and together with Master Compliance Violation, a "Compliance Violation"). Upon becoming, or being made, aware of a Compliance Violation, the Client shall provide to the Advisor a Violation Notice (as defined below) setting forth the terms of the remedy of such Compliance Violation (including any applicable time period to effectuate such remedy). The terms set forth by the Client shall be, to the extent practicable, commercially reasonable terms but shall take account of the fact that the violation is a Compliance Violation that may have legal, regulatory, reputational or similar consequences, in addition to economic consequences. In the event that the Advisor, acting in good faith and on a best efforts basis, fails to remedy the Compliance Violation according to the terms of the Violation Notice, then (A) in the case of a Supplemental Compliance Violation, the Client shall be entitled to immediately (or at any commercially reasonable time thereafter) terminate the Supplemental Agreement for the affected Sub-Account, upon delivery of written notice to the Advisor, and (B) in the case of a Master Compliance Violation, the Client shall be entitled to immediately (or at any commercially reasonable time thereafter) terminate this Agreement (and any Supplemental Agreements), upon delivery of written notice to the Advisor.

(iii) Upon becoming aware of an Investment Guidelines Violation or Compliance Violation, the Client shall deliver notice to the Advisor (to the relevant person specified in Section 11(g) below), specifying Advisor Positions and/or other circumstances with respect to which the Investment Guidelines Violation or Compliance Violation relates (a "Violation Notice"). The Advisor shall remedy the violation in accordance with the terms herein and therein.

(iv) In the event that (A) there occurs a material breach (as determined by the Client in its commercially reasonable judgment) by the Advisor of (1) any representation or agreement made by the Advisor in Section 12, (2) its obligation to deliver a "Trade Blotter File" or to provide intra-day reports, in each case, in accordance with Section 3(a) other than in circumstances beyond the control of the Advisor or (3) any covenant in Section 3 (other than Section 3(a)) the breach of which does not (or, with notice or the lapse of time or both, would not) otherwise constitute an Investment Guidelines Violation or a Compliance Violation and (B) unless such material breach constitutes the third (or greater) material breach of the same sub-clause within the twelve month period preceding the date of such material breach, the Advisor fails to cure such material breach within two (2) Exchange Business Days, in the case of sub-clause (1), one (1) Exchange Business Day, in the case of sub-clause (2), or seven (7) Exchange Business Days, in the case of sub-clause (3), after written notice of such material breach (an "Advisor Material Breach Notice") from the Client, then for so long as such material breach is continuing (but in no event longer than fifteen (15) Exchange Business Days after the lapse of such cure period) the Client may terminate this Agreement, for cause, upon delivery of written notice to the Advisor specifying the termination date, which date shall be no earlier than the date of such notice, provided, however, in the case of a material breach described in sub-clause (3), the Client may terminate this Agreement only if the occurrence of a substantially similar breach by an internal manager of the Client would be sufficient to be the sole basis for the Client to terminate such internal manager. The Client must deliver the Advisor Material Breach Notice within four (4) Exchange Business Days of attaining knowledge of the facts giving rise to the relevant breach or the Client's right to terminate on the basis of such breach shall be deemed waived.

For the purposes of this Section 8(c), "Trading Day" means any day when the New York Stock Exchange, the London Stock Exchange or any other relevant or applicable exchange is open.

(d) This Agreement may be terminated by the Advisor, for cause, upon delivery by the Advisor to the Client of a written notice of termination (W) after the breach by the Client of its obligations under Section 10, (X) after the occurrence of a Material Client Support Breach (as defined below), (Y) after the material breach of any representation or agreement (subject to the cure period described below) made by the Client in Section 12 (as determined by the Advisor in its commercially reasonable judgment) or (Z) after the occurrence of an Adverse Trading Regulatory Change (as defined below). Each of (W), (X), (Y) and (Z) (after applicable cures) being an "Advisor for Cause Termination Event".

Upon becoming or being made aware of a material breach by the Client of any representation or agreement made by the Client in Section 12, the Advisor shall deliver notice to the Client (to the relevant person specified in Section 11(g) below) specifying the representation with respect to which the breach relates (a "Breach Notice"). If the Client fails to cure such breach of representation or agreement within two (2) Exchange Business Days of delivery of the Breach Notice, then the Advisor shall be entitled to immediately terminate this Agreement for cause.

The Advisor must deliver any notice of termination described in this Section 8(d) within 15 days of attaining knowledge of the facts giving rise to the Advisor for Cause Termination Event, or in each case the Advisor's right to terminate on the basis of such facts shall be deemed waived. In the event this Agreement is terminated by the Advisor for cause under this Section 8(d), all Supplemental Agreements will terminate upon such termination of this Agreement. For the avoidance of doubt, the Advisor may not terminate a Supplemental Agreement for cause without also terminating this entire Agreement (and all Supplemental Agreements) for cause. If the Advisor duly delivers a notice of termination of this Agreement pursuant to this Section 8(d), the termination of this Agreement (and all Supplemental Agreements) shall be effective upon the earliest of (i) the Advisor giving notice to the Client that it will not commence and manage a Liquidation, (ii) three (3) Exchange Business Days after delivery of the termination if the Advisor does not give notice to the Client specifying whether the Advisor will or will not control and manage the Liquidation and (iii) if the Advisor gives notice to the Client, in accordance with Section 9(a), that the Advisor will control and manage the Liquidation, the earlier of (x) twenty (20) Exchange Business Days after the delivery of such notice and (y) subject to Section 9(b) below, the completion of the Liquidation by the Advisor.

For purposes of this Section 8(d), a "Material Client Support Breach" is the occurrence of any of the following: (i) both (x) the failure by the Client to provide the Advisor by the close of trading on any Exchange Business Day reports and data files for the prior Exchange Business Day showing (A) executed transactions for the prior Exchange Business Day and (B) the status of compliance on the prior Exchange Business Day with the Master Investment Guidelines and Compliance Restrictions and with all Supplemental Investment Guidelines and Compliance Restrictions and (y) such failure is repeated on three consecutive Exchange Business Days; (ii) both (x) the failure by the Client to provide the Advisor by the close of trading on any Exchange Business Day reports and data files for the prior Exchange Business Day showing (A) cash balances, (B) portfolio positions and (C) summary financing information (debit interest and short rebates), in each case, for the prior Exchange Business Day and (y) such failure is repeated on five consecutive Exchange Business Days; (iii) both (x) the failure by the Client to provide the Advisor by the close of trading on any Exchange Business Day a report showing the net asset value of the Account for the prior Exchange Business Day and (y) such failure is repeated on the next Exchange Business Day; (iv) a DMA Failure in respect of a particular country that continues for three (3) consecutive Exchange Business Days or the occurrence of more than five (5) DMA Failures in respect of a particular country within any period of twelve (12) consecutive calendar months; or (v) a Short Sale Liquidity Failure and the failure of the Client to cure the same within three (3) Exchange Business Days.

A "DMA Failure" means the unavailability during all of the normal trading hours on any Exchange Business Day of customary trade execution services through the Client's direct market access trading service in any country (an "Affected Country") in respect of which the Advisor is authorized to direct transactions under this Agreement unless (A) such execution services are unavailable for such Exchange Business Day in such country (x) as a result of circumstances that, notwithstanding commercially reasonable efforts by the Client to make such execution services available, are outside the control of the Client or (y) as a result of the failure of the Advisor to take any commercially reasonable action recommended by the Client to obtain relevant trade execution services unless the Advisor has previously notified the Client that the Advisor would not take such action, or (B) the Client gives notice to the Advisor that all transactions directed by the Advisor relating to the Affected Country, if any, will constitute Designated Positions.

A "Short Sale Liquidity Failure" means a material failure by the Client on any Exchange Business Day to make available, or cause to be made available, to the Advisor any shares requested by the Advisor to support any potential short sale transaction for the Account (a "Potential Short Sale") for such Exchange Business Day provided that, for purposes of this provision and in respect of any Potential Short Sale, the Client shall be deemed to have made sufficient shares available to support such Potential Short Sale if the Client notifies the Advisor (such notice, an "SSLF Designated Position Treatment Notice") that: such Potential Short Sale will create a Designated Position in the event that the Advisor confirms, during such Exchange Business Day, that the Advisor would have directed such Potential Short Sale on such Exchange Business Day as a transaction for the Account if the Client had actually made, or had caused to be made, available sufficient shares to support such Potential Short Sale. If the Advisor determines that such a material failure has occurred in respect of an Exchange Business Day, the Advisor shall notify the Client of such determination and upon such notice the Advisor shall determine the Benchmark Portfolio. A failure by the Client shall not be considered "material" if (A) the aggregate share quantity requested by Advisor to support Potential Short Sales for such Exchange Business Day exceeds, in aggregate, 110% of the aggregate of the share quantity requested by Advisor to support Potential Short Sales in the Benchmark Portfolio, (B) the shares made available by the Client to support Potential Short Sales for such Exchange Business Day exceed 90% of the shares made available by the Client to support Potential Short Sales in the Benchmark Portfolio or (C) the ratio of hard to borrow securities to generally available securities in the Potential Short Sales for such Exchange Business Day is more than 10% greater than the ratio in the Benchmark Portfolio. The "Benchmark Portfolio" for any Exchange Business Day means the arithmetic mean of the share quantity requested by Advisor to support Potential Short Sales under this Agreement and the arithmetic mean of the share quantity made available to support Potential Short Sales under this Agreement, in each case, on the day in each of the three most recent calendar months that corresponds with such Exchange Business Day (or if such corresponding day was not an Exchange Business Day, the first succeeding Exchange Business Day). In the absence of manifest error, the determination of the Benchmark Portfolio by the Advisor shall presumptively be deemed correct provided that if, within one Exchange Business Day of such determination, the Client objects to the classification by the Advisor of any security as "hard to borrow" or "generally available" then the classification of such security shall be determined by a third party mutually acceptable to each of the Client and the Advisor unless the Client and the Advisor are unable to reach agreement on such a third party within one Exchange Business Day of the Client's objection in which case the classification of such security shall be determined by Data Explorers Limited (or any successor).

For purposes of this Section 8(d), an "Adverse Trading Regulatory Change" means any change or series of changes after the date of this Agreement in any law (including, without limitation, any law, treaty, ordinance, rule, regulation, ruling, interpretation or authorization) or group of related laws or the issuance or revision or series of issuances or revisions after the date of this Agreement by any governmental or regulatory authority of any order or directive or group of related orders or directives that, in the case of any such law, order, directive or group: (1) applies to investments of, or transactions in or relating to, 50% or more of the Underlying Securities (as defined in Appendix I hereto) that have been traded in the Account in the previous 12 months in 25% or more of the MSCI Barra sectors (as defined by the MSCI Barra US E3 model) associated with Positions (as defined in Appendix I hereto) in the Account; and (2) in the determination of the Advisor (which determination shall be made in good faith applying commercially reasonable standards), either individually or in cumulative effect with other such changes, issuances or revisions, has a material adverse effect on the ability of the Advisor to maximize the Advisor Fees; provided that "Adverse Trading Regulatory Change" shall not include the reinstatement of any price test restrictions substantially similar to the price test restriction set forth in Rule 10a-1 of the Securities Exchange Act of 1934 prior to July 6, 2007."

(e) Subject to the provisions of Section 9, upon termination of this Agreement or any Supplemental Agreement the Client will assume control of the Account (including all Sub-Accounts) or the relevant Sub-Account, as the case may be, without further liability or responsibility of the Advisor therefor.

9 Liquidation.

(a) In the event that (i) the Client has delivered a notice of termination in respect of any Sub-Account pursuant to Section 8(b) or (ii) the Advisor has delivered a notice of termination of this Agreement (and all Supplemental Agreements) pursuant to Section 8(d), there shall be a period of three (3) Exchange Business Days after such delivery for the Advisor to determine (in its sole discretion) whether a liquidation of the Advisor Positions in the affected Sub-Account or the Account (as the case may be) may adversely affect substantially similar positions that the Advisor manages on behalf of other clients. If, no later than the end of such period, the Advisor has made such determination and gives notice to the Client (substantially in the form attached hereto as Appendix IV) to such effect, the Advisor shall immediately commence and manage a liquidation and reduction to USD cash of all Effected Positions and a deemed liquidation and adjustment to USD cash of all Designated Positions (together, a "Liquidation") of the affected Sub-Accounts or the Account (as the case may be), subject to the provisions of Section 9(b), until such Liquidation has been completed. If the Advisor does not provide such notice to the Client by the end of such 3 Exchange Business Day period then the Client shall be entitled to assume control of the Account or the relevant Sub-Account, as applicable. Notwithstanding the specification of an earlier termination date in a notice of termination delivered by the Client pursuant to Section 8(b), if the Advisor has duly delivered to the Client a notice that it will control the Liquidation of the Account or a Sub-Account, as the case may be, this Agreement or the relevant Supplemental Agreement, as the case may be, shall terminate upon the earlier of (X) 20 Exchange Business Days from the commencement of such Liquidation by the Advisor and (Y) subject to Section 9(b) below, the completion of such Liquidation by the Advisor.

(b) Notwithstanding any provision of this Agreement to the contrary, any Liquidation by the Advisor shall be effected in such a manner, as determined by the Advisor exercising commercially reasonable judgment, to minimize market impact and preserve equity value of the affected Sub-Account(s) or the Account (as the case may be). In conducting any Liquidation, the Advisor shall give due regard to effecting proportionate reductions of any economic long positions and economic short positions. During a Liquidation, the Advisor shall not (i) direct that the affected Sub-Account(s) or the Account (as the case may be) enter into any new transaction unless such transaction would be a risk-reducing position and (ii) directly or indirectly effect the sale or transfer of any Advisor Position or any beneficial interest in any Advisor Position to any account (other than in an arms-length transaction to another Sub-Account or to another account held in the name of the Client) or entity that is, directly or indirectly, managed, advised or owned in whole or in part by the Advisor or any affiliate of the Advisor. Prior to commencement of a Liquidation by the Advisor, the Client shall (i) determine the market value of Designated Positions in the Account or Sub-Account as applicable based on the indicative bid for such Designated Positions from an unaffiliated market maker and credit or debit, as appropriate, the cash balance in the Account or Sub-Account, as appropriate, by such market value (such resulting cash balance, the "Adjusted Cash Balance") and (ii) prepare two "Equity Portfolio Analyses" of the Effected Positions in the Account or Sub-Account, as applicable, one actual and one theoretical. The actual Equity Portfolio Analysis shall utilize the actual relevant Account or Sub-Account data to generate such Equity Portfolio Analysis. The theoretical Equity Portfolio Analysis shall utilize the same Account or Sub-Account data as that used to generate the actual Equity Portfolio Analysis, but any data that reflects Effected Positions that are held long in the relevant Account or Sub-Account shall be reflected as being held short, and any Effected Positions that are held short in the relevant Account or Sub-Account shall be reflected as being held long for the purposes of generating the Equity Portfolio Analysis. Accordingly, for the avoidance of doubt, the two Equity Portfolio Analyses shall be exact mirror images of one another. No indication shall be given to any potential bidder as to which of the Equity Portfolio Analyses is actual and which is theoretical and both shall be bid on as if they were the actual Equity Portfolio Analysis. All numerical notations on each Equity Portfolio Analysis shall use scientific notation that is accurate to the second significant decimal point and will take the following form:

X.YZ0000 x 10^m, where X is an integer between 1 and 9 (inclusive),Y and Z are each integers between 0 and 9 (inclusive) and m is an integer.

Each Equity Portfolio Analysis shall be substantially in the form attached hereto as Appendix V, and on the basis of these Equity Portfolio Analyses the Client shall obtain a firm principal bid for the Effected Positions, included in such Sub-Account or the Account (excluding, for the avoidance of doubt, any Adjusted Cash Balance in such Sub-Account or the Account at commencement of the Liquidation), as applicable, from no fewer than three market makers (one of which may be an affiliate of the Client but no one of which may be an affiliate of the Advisor) selected in the Client's sole discretion. The highest of these bids will be chosen as the "Market Bid Level."

The Client will notify the Advisor of how long the Market Bid Level bid is open for acceptance. If such initial Market Bid Level bid is open for less than one hour after such notice the Advisor shall have the right to request the Client to obtain a new firm principal bid for the Effected Positions included in the relevant Sub-Account or the Account, as applicable, and Client shall use best efforts to promptly obtain such a bid from the market maker whose bid established the Market Bid Level. The Client shall notify the Advisor of any such new bid and the amount of time such bid is open for acceptance, and upon such notice the new bid shall become the Market Bid Level, provided, that if the Client is unable to secure a new firm principal bid from such market maker, than such market maker's original bid, shall constitute the Market Bid Level. For so long as the bid that establishes the Market Bid Level remains open for acceptance, if the Advisor notifies the Client that the Advisor, in its sole discretion, has determined that the proceeds of the Liquidation of Effected Positions are not likely to exceed the Market Bid Level and therefore advises the Client to accept such bid, and the Client, using commercially reasonable efforts, would have sufficient time to accept such bid, then (x) the relevant Sub-Account or the Account, as applicable, shall be deemed to have a Market Value (as defined below) equal to the sum of the Market Bid Level and its Adjusted Cash Balance for the purpose of determining any applicable Advisor Fee, (y) the Advisor shall not commence a Liquidation of Effected Positions and (z) the Advisor shall take such actions as the Client may direct to transfer the Effected Posotions to the market maker that provided the bid that established the Market Bid Level, or as the Client may otherwise direct consistent with its ownership of the Sub-Account or Account, as applicable. If the Advisor does not timely provide the notice described in the prior sentence, then the Advisor shall immediately commence a Liquidation of the Sub-Account or Account, as the case may be. Notwithstanding the foregoing, if the Advisor advises Client in a timely fashion to accept the bid that established the Market Bid Level but the Client determines that it is not in the Client's best interest to so accept such bid, the Client shall immediately assume control of the relevant Sub-Account or the Account, as applicable, and for the avoidance of doubt, Section 9(c) shall apply.

If the Advisor does not advise the Client in a timely fashion to accept the bid constituting the Market Bid Level, then in connection with any resulting Liquidation, the quotient of (A) (I) the value of the Effected Positions in the Sub-Account or Account, as applicable, based on the sum of the market values of the Effected Positions in such Sub-Account or the Account (the "Market Value") at the commencement of the Liquidation **minus** (II) the Market Bid Level, **divided by** (B) two, shall be the "Control Trigger Decline Amount." The difference of the (D) the sum of (u) the Market Value, at the time the Control Trigger Decline Amount is determined, **plus** (v) the Adjusted Cash Balance in such Sub-Account or the Account, as applicable, **minus** (E) the Control Trigger Decline Amount shall be the Control Trigger Amount. If, in respect of a Liquidation by the Advisor of the Account or any Sub-Account, (x) at any time, the sum of (I) the applicable Market Value plus (II) the Adjusted Cash Balance in such Sub-Account or the Account, as applicable, falls below the Control Trigger Amount, (y) such Liquidation is not completed within 20 Exchange Business Days of its commencement or (z) in the case of a Liquidation of a Sub-Account, at any time the AssetNAV of such Sub-Account is less than the Net Asset Floor (as defined in the relevant Supplemental Agreement) for such Sub-Account, then the Client may, at its sole discretion, immediately (or at any time thereafter) assume control of such Sub-Account or the Account (as the case may be) that is subject to the Liquidation upon delivery of written notice to the Advisor.

(c) Notwithstanding Section 9(a), if the Client assumes control of the Account or any Sub-Account pursuant to any provision herein or of any applicable Supplemental Agreement, the Client may, but is not obligated to, liquidate some or all of the Advisor Positions of the Sub-Account or Account, as the Client determines in its sole discretion. Upon such assumption of control, if the Client determines to liquidate any Advisor Positions or otherwise reduce exposure in the Account or any Sub-Account, the Advisor shall, upon request, actively cooperate with the Client and advise the Client (including, for the avoidance of doubt, actually conducting the Liquidation if so requested by the Client), in connection with such liquidation or exposure reduction, as to the manner in which to proceed that minimizes market impact and best preserves equity value. The Advisor shall perform its obligations under this Section 9(c) with the same level of diligence as if the Advisor were still directly managing the Account or such Sub-Account(s). Notwithstanding the foregoing, the Client has no obligation to proceed upon such advice given by the Advisor. If the Client assumes control of the Account or any Sub-Account, this Section 9(c) shall survive the termination of this Agreement and any applicable Supplemental Agreement, as the case may be, until any such Liquidation is complete.

(d) On or after such time as the Client assumes control of the Account or any Sub-Account in accordance with the provisions hereof, the Client in its sole discretion may take over management of the Account or Sub-Account, bring in a replacement manager for the Account or such Sub-Account or allow Advisor to continue to manage in accordance with the provisions hereof. In respect of a Liquidation by the Advisor of any Account or Sub-Account, until such time, if any, that the Client takes over management or brings in a replacement advisor of the Account or such Sub-Account in accordance with the provisions hereof, the Advisor shall continue to manage such Liquidation in accordance with the terms of Section 9(b). If, at any time the Client assumes control of any affected Sub-Account or the Account in accordance with the provisions hereof, the Advisor shall, at the Client's request, continue to advise the Client, in accordance with the terms of Section 9(c). This Section 9(d) shall survive the termination of this Agreement until the Liquidation of the Account is completed.

10 Confidentiality.

(a) Subject to the provisions of Section 10(b) below, neither of the Parties shall, except under compulsion of any applicable law or regulation made thereunder or as required by applicable law, rule, regulation, order or as requested by any regulatory authority, agency, body, court or representative thereof, or pursuant to legal process (hereafter "Regulatory Mandated Disclosure"), either before or after the termination of this Agreement disclose to any person not authorized by the relevant Party to receive the same any confidential information relating to such Party or to the affairs of such Party of which the Party disclosing the same shall have become possessed during the period of this Agreement and such Party shall use all reasonable efforts to prevent any such disclosure as aforesaid. Without in any way limiting the generality of the foregoing, before acting upon a request for any Regulatory Mandated Disclosure, a Party shall (i) immediately notify the other Party of the existence, terms and circumstances surrounding such request to the extent permissible; (ii) consult with such other Party on the advisability of taking legally available steps to resist or narrow such request to the extent permissible; and (iii) if such Regulatory Mandated Disclosure is required, exercise such Party's best efforts to obtain reasonable assurance that confidential treatment will be afforded. Each Party further agrees not to disclose or use the name of the other Party (or any affiliate thereof) for marketing or other purposes not directly relating to implementation of this Agreement.

The term "confidential information" shall include (without limitation) the existence of, and contents of, the Trade Restrictions List (referenced on Appendix I hereto) delivered by the Client to the Advisor from time to time as well as any other proprietary, non-public information regarding a Party to the Agreement that such other Party received in connection with this Agreement, including, without limitation, that such Party has entered into this Agreement with the other Party. The Advisor acknowledges its obligations under applicable law, including federal and state laws, not to disclose, or otherwise effect trades based on, material non-public information. Without limiting the responsibilities and agreements of the Advisor under this Section 10, the Advisor specifically agrees with the Client that the Advisor shall not utilize, directly or indirectly, any Trade Restrictions List as a basis for trading or otherwise investing in (either through the Account or by means of any other independent trading or advisory activities of the Advisor) any securities included in good faith on such Trade Restrictions List.

The Client further specifically agrees that, other than by reason of Regulatory Mandated Disclosure, (i) except with the prior written consent of the Advisor it shall not disclose to any third party the terms of the Advisor-directed trading strategies (including the nature and content of the Account) contemplated under this Agreement (as evidenced by the annexed Master Investment Guidelines and Compliance Restrictions, any Supplemental Investment Guidelines and Compliance Restrictions and related transaction reports); and (ii) it shall not establish or engage in any form of trading strategy, for its own account or for the account of any affiliate or third party, that materially replicates any aspect of Advisor's trading strategies provided for in this Agreement if the establishment or engagement of such strategy or strategies is a result of the Client's knowledge of the Advisor's trading strategies provided for in this Agreement. Notwithstanding the foregoing, the Client shall be permitted to reveal confidential information in connection with the bidding process described in Section 9(b), but only to the extent such information would be required to complete the form of Equity Portfolio Analysis attached hereto as Appendix V.

(b) Notwithstanding anything to the contrary in this Agreement, except as otherwise hereinafter set forth in this Section 10(b), the parties hereto agree and acknowledge that the structure and tax aspects of the Account, any Sub-Account, this Agreement, any transaction effected pursuant to this Agreement, and all materials provided by either Party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either Party. Notwithstanding anything to the contrary in this Agreement, each Party and each affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Account, any Sub-Account, this Agreement, any transaction effected pursuant to this Agreement and all materials of any kind (including opinions or other tax analyses) that are provided to such Party (or affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof unless and to the extent such information is necessary or helpful in understanding the tax treatment or tax structure of the transaction).

11 Miscellaneous.

(a) No failure on the part of either Party to exercise, and no delay on its part in exercising, any right or remedy under this Agreement will operate as a waiver thereof nor will any single or partial exercise of any right or remedy preclude any other or further exercise thereof or the exercise of any other right or remedy. The rights and remedies provided in this Agreement are cumulative and not exclusive of any rights or remedies provided by law.

(b) This Agreement may only be amended by the written agreement of the parties hereto.

(c) The illegality, invalidity or unenforceability of any provision of this Agreement under the law of any jurisdiction shall not affect its legality, validity or enforceability under the law of any other jurisdiction nor the legality, validity or enforceability of any other provision.

(d) The Advisor will forward to the Client a list of names and specimen signatures of persons authorized to act on behalf of the Account, subject to the Client's approval, such approval not to be unreasonably withheld. The Client will forward from time to time a list of names and specimen signatures of persons authorized to act on behalf of the Client. The Advisor and/or the Client, as applicable, will provide to the other Party a revised list of names and specimen signatures of persons authorized to act on behalf of the Account or the Client whenever such authorized persons change.

(e) Notwithstanding anything to the contrary contained in this Agreement, the Client agrees that any amounts owed or liabilities incurred by the Advisor under this Agreement, will be satisfied solely from the Advisor's assets. Without limiting the generality of the foregoing, in no event shall this Agreement give the Client recourse, whether by setoff or otherwise, with respect to any such amounts owed or liabilities incurred, to or against any assets of any person or entity other than the Advisor.

(f) Notwithstanding anything to the contrary contained in this Agreement, except as provided in Section (5) hereof, the Advisor will not be liable to the Client for any losses, damages, costs, expenses, or other liabilities arising in connection with their activities and services hereunder.

(g) Notices. Except in the case of notices and other communications expressly permitted to be given by telephone or by electronic transmission alone (including e-mail), all notices and other communications provided for herein shall be in writing and shall be sent by e-mail to all the individuals listed below, in accordance with the information set forth below unless otherwise instructed by such Party. Any such notice shall be deemed duly served at the time sent to all individuals listed below. The sender of notice shall use its best efforts to follow each email notice with telephonic notice to any of the individuals listed below, which will be deemed made when such individual actually fields the phone call; provided however, that the effectiveness of the email notice shall not be affected by the failure to make such telephonic notice. The Advisor may rely and shall be protected in acting upon any written instruction or communication believed by it to be genuine and to have been signed by, or in the case of e-mail, sent by, the proper Party or parties.

Deutsche Bank AG, London Branch
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005

All email notices to be sent to:
RentecNotification@list.db.com

Additional specific contacts:
Daily Trade Blotter:

Attn:	Vincent Capone
Tel:	(212) 250-7221
Fax:	(212) 797-4932
E-mail:	vincent.j.capone@db.com

Attn:	Peter Brophy
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Fax:	(212) 797-8733
E-mail:	peter.brophy@db.com

Payments/Fixings:

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Fax:	(212) 797-4932
E-mail:	vincent.j.capone@db.com

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Renaissance Technologies LLC
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Fax:	(212) 486-7291
E-mail:	TKerns@rentec.com Scott@rentec.com

12 Representations and Warranties

Each of the Parties (or the specified Party, as the case may be) represents, warrants, and agrees with the other Party that:

It is duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation and has all requisite power and authority to own its property, to conduct its business as currently conducted and to execute and deliver, and to perform its obligations under, this Agreement.

This Agreement has been duly authorized, executed and delivered by it and constitutes a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms.

No permits, licenses, franchises, approvals, authorizations, qualifications or consents of, or registrations or filings with, governmental authorities are required in connection with the execution or delivery by such Party of, or the performance by such Party of its obligations under, this Agreement, except for such as have been obtained and are in full force and effect.

The execution and delivery of, and the performance by such Party of its obligations under, this Agreement do not and will not result in a breach or constitute a violation of, conflict with, or constitute a default under, the certificate of incorporation or bylaws of such Party or any agreement or instrument to which it is a Party or by which it or any of its property is bound, which breach, violation, conflict or default could have a materially adverse effect on its ability to perform its obligations under this Agreement.

No actions, proceedings or claims are pending or, to the knowledge of such Party, threatened against such Party or any of its property that could affect the validity or enforceability of this Agreement or that could have a materially adverse effect on the ability of such Party to perform its obligations under this Agreement.

The Client represents and covenants that it is and will remain for the term of this Agreement a "qualified eligible person" as such term is defined in Rule 4.7 under the Commodity Exchange Act. The Client hereby consents to the Account being treated as an "exempt account" pursuant to the provisions of Rule 4.7.

13 No Amendment or Restatement of Existing Investment Advisory Agreement.

The parties agree that this Agreement does not amend or restate the Amended and Restated Investment Advisory Agreement dated as of November 16, 2007, between the Client and the Advisor (the "Existing Agreement"). The parties hereto acknowledge and agree that this Agreement does not constitute a novation or termination of the Existing Agreement or any transactions thereunder and the Existing Agreement and the transactions thereunder are in all respects continuing under the terms described thereunder.

14 Governing Law; Waiver of Jury Trial.

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS ENTERED INTO AND TO BE PERFORMED ENTIRELY WITHIN THE STATE. EACH PARTY CONSENTS TO THE JURISDICTION OF THE FEDERAL AND STATE COURTS IN NEW YORK; EACH PARTY HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY SUIT, ACTION, CLAIM OR PROCEEDING ARISING OUT OF, OR RELATING TO, THIS AGREEMENT.

15 Client Receipt of Advisor's Brochure

The Client hereby acknowledges receipt of the Advisor's current Form ADV Part II or brochure statement in lieu thereof.

[Rest of this page intentionally blank; signature page follows]

PURSUANT TO AN EXEMPTION FROM THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH ACCOUNTS OF QUALIFIED ELIGIBLE PERSONS, THIS ACCOUNT DOCUMENTATION IS NOT REQUIRED TO BE, AND HAS NOT BEEN, FILED WITH THE COMMISSION. THE COMMODITY FUTURES TRADING COMMISSION DOES NOT PASS UPON THE MERITS OF PARTICIPATING IN A TRADING PROGRAM OR UPON THE ADEQUACY OR ACCURACY OF COMMODITY TRADING ADVISOR DISCLOSURE. CONSEQUENTLY, THE COMMODITY FUTURES TRADING COMMISSION HAS NOT REVIEWED OR APPROVED THIS TRADING PROGRAM OR THIS ACCOUNT DOCUMENT.

IN WITNESS WHEREOF, this Agreement has been entered into the day and year first above written.

DEUTSCHE BANK AG LONDON

By: Satish Ramakrishna Satish Ramakrishna Managing Director
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By: Frank X Nelson
Name: FRANK X NELSON
Title: Attorney-in-Fact

RENAISSANCE TECHNOLOGIES LLC

By: ____________________
Name: James S. Rowen
Title: Chief Operating Officer

[Signature page to Master Investment Advisory Agreement]

263720

PURSUANT TO AN EXEMPTION FROM THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH ACCOUNTS OF QUALIFIED ELIGIBLE PERSONS, THIS ACCOUNT DOCUMENTATION IS NOT REQUIRED TO BE, AND HAS NOT BEEN, FILED WITH THE COMMISSION. THE COMMODITY FUTURES TRADING COMMISSION DOES NOT PASS UPON THE MERITS OF PARTICIPATING IN A TRADING PROGRAM OR UPON THE ADEQUACY OR ACCURACY OF COMMODITY TRADING ADVISOR DISCLOSURE. CONSEQUENTLY, THE COMMODITY FUTURES TRADING COMMISSION HAS NOT REVIEWED OR APPROVED THIS TRADING PROGRAM OR THIS ACCOUNT DOCUMENT.

IN WITNESS WHEREOF, this Agreement has been entered into the day and year first above written.

DEUTSCHE BANK AG LONDON

By: ________________________
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By: ________________________
Name:
Title: Attorney-in-Fact

RENAISSANCE TECHNOLOGIES LLC

By: James S. Rowen
Name: James S. Rowen
Title: Chief Operating Officer

[Signature page to Master Investment Advisory Agreement]

263720

APPENDIX I

Investment Guidelines and Compliance Restrictions

Part A

For purposes of calculations under the Investment Guidelines, all Positions (as defined below) shall be valued in USD (converted, if necessary, using the then-applicable relevant FX rate of conversion).

1) **Investment Guidelines**

a) Definitions (except where specified below, each defined term here is in respect of the Account taken as a whole):

i) "*Underlying Security*" or "*U*" shall mean any one of the following:

(1) an equity security (including a depositary receipt) in a company listed on a recognized exchange or quoted on an over-the-counter market (e.g., IBM common stock);

(2) an equity index (e.g., the S&P500 index); or

(3) an exchange-traded fund (e.g., the SPDR fund), the value of which is linked to the prices of the equity securities comprising a specified index or basket of equity securities).

ii) "*Position*" means either:

(1) a long or short direct holding in an Underlying Security (an "Actual Position"); or

(2) an interest whose value is derived from an Underlying Security, whether by conversion, exchange, exercise or otherwise (a "Derivative Position");

For the purposes herein, every Advisor Position shall be considered as either an Actual Position or a Derivative Position, depending on the substance of such Advisor Position.

iii) "*Notional Shares*" with respect to any Position means (1) in the case of an Actual Position, the number of shares (long or short) and (2) in the case of a Derivative Position, the number of shares of the Underlying Security into which the Derivative Position is convertible, exchangeable, exercisable or otherwise related. In all cases, Notional Shares shall be expressed as a positive number.

iv) The "*Delta*" of a Position means the ratio of A over B where:

(1) "*A*" = the actual number of shares in an Underlying Security that would be expected to have the same change in value as the expected change in value of the Position given a small increase in the price of the Underlying Security assuming all other variables remain constant. A will be positive for an increase in value and A will be negative for a decrease in value; and

(2) "*B*" = the Notional Shares of such Position.

For the avoidance of doubt, the Delta of a long Actual Position is +1, and of a short Actual Position is -1.

v) "*Exposure*" (Delta-adjusted value) with respect to any Position means the product of (i) Delta, (ii) the Notional Shares and (iii) the share price of the Underlying Security, with the share price of U converted to USD using the prevailing exchange rate if such price is quoted in a currency other than USD.

vi) "*Liquidity Measure*" means the daily trading volume, determined in the following order, depending on availability:

(1) 100 working day average trading volume
(2) 0.75 * 20 working day average trading volume, and
(3) 0.50 * 10 working day average trading volume.

vii) "*Term Basket*" means a record maintained by the Client relating to the Advisor Positions in the Account, in respect of which all of the following characteristics have been specified: (i) a country, (ii) a currency, (iii) the date on which such record is established (the "Start Date"), (iv) the relevant LIBOR Rate and (v) the date on which all of the Advisor Positions included in such record are scheduled to be liquidated (the "End Date"); and that identifies, at all times, all of the outstanding Advisor Positions in the Account designated by the Advisor to be included in such record.

viii) "*Trading Basket*" means a record maintained by the Client relating to the Advisor Positions in the Account, in respect of which all of the following characteristics have been specified: (i) a country and (ii) a currency; and that identifies, at all times, all of the outstanding Advisor Positions designated by the Advisor to be included in such record.

ix) For each U:

(1) The "*Term Position Set*" of U shall consist of all Positions in the Term Basket with the same U.

(2) The "*Trading Position Set*" of U shall consist of all Positions in the Trading Basket with the same U.

(3) The "*Position Set*" of U shall consist of the union of the Trading Position Set and the Term Position Set of such U.

(4) "*Actual Trading Gross*" shall mean the sum of the absolute values of the Exposures of all Actual Positions in the Trading Position Set of U;

(5) "*Actual Term Gross*" shall mean the sum of the absolute values of the Exposures of all Actual Positions in the Term Position Set of U;

(6) "*Derivative Trading Gross*" shall mean the sum of the absolute values of the Exposures of all Derivative Positions in the Trading Position Set of U;

(7) "*Derivative Term Gross*" shall mean the sum of the absolute values of the Exposures of all Derivative Positions in the Term Position Set of U;

(8) "*Actual Trading Net*" shall mean the algebraic sum of the Exposures of all Actual Positions in the Trading Position Set of U;

(9) "*Actual Term Net*" shall mean the algebraic sum of the Exposures of all Actual Positions in the Term Position Set of U;

(10) "*Derivative Trading Net*" shall mean the algebraic sum of the Exposures of all Derivative

Positions in the Trading Position Set of U;

(11)"*Derivative Term Net*" shall mean the algebraic sum of the Exposures of all Derivative Positions in the Term Position Set of U; and

(12)"*Total Net*" shall mean the algebraic sum of Actual Trading Net, Derivative Trading Net, Actual Term Net and Derivative Term Net.

b) "Total Gross Trading Exposure" shall not exceed USD 32 billion,

where *"Total Gross Trading Exposure"* shall mean the sum of Actual Trading Gross plus Actual Term Gross plus Derivative Trading Gross plus Derivative Term Gross.

c) "Capital Needed" shall always be less than or equal to the Capital Available;

where: "*Capital Available*" shall mean the sum of the Sub Account Capital Available for all existing Sub-Accounts;

where the "*Sub-Account Capital Available*" for each Sub-Account shall be the sum of

(i) The Sub-Account Initial Capital Available for such Sub-Account;

(ii) the aggregate realized and unrealized gains on all Positions in such Sub-Account minus the aggregate realized and unrealized losses in respect of all Positions in such Sub-Account; and

(iii) the sum in such Sub-Account, expressed in USD, of (A) dividend income (determined based on ex-dividend dates) net of any tax withheld, if necessary, plus (B) interest income and any short rebates (on an accrual basis), plus (C) any other income accrued or realized in such Sub-Account, minus (D) payments in lieu of dividends (determined based on ex-dividend dates) in such Sub-Account grossed up for any dividend withholding taxes, if necessary, minus (E) interest expense and finance charges in such Sub-Account, minus (F) other expenses agreed by the Client and the Advisor from time to time, including, without limitation, the Advisor Fees for such Sub-Account.

For the avoidance of doubt, the sum of (ii) and (iii) (defined as the "*Sub Account Additional Capital Available*") should equal the true economic increase or decrease in the value in each existing Sub-Account.

and "*Capital Needed*" shall mean the greater of (A) 5.555555% of the Total Gross Trading Exposure and (B) the lesser of (X) the sum over all Us of the absolute value of the Total Net and (Y) the sum of :

(i) "Alpha" multiplied by the sum over all Us of the absolute value of the Total Net; plus,

(ii) "Beta" multiplied by the absolute value of the sum over all Us of the Total Net; plus,

(iii) "Gamma" multiplied by the maximum of 0 and the difference between (the sum over all Us with the absolute value of Total Net positions greater than 2.5 times the Liquidity Measure of the absolute value of the Total Net) **minus** (3% of the sum over all Us of the absolute value of the Total Net).

where:

1. "*Alpha*" shall mean 0.0453216,
2. "*Beta*" shall mean 0.2046784, and
3. "*Gamma*" shall mean 0.99206

2) **Position Guidelines**

a) The "Issuer Position" for any U shall not be greater than 4% of an issuer's total outstanding shares where:

"*Issuer Position*" for a U shall equal the algebraic sum of the number of shares in all Positions in such U in the Position Set, exclusive of Positions that are Derivative Instruments with negative Delta.

b) The sum over all Us with Total Net positions greater than 2.5 times the Liquidity Measure of the absolute value of the Total Net should not be greater than 54% of Capital Available.

c) The sum over all Us with Total Net positions greater than 5 times and less than 10 times the Liquidity Measure of the absolute value of the Total Net should not be greater than 13.5% of Capital Available.

d) The sum over all Us with Total Net positions greater than 10 times the Liquidity Measure of the absolute value of the Total Net should not be greater than 13.5% of Capital Available.

e) The sum over all Us of the absolute value of the Total Net for U divided by "Total Trading GMV" times the fraction of the total trading volume in U executed by the advisor for the account on any day should be less than 20% where:

"Total Trading GMV" is the sum over all Us of the absolute value of the Total Net.

Part B

Compliance Restrictions

1) The Advisor shall not cause the Account to purchase or invest in securities the offering of which constitutes "new issues," as defined in NASD Rule 2790, as amended from time to time, or any successor rule of the Financial Industry Regulatory Authority.

2) The Advisor shall not cause the Account to purchase or sell, invest in or dispose of securities issued by Deutsche Bank AG or any of its affiliates.

3) The Advisor (a) shall not cause the Account to acquire 5% or more of any class of voting security for which reports are required pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended, and (b) shall not cause the Client, through its ownership of the Account, to become an "affiliate" of any issuer. As used herein "affiliate" has the meaning ascribed to it in each applicable jurisdiction.

4) The Client, acting reasonably and in good faith, has determined that it is necessary or advisable to liquidate certain positions in the Account, or take other remedial actions in relation to the Account, in order to comply or maintain compliance with applicable laws, rules, regulations or recommendations of regulatory authorities (including self-regulatory organizations), internal

policies or risk management requirements of Deutsche Bank Group or this Agreement and has delivered written notice to the Advisor indicating such actions to take and the Advisor has failed to (in the Client's sole reasonable opinion) effect such instructions of the Client.

5) The Client shall provide the Advisor with a list (the "Restricted List") of issuers, securities, industries and/or countries in which the Account is prohibited from buying or selling investments. The Client shall provide an updated Restricted List to the Advisor (i) as promptly as practicable upon any change in such list since its most recent distribution to the Advisor and (ii) no less frequently than daily. Except to the extent set out in the table of permissible activities below, the Advisor shall not cause the Account to trade in any investment included on the Restricted List. For the avoidance of doubt, if the Account is holding securities or obligations when such securities or obligations are placed on the Restricted List, the Advisor shall only be deemed in violation of these restrictions if the Advisor engages in a transaction with respect to such securities or obligations after receiving the Restricted List that contains such restrictions. The following table sets forth the various categories of restrictions that the Restricted List shall comprise, and includes permissible activities that the Advisor may take in respect of such restrictions:

Restriction Category	Permissible Activities
Full Restriction	For the first Exchange Business Day on the relevant Exchange ("Relevant Exchange Business Day") following a security being categorized as "Full Restriction," no trades will be permitted. Permitted Trades (as defined below) may be executed, upon notice to the Client, during the second and third Relevant Exchange Business Days following the security being categorized as "Full Restriction." After the close of business on the third Relevant Exchange Business Day following the security being categorized as "Full Restriction", the position will be frozen and the Advisor will be prohibited from trading the security unless it is removed from the Restricted List. As used herein, "Permitted Trades" means a trade or trades that eliminate exposure to the restricted security by selling all or any part of a pre-existing long position or buying-in all or any part of a pre-existing short position, at then-current market prices, (a) in ordinary market transactions or (b) in transactions with an Unaffiliated Account (as defined below), *provided* that securities transferred to such Unaffiliated Account are not transferred back to the Account in a single transaction or series of transactions. As used herein, "Unaffiliated Account" means an account managed by the Advisor in which no Deutsche Bank entity has any beneficial interest.
Offering	No trades are permitted.
Affiliate Related	The Advisor may, upon notice to the Client, sell a pre-existing long position, sell short and/or buy-in a pre-existing short position. Such transactions should be executed at then-current market prices in accordance with the provisions of (a) and (b) in "Full Restriction".
DB Investment	No trades are permitted.

APPENDIX II

Form of Supplemental Investment Advisory Agreement

[*Continued on next page*]

SUPPLEMENTAL INVESTMENT ADVISORY AGREEMENT

relating to [•]

AGREEMENT dated as of **[•]** (the "Supplemental Agreement") between **Deutsche Bank AG London** (the "Client"), and **Renaissance Technologies LLC** (the "Advisor"). This Supplemental Agreement constitutes a "Supplemental Agreement" as referred to in, and supplements, forms a part of and is subject to, the Master Investment Advisory Agreement between the Client and the Advisor, dated as of December 15, 2008 (the "Master Agreement"). This Supplemental Agreement, combined with the Master Agreement, forms a complete agreement with respect to the sub-account referenced herein(as so combined, the "Sub-Account [•] Investment Advisory Agreement"). Capitalized terms used herein and not defined herein shall have the meaning given to them in the Master Agreement.

In consideration of the premises and mutual promises hereinafter set forth, the parties hereto agree as follows:

16 Creation of New Sub-Account

(a) The Advisor is hereby notified of the establishment of a new Sub-Account, labeled Sub-Account [•] (the "Sub-Account") of the Account.

(b) The Sub-Account shall be managed as though the Client has made available $[•] (the "Sub-Account Initial Capital Available"), to the Advisor for use in the Sub-Account.

17 Supplemental Investment Guidelines and Restrictions

(a) In addition to those Master Investment Guidelines imposed on the Account, and by extension the Sub-Account, the Supplemental Investment Guidelines and Restrictions (the "Supplemental Investment Guidelines"), attached hereto as Appendix S-I, shall apply to the Sub-Account.

(b) A violation of any provision of the Supplemental Investment Guidelines shall constitute a Supplemental Investment Guidelines Violation under Section 8(c) of the Master Agreement, subject to the applicable cure period described below.

In the case of a breach of the following Supplemental Investment Guidelines set out in Part A.1 of the Supplemental Investment Guidelines, the following cure period shall apply:

1. [•]

In the case of a breach of the following Supplemental Position Guidelines set out in Part A.2 of the Supplemental Investment Guidelines, the following cure periods shall apply:

2. [•]

In the case of a breach of any provision of the Supplemental Investment Guidelines not set out in [(i) or (ii)] above, there shall be no cure period.

18 Sub-Account Termination

(a) Unless previously terminated, this Supplemental Agreement shall terminate on **[•]**. If the Supplemental Agreement terminates pursuant to this Section 3(a), the Client will be deemed (solely for the purposes of conducting a Liquidation of the Sub-Account) to have delivered a termination notice to the Advisor and Section 9 of the Master Agreement shall apply.

(b) [For purposes of Section 9(b) of the Master Agreement, the Net Asset Floor for this Sub-Account shall be an AssetNAV (of this Sub-Account) of [•]].

(c) Nothing in this Section 3 shall be seen to impair any rights the Client has under Section 8 of the Master Agreement.

19 Miscellaneous.

(a) This Supplemental Agreement may only be amended by the written agreement of the parties hereto.

(b) The illegality, invalidity or unenforceability of any provision of this Agreement under the law of any jurisdiction shall not affect its legality, validity or enforceability under the law of any other jurisdiction nor the legality, validity or enforceability of any other provision.

(c) Each of the parties (or the specified party, as the case may be) represents, warrants, affirms and agrees to the Representations and Warranties in Section 12 of the Master Agreement, as if they had been made as of the date hereof.

20 Governing Law.

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS ENTERED INTO AND TO BE PERFORMED ENTIRELY WITHIN THE STATE.

[Rest of this page intentionally blank; signature page follows]

IN WITNESS WHEREOF, this Agreement has been entered into the day and year first above written.

DEUTSCHE BANK AG LONDON

By: ______________________
Name:
Title: Attorney-in-Fact

By: ______________________
Name:
Title: Attorney-in-Fact

RENAISSANCE TECHNOLOGIES LLC

By: ______________________
Name:
Title:

APPENDIX S-I

Supplemental Investment Guidelines and Compliance Restrictions

(i) Sub-Account: Investment Guidelines

Part A

1) **Supplemental Investment Guidelines**

[•]

2) **Supplemental Position Guidelines**

[•]

Part B

Compliance Restrictions

For the avoidance of doubt, the Compliance Restrictions located in the Master Investment Guidelines and Compliance Restrictions are incorporated by reference into this Supplemental Agreement.

[•]

APPENDIX S-II

Country Tier pursuant to Appendix S-I

[•]

APPENDIX S-III

________ __, 20__

Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022

Dear Sirs:

With respect to the Supplemental Investment Advisory Agreement relating to Sub-Account **[•]** between **Deutsche Bank AG, London Branch**, ("Client") and **Renaissance Technologies LLC** (the *"Advisor"*), dated **[•]**, (the "Supplemental Agreement") which supplements the Master Investment Advisory Agreement between the Client and the Advisor, dated December 15, 2008 (the "Master Agreement"), the Advisor will receive a management fee calculated as:

[fee to be negotiated by the parties and their counsel]

Capitalized terms used herein and not defined herein shall have the meaning given to them in the Master Agreement.

[Rest of this page intentionally blank]

Very truly yours,

DEUTSCHE BANK AG LONDON

By: ______________________
Name:
Title: Attorney-in-Fact

By: ______________________
Name:
Title: Attorney-in-Fact

Agreed and Accepted:

RENAISSANCE TECHNOLOGIES LLC

By: ______________________
Name:
Title:

[Signature page to Fee Letter]

APPENDIX III

[List of Third Party Brokers pursuant to Section 3(c)]

NYSEARCA
Bloomberg
DOT
Jefferies Execution Services
NASDAQ
Instinet LLC
BATS
CIBC
NeoNet
G-Trade
CHI-X
Deutsche Bank Securities Inc.

APPENDIX IV
Form of Liquidation Control Notice

__________, 20__

Dear Sirs:

In connection with Section 9(a) of the Master Investment Advisory Agreement between **Deutsche Bank AG, London Branch**, (the "Client") and **Renaissance Technologies LLC** (the "Advisor"), dated _________, 2008 (the "Agreement"), the Advisor is delivering to the Client this notice. [The Advisor has received notice from the Client indicating that [the Supplemental Investment Advisory Agreement[s] relating to Sub-Account[s] ____] [the Agreement] will be terminating on [DATE TERMINATION WILL BE EFFECTIVE] pursuant to Section 8(b) of the Agreement.] The Advisor hereby informs the Client that the Advisor has determined that a Liquidation of [the following Sub-Account[s]: ___ of the Account] [the Account] may adversely affect substantially similar positions that the Advisor manages on behalf of other clients, and the Advisor shall commence and manage the Liquidation of [the following Sub-Accounts: ___ of the Account] [the Account], subject to the provisions of Section 9(b) of the Agreement.

Capitalized terms used herein and not defined herein shall have the meaning given to them in the Agreement.

Very truly yours,

RENAISSANCE TECHNOLOGIES LLC

By: ___________________________
Name:
Title:

APPENDIX V
Form of Equity Portfolio Analysis

EQUITY PORTFOLIO ANALYSIS

Report Currency	*USD*	Trade Date		Volume Constraint	
Names		Names		Names	
Shares		Shares		Shares	
Close Value		Close Value		Close Value	
Last Value		Last Value		Last Value	
Avg. Days to Trade		Avg. Days to Trade		Avg. Days to Trade	
% of Avg. Volume		% of Avg. Volume		% of Avg. Volume	
Mid Spread (BPS)		Mid Spread (BPS)		Mid Spread (BPS)	
Mkt. Impact (BPS)		Mkt. Impact (BPS)		Mkt. Impact (BPS)	
Value at Risk (VAR)		Value at Risk (VAR)		Value at Risk (VAR)	
Beta Exposure		Beta Exposure		Beta Exposure	
Beta		Beta		Beta	
Residual Risk		Residual Risk		Residual Risk	
Avg. Daily Return		Avg. Daily Return		Avg. Daily Return	
Volatility		Volatility		Volatility	
Alpha		Alpha		Alpha	
Index Trk.		Index Trk.		Index Trk.	

EQUITY PORTFOLIO ANALYSIS

[Capitalization Breakdown]

BUY							
Mkt. Cap		**Last Value**	**Weight**	**% of Mkt Cap**	**% of Avg. Volume**	**Mid Spread (BPS)**	**Mkt. Impact (BPS)**
0 to 1B							
1 to 10B							
10 to 50B							
50 to 100B							
Above 100B							
Totals:							

SELL							
Mkt. Cap		**Last Value**	**Weight**	**% of Mkt Cap**	**% of Avg. Volume**	**Mid Spread (BPS)**	**Mkt. Impact (BPS)**
0 to 1B							
1 to 10B							
10 to 50B							
50 to 100B							
Above 100B							
Totals:							

EQUITY PORTFOLIO ANALYSIS
[Liquidity Breakdown]

BUY							
Liquidity		Last Value	Weight	% of Mkt Cap	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
00 to 05%							
05% to 10%							
10% to 15%							
100% to 200%							
15% to 20%							
20% to 25%							
25% to 30%							
30% to 50%							
50% to 100%							
Above 200%							
UNKNOWN							
Totals:							

SELL							
Liquidity			Weight	% of Mkt Cap	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
00 to 05%							
05% to 10%							
10% to 15%							
100% to 200%							
15% to 20%							
20% to 25%							
25% to 30%							
30% to 50%							
50% to 100%							
Above 200%							
UNKNOWN							
Totals:							

EQUITY PORTFOLIO ANALYSIS
[Country Breakdown]

BUY Country	Trk. Index	Last Value	Weight	Index Trk.	Beta	Residual Risk	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
Australia											
Canada											
Finland											
France											
Germany											
Italy											
Japan											
Netherlands											
Norway											
Spain											
Sweden											
Switzerland											
US											
Totals:											

SELL Country			Weight	Index Trk.	Beta	Residual Risk	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
Australia											
Belgium											
Canada											
Finland											
France											
Germany											
Italy											
Japan											
Netherlands											
Norway											
Spain											
Sweden											
Switzerland											
US											
Totals:											

EQUITY PORTFOLIO ANALYSIS
[Exchange Breakdown]

BUY								
Code		Name		Last Value	Weight	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
ADF		Not Setup						
AMS		Amsterdam Stock Exchange						
ASE		American Stock Exchange						
ASX		Australian Stock Exchange						
GER		XETRA						
GSD		Not Setup						
HEX		Helsinki Stock Exchange						
JSD		JSDA OTC market						
MCE		Madrid Stock Exchange						
MIL		Milan Stock Exchange						
NAS		NASDAQ						
NMS		NASDAQ National Market System						
NYS		New York Stock Exchange						
OSA		Osaka Stock Exchange						
OSL		Oslo Stock Exchange						
PAR		Paris Stock Exchange						
PSE		Not Setup						
STO		Stockholm Stock Exchange						
SWX		Swiss Stock Exchange						
TOR		Toronto Stock Exchange						
TYO		Tokyo Stock Exchange						
VTX		VIRT-X Exchange						
Totals:								

EQUITY PORTFOLIO ANALYSIS
[Exchange Breakdown]

SELL							
Code		Name		Weight	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
ADC		Not Setup					
ADF		Not Setup					
AMS		Amsterdam Stock Exchange					
ASE		American Stock Exchange					
ASX		Australian Stock Exchange					
BRU		Brussels Stock Exchange					
GER		XETRA					
GSA		Not Setup					
HEX		Helsinki Stock Exchange					
JSD		JSDA OTC Market					
MCE		Madrid Stock Exchange					
MIL		Milan Stock Exchange					
NAS		NASDAQ					
NMS		NASDAQ National Market System					
NSM		NASDAQ National Market System					
NYS		New York Stock Exchange					
OSA		Osaka Stock Exchange					
OSL		Oslo Stock Exchange					
PAR		Paris Stock Exchange					
STO		Stockholm Stock Exchange					
SWX		Swiss Exchange					
TOR		Toronto Stock Exchange					
TYO		Tokyo Stock Exchange					
VTX:		VIRT-X Exchange					
Totals:							

263720

EQUITY PORTFOLIO ANALYSIS
[Index Breakdown]

BUY											
Index		Last Value	Weight	Index Trk.	Beta	Residual Risk	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
AEX											
ASX200											
BEL20											
CAC40											
DAX30											
ETOP100											
ETOP300											
HEX25											
IBEX35											
MDAX											
MIB30											
MSCI-CANADA											
MSCI-EMGMKT											
MSCI-US											
MSCI-WORLD											
NASDAQ											
NIKKEI-1225											
Non-Index											
OBX											
OMX											
S&P500											
SMI											
SPMIB40											
TOPX											
TXS60											
TSX Composite											
Totals:											

EQUITY PORTFOLIO ANALYSIS
[Index Breakdown]

SELL											
Index		Last Value	Weight	Index Trk.	Beta	Residual Risk	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
AEX											
ASX200											
BEL20											
CAC40											
DAX30											
ETOP100											
ETOP300											
HEX25											
IBEX35											
MDAX											
MIB30											
MSCI-CANADA											
MSCI-EMGMKT											
MSCI-US											
MSCI-WORLD											
NASDAQ											
NIKKEI-1225											
Non-Index											
OBX											
OMX											
S&P500											
SMI											
SPMIB40											
TOPX											
TXS60											
TSX Composite											
Totals:											

EQUITY PORTFOLIO ANALYSIS
[Industry Breakdown]

BUY

Industry		Last Value	Weight	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
Advertising								
Aerospace/Defense								
Agriculture								
Airlines								
Apparel								
Auto Manufacturers								
Auto Parts & Equipment								
Banks								
Beverages								
Biotechnology								
Building Materials								
Chemicals								
Closed-end Funds								
Coal								
Commercial Services								
Computers								
Cosmetics/Personal Care								
Distribution/Wholesale								
Diversified Finan Serv								
Electric								
Electrical Comp&Equip								
Electronics								
Energy-Alternate Sources								
Engineering & Construction								
Entertainment								

EQUITY PORTFOLIO ANALYSIS
[Industry Breakdown]

BUY								
Industry		**Last Value**	**Weight**	**Volatility**	**C-Volatility**	**% of Avg. Volume**	**Mid Spread (BPS)**	**Mkt. Impact (BPS)**
Environmental Control								
Food								
Food Service								
Forest Product & Paper								
Gas								
Hand/Machine Tools								
Healthcare-Products								
Healthcare-Services								
Holding Companies-Diversified								
Home Builders								
Home Furnishings								
Household Products/Wares								
Housewares								
Insurance								
Internet								
Investment Companies								
Iron/Steel								
Leisure Time								
Lodging								
Machinery-Const&Mining								
Machinery-Diversified								
Media								
Metal Fabricate/Hardware								
Mining								
Miscellaneous Manufactur								
Office Furnishings								

EQUITY PORTFOLIO ANALYSIS
[Industry Breakdown]

BUY								
Industry		**Last Value**	**Weight**	**Volatility**	**C-Volatility**	**% of Avg. Volume**	**Mid Spread (BPS)**	**Mkt. Impact (BPS)**
Office/Business Equip								
Oil & Gas								
Oil & Gas Services								
Packaging & Containers								
Pharmaceuticals								
Pipelines								
REITS								
Real Estate								
Retail								
Savings & Loans								
Semiconductors								
Shipbuilding								
Solftware								
Storage/Warehousing								
Telecommunications								
Textiles								
Toys/Games/Hobbies								
Transportation								
Trucking & Leasing								
UNKNOWN								
Venture Capital								
Water								
Totals:								

EQUITY PORTFOLIO ANALYSIS
[Industry Breakdown]

SELL

Industry		Last Value	Weight	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
Advertising								
Aerospace/Defense								
Agriculture								
Airlines								
Apparel								
Auto Manufacturers								
Auto Parts & Equipment								
Banks								
Beverages								
Biotechnology								
Building Materials								
Chemicals								
Coal								
Commercial Services								
Computers								
Cosmetics/Personal Care								
Distribution/Wholesale								
Diversified Finan Serv								
Electric								
Electrical Comp&Equip								
Electronics								
Energy-Alternate Sources								
Engineering & Construction								
Entertainment								
Environmental Control								
Food								

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EQUITY PORTFOLIO ANALYSIS
[Industry Breakdown]

SELL

Industry		Last Value	Weight	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
Food Service								
Forest Product & Paper								
Gas								
Hand/Machine Tools								
Healthcare-Products								
Healthcare-Services								
Holding Companies-Diversified								
Home Builders								
Home Furnishings								
Household Products/Wares								
Housewares								
Insurance								
Internet								
Investment Companies								
Iron/Steel								
Leisure Time								
Lodging								
Machinery-Const&Mining								
Machinery-Diversified								
Media								
Metal Fabricate/Hardware								
Mining								
Miscellaneous Manufactur								
Office Furnishings								
Office/Business Equip								
Oil & Gas								

EQUITY PORTFOLIO ANALYSIS
[Industry Breakdown]

SELL

Industry		Last Value	Weight	Volatility	C-Volatility	% of Avg. Volume	Mid Spread (BPS)	Mkt. Impact (BPS)
Oil & Gas Services								
Packaging & Containers								
Pharmaceuticals								
Pipelines								
REITS								
Real Estate								
Retail								
Savings & Loans								
Semiconductors								
Shipbuilding								
Software								
Storage/Warehousing								
Telecommunications								
Textiles								
Toys/Games/Hobbies								
Transportation								
Trucking & Leasing								
UNKNOWN								
Venture Capital								
Water								
Totals:								

From: "Rick Doucette" <rdoucette@gweiss.com>
To: Frank X Nelson/db/dbcom@DBAMERICAS
cn=joe genovese/ou=db/o=dbcom@dbamericas
CC: Joe Genovese/db/dbcom@DBAmericas
"Marcus Peckman" <mpeckman@gweiss.com>
"Steve Kleinman" <skleinman@gweiss.com>
Date: Feb 26 2009 15:17:05
Subject: RE: MAPs comments

Frank

11:00 AM tomorrow is ok with us. Should we call you or you call us?

Rick

From: Frank X Nelson [mailto:frank.x.nelson@db.com]
Sent: Thursday, February 26, 2009 1:26 PM
To: Rick Doucette
Cc: Joe Genovese; Marcus Peckman; Steve Kleinman
Subject: Re: MAPs comments

How does 11am tomorrow work for a call?

"Rick Doucette" <rdoucette@gweiss.com>

02/25/2009 06:33 PM

To

Frank X Nelson/db/dbcom@DBAMERICAS

cc

"Marcus Peckman" <mpeckman@gweiss.com>, "Steve Kleinman" <skleinman@gweiss.com>,
Joe Genovese/db/dbcom@DBAmericas

Subject

MAPs comments

Frank

I have owed you a response on the documentation for the new MAPs structure. We have a series of issues we would like to highlight. Some are more discussion/negotiating items, some cause us to have to change the way we operate, and others are potential deal breakers. Let me explain.

Things that could be deal breakers:

a. Loss of time premium in the event of: 1) breaking through the barrier, 2) misbehavior, 3) default under ISDA terms, and 4) additional termination events(?).
a. We would lose the unamortized premium under the above situations if DB decided not to buy back the option. That value could be as much as 20% in the early stages of the options life, (which is much shorter, 18 to 24 months, than our other options, 5 years plus).

i. Another problem is that with the sale of the option is that there is no pre-set determination of how the value of the option would be determined (intrinsic value, plus liquidity haircut) and what bid/offer spread would be used for the proffer.
b. The financing is applied on the full notional value of the option, not the actual notional that is invested in the underlying portfolio.
a. This is potentially an enormous cost that penalizes us significantly when there is stress in the markets and we reduce our invested balances in order to reduce the risk of draw-downs, an action that is also in the best interest of DB. This doesnt seem fair.

Things that cause us to change the way we operate:

a. Loss of the cross collateralization (ability to borrow against the excess equity) of the option.
a. Historically, we have been able to fund the operating expenses of our business by borrowing against the excess equity value of the option. Additionally, we have been able to use the MAPs account as our primary asset because we can access capital to fund positions held in our OGI, LLC prime brokerage accounts with Deutsche Bank (for non-allowable securities) and our other prime brokers (UBS, Citigroup and Credit Suisse).
b. The loss of this flexibility will cause us to reduce the amount of capital we can invest in the MAPs product to insure that we have sufficient resources to fund our business expenses and outside capital requirements. I believe that this would reduce the amount of capital we can invest by 40% to

60%. We can adjust how we handle our cash management to reflect this new paradigm, but it will take some time to determine how much outside liquidity we need to maintain in order to meet our obligations outside of the MAPs product. This will cause us to use conservative assumptions until we have enough practical experience to know the expectational range that would be required.

Things we would like to negotiate:

a. The liquidation process of the option.
a. We need to negotiate the ability to cross sell the positions in the MAPs account into our prime brokerage account for OGI as the cash to fund the purchases will be tied up in the option until settlement. We would like to propose a simultaneous purchase and sale of the option and the underlying, in effect, we would like to get a payment in kind of the underlying securities on the liquidation of the option.

b. The barrier concept.
a. When we meet with you and Satish, we discussed the concept of doing away with the barrier structure and instead using a level leverage function that would cap the leverage of the notional at 10 times the equity of the option. If the value of the option drops, the amount of the notional exposure underlying the option would drop, much the same as the delta notional value of an option drops as the underlying stocks price moves farther out-of-the-money. In effect, the leverage would be fixed at 10 times to the equity value of the option, subject to some minimum dollar threshold.
b. Additionally, the barrier price was raised substantially from the level used for our other options. Our other options used a price of 94 as the knockout price. The proposed structure uses 97.7, which we believe is too tight.

c. The maturity of the option.
a. Is it possible to extend the maturity of the option beyond the 18 to 24 month target?

Frank, give me a call so we can talk about the above. The obvious big issues are the first two. It would be inappropriate for us to strike a new option if we cannot get any resolution to these items. I will be in Hartford [redacted] tomorrow and Friday. Thanks,

Rick

▬ = Redacted by the Permanent Subcommittee on Investigations

the intended recipient.

From: Satish Ramakrishna <satish.ramakrishna@db.com>
To: Bill Broeksmit <bill.broeksmit@db.com>
cn=bill broeksmit/ou=db/o=dbcom@dbamericas
Date: Aug 25 2009 06:44:45
Subject: Re: RenTech MAPS

Bill - couple of clarifications
- deleveraging is smooth, not only "if half the capital is depleted" - it starts from 100.
A
- RoA when I looked at it last was closer to 110 bps. I will check and let you know.

Best Regards,
Satish Ramakrishna
Deutsche Bank AG, London
Global Markets Equity
Global Prime Finance Risk & Complex Prime Finance
1342, 60 Wall Street, New York
+ 1 212 250 4928 New York
[redacted]
+ 1. 212 250 4051 Asst: Magdalena Pisarczyk

▬ = Redacted by the Permanent Subcommittee on Investigations

----- Original Message -----
From: Bill Broeksmit
Sent: 08/25/2009 10:47 AM GDT
To: Anshu Jain
Cc: Satish Ramakrishna; Jonathan Hitchon; Barry Bausano
Subject: RenTech MAPS
The Renaissance synthetic, non-recourse PB facility (MAPS) tends to use around $15 billion of BS and produces ROA in area of 80 bps. Current facility is up for renewal in early 2010. We think we and one other PB (Barclays or CS, don't know their size) are only providers MAPS to client. AUM in relevant fund (Medallion) is almost all partners' wealth and friends and family. This is the fund with the legendary track record (35% average annual returns over past 20Y). (Somewhat puzzlingly, the Renaissance fund open to outside investors (RIEF, a 175/75 S+P plus style) has badly underperformed S+P this year and AUM is down from $25 billion to less tha $10 billion).

Following is a more detailed description of the MAPS facility:

The Renaissance MAPS trade is a synthetic, non-recourse PB-inspired facility. We carry the equity longs and shorts, as directed by Renaissance, on our BS and pass the performance of portfolio to Renaissance via swap. Equity longs we carry on behalf of Renaissance show up as trading assets for DB and shorts appear as securities borrowed (asset) and securities sold but not yet purchased (liability).

This trade format is much less BS efficient than a traditional PB account because in a PB account I can net receivables and payables with same customer. So if an equity long/short account has equal amount of longs (financed by us) and shorts (borrowed from us versus posting of cash collateral), PB receivable wrt that account nets to zero.

Renaissance trade is only different from a straight synthetic PB facility in that it is non-recourse. Facility allows client maximum of 18X NAV in gross value of longs plus shorts, or a 9X9 long versus short portfolio. Diversification requirements and other sub-limits are tighter than more

traditional equity long/short PB facilities - EM exposures are restricted, as are illiquid and concentrated positions. If client started the day with maximum leverage (it has never done so), longs would have to underperform shorts by 11% to burn through capital and put us into non-recourse loss territory. We have triggers in place that allow us to sieze control of the portfolio at any point during the day if half of the capital is depleted (ie, 5.5% long underperformance of shorts). Biggest risk is an August 2007 event when equity long/short trades got too crowded and there was a sudden shake-out - they were then running at 12x leverage and they delevered immediately.. Since
they stagger their individual MAPS trades, if one option ran into trouble, they could redistribute the long/short portfolio into the other (deeper-in-the-money and hopefully less levered) options.

This structure (long option on underlying portfolio) is a capital asset if held by the partners for more than one year. Size of portfolio tends to be between $8 and 12 billion long and same amount of short. Maximum allowed usage is $16 billion X $16 billion, though this has never been approached.

Pricing is: we lend to finance longs at FF+37.5 bps and borrow cash pledged against securities borrowed at FF-37.5 bps. Most of the money is actually made by lending them specials that we have on inventory and they pay far above the regular rates for that. In addition, their positions help us internalize other clients' exposures, so it helps reduce financing cost across the platform.

Bill Broeksmit
Office: +44 (0)20 7545 7899
[redacted]
US Mobile: +1 917 301 3003

[redacted] = Redacted by the Permanent Subcommittee on Investigations

EXECUTION COPY

Deutsche Bank
Deutsche Bank AG London[1]
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Telephone: 1-212-250-2500

MOSEL EQUITIES L.P.
c/o Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022
Attn: Mark Silber / Carla Volpe Porter
Tel: (212) 486-6780
Fax: (212) 758-7136

BARRIER OPTION TRANSACTION – Cash Settled –
DBSI Reference No. 941-50310

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the transaction entered into between **DEUTSCHE BANK AG, LONDON BRANCH** ("Party A" or "Seller") and **MOSEL EQUITIES L.P.** ("Party B," or "Buyer," and together with Party A, the "Parties") on the Trade Date specified below (the "Transaction"). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below. This Confirmation constitutes the entire agreement and understanding of the parties with respect to the subject matter and terms of the Transaction and supersedes all prior or contemporaneous written or oral communications with respect thereto.

DEUTSCHE BANK AG IS NOT REGISTERED AS A BROKER DEALER UNDER THE U.S. SECURITIES EXCHANGE ACT OF 1934. DEUTSCHE BANK SECURITIES INC. ("DBSI" or "DESIGNATED AGENT") HAS ACTED SOLELY AS AGENT IN CONNECTION WITH THIS TRANSACTION AND HAS NO OBLIGATION, BY WAY OF ISSUANCE, ENDORSEMENT, GUARANTEE OR OTHERWISE WITH RESPECT TO THE PERFORMANCE OF EITHER PARTY UNDER THE TRANSACTION. DEUTSCHE BANK AG, LONDON BRANCH IS NOT A MEMBER OF THE SECURITIES INVESTOR PROTECTION CORPORATION (SIPC).

1. The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 2002 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc. are incorporated into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern. In the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern. For purposes of the Equity Definitions, the Transaction shall constitute an "Index Option Transaction".

[1] Deutsche Bank AG is regulated by the FSA for the conduct of designated investment business in the UK, is a member of the London Stock Exchange and is a joint stock corporation with limited liability incorporated in the Federal Republic of Germany HRB No. 30 000 District Court of Frankfurt am Main; Branch Registration No. in England and Wales BR000005, Registered address: Winchester House, 1 Great Winchester Street, London EC2N 2DB, Telephone: +44 20 7545 8000.

This Confirmation constitutes a "Confirmation" as referred to in, and supplements, forms a part of and is subject to, the 1992 ISDA Master Agreement, including the Schedule thereto dated as of December 15, 2008 as amended and supplemented from time to time (the "Agreement"), between Party A and Party B. For the avoidance of doubt, the Transaction shall not be subject to the provisions of any other agreement between Party A and Party B, including any other ISDA Master Agreement and any Credit Support Annex thereto. All provisions contained in the Agreement govern this Confirmation except as expressly modified below. All provisions contained or incorporated by reference in the Agreement will govern this Confirmation, except that, without limiting the foregoing, in the event of any inconsistency between this Confirmation and any provisions contained or incorporated by reference in the Agreement with respect to any payment obligations of Party A or Party B, the terms of this Confirmation shall govern. For the avoidance of doubt, notwithstanding anything in Section 6(d) or Section 6(e) of the Agreement to the contrary, any payment or delivery required to be made in connection with the termination of the Transaction shall be calculated and paid in accordance with the provisions contained in this Confirmation.

2. The terms of the particular Transaction to which the Confirmation relates are as follows:

General Terms

Trade Date:	October 8, 2009, which is the first date on which trading in the Basket (as defined below) can occur.
Effective Date:	The Trade Date
Term:	The period from and including the Trade Date to but excluding the Final Valuation Date.
Tenor:	The number of days in the period from and including the Premium Payment Date to but excluding the Scheduled Expiration Date.
Option Type:	Call
Option Style:	European
Buyer:	Party B
Seller:	Party A
Index:	The NAV Index Level
Business Day:	New York
Business Day Convention:	Following Business Day.
Exchange Business Day:	For each Exchange (as defined below), any Scheduled Trading Day on which such Exchange is open for trading during its regular trading session notwithstanding such Exchange closing prior to its Scheduled Closing Time.

Transaction Details

Number of Options:	One
Strike Price:	100
Notional Amount:	USD3,600,000,000
Initial Leverage:	USD2,825,000,000
Premium:	USD400,000,000
Premium Payment Date:	The third (3rd) Business Day immediately following the Trade Date.
Calculation Agent:	Designated Agent

Procedure for Exercise

Expiration Time:	5 p.m. (local time in New York City).
Expiration Date:	The date which is the earliest of: (i) December 18, 2010, (the "Scheduled Expiration Date"), (ii) the first date on which the NAV Index Level is at or below the Barrier NAV Index Level (such event and date described in this clause (ii) shall be referred to herein as an "Early Expiration Event" and an "Early Expiration Date", respectively) and (iii) any other date on which the Transaction is terminated or expires in accordance with the Confirmation or the Agreement.
Automatic Exercise:	Applicable.
Seller's Agent's Telephone Number and Facsimile Number and Contact Details for Purpose of Giving Notice:	Seller's Agent's Name: Satish Ramakrishna Specified Location: 60 Wall Street, 4th Floor, New York, NY 10005 Tel: (212) 250-4928 Fax: (212) 797-9358 Email: satish.ramakrishna@db.com

Valuation

Final Valuation Date:	The last Pricing Day in the Pricing Period.
Pricing Period:	The period commencing on, and including, the Expiration Date and ending on, and including, the earlier of (i) the Expiration Date, or if such day is not a Pricing Day, then the first (1st) Pricing Day immediately following the Expiration Date, and (ii) the 14th Business Day immediately following the Expiration Date, <u>provided, however</u>, that the Pricing Period shall not be deemed to

commence until the earlier of (a) the Advisor (as defined in Master Investment Advisory Agreement (as defined below)) commencing a Liquidation (as defined therein) of the Sub-Account (as defined therein) relating to the Basket and (b) the Seller having the right, under the Master Investment Advisory Agreement, to take control of the Sub-Account relating to the Basket, provided, further, that the Pricing Period may be a longer or shorter period as mutually agreed upon by the Parties, provided, further, that the Pricing Period shall be deemed to continue until such time as the Calculation Agent has determined, in accordance with customary practices, that it has ended. In the event that the Buyer disputes the Calculation Agent's determination of the Pricing Period and can reasonably demonstrate that an investment manager could have liquidated and reduced to cash a portfolio substantially similar to the Basket in a shorter period subject to the same conditions considered by the Calculation Agent in determining the Pricing Period, then Buyer and Seller shall mutually determine in good faith any adjustment to the Pricing Period and the Pricing Period shall end on the last day of such adjusted period. Notwithstanding the foregoing, if an Early Expiration Event has occurred, the commencement and termination of the Pricing Period will be as determined by the Calculation Agent at such time.

Valuation Method: Upon the expiration or termination of the Transaction, for purposes of establishing the NAV Index Level used to calculate the Cash Settlement Amount, it shall be assumed that (i) all Effected Positions shall be liquidated during the Pricing Period and (ii) each Designated Position shall be deemed liquidated at such time and price as the Investment Advisor, the Seller or any manager chosen by the Seller would have liquidated in conformity with the liquidation provisions of the Master Investment Advisory Agreement (as defined below). It also shall be assumed that Seller, or any manager chosen by Seller to exercise control over the Basket, shall, commencing on the Expiration Date or as soon as is practicable thereafter, conduct an orderly liquidation and reduction to cash of all Effected Positions contained in the Basket, in a commercially reasonable manner and in accordance with the provisions of the Master Investment Advisory Agreement relating to effecting a liquidation, with the objective of minimizing market impact and preserving the remaining equity value of the Basket. Except in the case of an Early Expiration Event, it shall be assumed, in conducting the liquidation, Seller or any manager chosen by Seller to exercise control over the Basket (if applicable) shall give due regard to effecting proportionate reductions of any economic long positions and economic short positions. Notwithstanding the foregoing, if Section 9(b) of the Master Investment Advisory Agreement applies and the Investment Advisor has advised the Seller in a timely fashion to accept the

	bid that established the Market Bid Level (as defined therein), then for purposes of establishing the NAV Index Level used to calculate the Cash Settlement Amount, the Basket shall be deemed to have been liquidated at the Market Value (as defined in the Master Investment Advisory Agreement).
Pricing Day:	For each Trading Basket, an Exchange Business Day on which a Market Disruption Event has not occurred.

Settlement Terms:

Cash Settlement:	Applicable
Settlement Currency	USD
Term Rate:	2.07%
Debit Spread:	The Spread applied to the Basket Debit Balance in accordance with the U.S. Spread Schedule (as outlined below).
Remaining Tenor:	As of any day during the period from and including the Premium Payment Date to but excluding the Scheduled Expiration Date, the number of days remaining in the Tenor, from and including the day on which such determination is being made to but excluding the Scheduled Expiration Date.
Optionality Value:	As of any day during the period from and including the Trade Date to but excluding the Premium Payment Date, an amount equal to:

$$\frac{\textit{Initial Leverage} \times (\textit{Term Rate} + \textit{Debit Spread}) \times \textit{Tenor}}{365 + (\textit{Term Rate} \times \textit{Tenor})}$$

; and as of any other day during the Term of this Transaction, the **greater of** (i) zero and (ii) an amount determined by the difference of (a) the Optionality Value calculated for the previous day **minus** (b) the quotient of (x) the Optionality Value as of the Trade Date **divided** by (y) Tenor.

Intrinsic Value:	As of the Trade Date, an amount equal to (i) the Premium **minus** (ii) the Optionality Value as of the Trade Date (the "Initial Intrinsic Value"); and as of any other day during the Term of this Transaction, an amount (which may be positive or negative) equal to the sum of (a) the Intrinsic Value calculated for the previous day **plus** (b) the change in Basket Base Performance for such day (which may be a positive or negative number).
NAV Index Level:	As of each day during the Term of this Transaction, an amount determined as follows:

$$100 + \left(100 \times \frac{\textit{Intrinsic Value as of such date}}{\textit{Notional Amount}}\right)$$

Barrier NAV Index Level: As of the Trade Date, 106.604597; and as of each day during the Term of this Transaction, an amount determined as follows:

$$100 \times \left(.977 + \frac{\textit{Premium} - \textit{Optionality Value}}{\textit{Notional Amount}}\right)$$

Cash Settlement Amount: Cash Settlement Scenario "A" or Cash Settlement Scenario "B" (each, a "Cash Settlement Scenario"), as specified herein, determined as of the Final Valuation Date. Except as otherwise stated herein, if for any reason this Transaction is terminated or expires prior to the Scheduled Expiration Date, the measure for any payment owed shall be Cash Settlement Amount Scenario "A". For the avoidance of doubt, if a Party delivers a notice specifying an Expiration Date and the grounds on which such termination notice is being delivered, the Cash Settlement Scenario associated with such grounds shall be the Cash Settlement Amount, notwithstanding the occurrence, between the delivery of the termination notice and the Expiration Date specified therein, of circumstances or events giving rise to the alternative Cash Settlement Scenario.

(i) For the avoidance of doubt, without limitation, the following events will result in the Cash Settlement Amount being Cash Settlement Scenario "A:"

(a) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(d)(i), Paragraph 4(d)(iii) or Paragraph 4(d)(iv) of this Confirmation;

(b) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(e) of this Confirmation;

(c) a termination of the Transaction resulting from the occurrence of an Event of Default other than one described in paragraph (ii)(c) below;

(d) a termination of the Transaction resulting from the occurrence of a Termination Event other than one described in paragraph (ii)(d) below; and

(e) all other events that result in the Transaction being terminated, either automatically under the terms of this Agreement, or by action of one of the Parties, where the Cash Settlement Amount is not otherwise specified.

(ii) For the avoidance of doubt, without limitation, the following events will result in the Cash Settlement Amount being Cash Settlement Scenario "B":

(a) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(d)(ii) of this Confirmation;

(b) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(f) of this Confirmation;

(c) a termination of the Transaction effected by Buyer as the result of the occurrence of one of the following Events of Default:

(1) a breach by Seller of an agreement in accordance with Section 5(a)(ii) of the Agreement;

(2) a misrepresentation by Seller in accordance with Section 5(a)(iv) of the Agreement;

(3) a default by Seller under Section 5(a)(v)(2) of the Agreement;

(4) a default by Seller under Section 5(a)(vi) of the Agreement;

(5) the occurrence of an event described in Section 5(a)(vii) of the Agreement in respect of the Seller; and

(6) a "merger without assumption" in respect of the Seller as described in Section 5(a)(viii) of the Agreement;

and

(d) a termination of the Transaction resulting from the occurrence of one of the following Termination Events:

(1) an Illegality in accordance with Section 5(b)(i) of the Agreement in respect of which the Seller is the sole Affected Party;

(2) a Tax Event in accordance with Section 5(b)(ii)(y) of the Agreement in respect of which

the effective date of the Change in Law has not yet occurred and Seller has delivered notice to terminate the Transaction;

(3) (X) an Additional Termination Event described in the second paragraph of Paragraph 4(i) of this Confirmation or (Y) the designation by Seller of an Early Termination Date in accordance with Paragraph 4(n) of this Confirmation, provided that in the case of (X) or (Y) above, such Termination Event occurs in respect of any change in applicable law or Change in U.S. Tax Law, as applicable, that has not become effective; and

(4) a Tax Event Upon Merger in accordance with Section 5(b)(iii) of the Agreement in respect of which Seller is the sole Affected Party;

(for the avoidance of doubt, each reference to provisions in the Agreement are as amended by the Schedule thereto).

Cash Settlement Scenario "A": The **greater of** (i) zero, and (ii) an amount determined as follows:

$$\left(NAV\,Index\ Level - Strike\ Price\right) \times \frac{Notional\ Amount}{100}$$

Cash Settlement Scenario "B": The **greater of** (i) zero, and (ii) an amount determined as follows: the sum of (a):

$$\left(NAV\,Index\ Level - Strike\ Price\right) \times \frac{Notional\ Amount}{100}$$

plus (b) the Optionality Value.

Cash Settlement Payment Date: The third (3rd) Exchange Business Day immediately following the Final Valuation Date.

Early Settlement Amount: Without altering the foregoing or the final determination of the Cash Settlement Amount or the Seller's obligations in respect thereof, from time to time on any day during the Pricing Period, Buyer may request, and upon such request Seller shall make, a payment to Buyer (all such payments less all repayments of such payments by Buyer to Seller being, the "Early Settlement Payment") in an amount equal to the Available Early Settlement Amount (as defined below). If such request is made by Buyer on or prior to 5:00 p.m., New York time, on a Business Day then Seller shall make such payment to Buyer prior to 2:00 p.m., New York time on the next Business Day. If such request is made after 5:00 p.m., New York time, on a Business Day, Seller shall make such payment to Buyer prior to noon, New York time, on the second succeeding Business Day. If the Seller determines that the Early Settlement Payment on any day during the Pricing Period exceeds the Early Settlement Amount for such day, then the Seller shall so notify Buyer and prior to 5:00 p.m., New York time on the next Business Day, Buyer shall repay such excess to Seller. For each day in the Pricing Period, the Early Settlement Payment on such day shall bear interest at a rate equal to the overnight USD-Federal Funds – H.15 for such day. On the Cash Settlement Payment Date, Buyer shall repay to Seller an amount equal to the Early Settlement Payment together with interest accrued thereon.

For these purposes, at any time:

(i) "Available Early Settlement Amount" equals the excess, if any, of the Early Settlement Amount at such time over the Early Settlement Payment at such time;

(ii) "Early Settlement Amount" means (x) if the Net Hedge Ratio is greater than or equal to .05, zero and (y) otherwise, the amount that equals the product of .75 multiplied by (Intrinsic Value – (Gross Basket Value/(Notional Amount x 1.60)/Premium));

(iii) "Gross Basket Value" means the sum of (x) the total USD market value of all Basket Positions held long plus (y) the absolute value of the total USD market value of all Basket Positions held short;

(iv) "Net Hedge Ratio" means the absolute value of the amount determined by the following formula: (x) total USD market value of all Basket Positions held long less the absolute value of the total USD market value of all Basket Positions held short divided by (y) Gross Basket Value.

Adjustments For Potential Adjustment Events: Calculation Agent Adjustment (as defined below)

Consequences of Merger Events: Calculation Agent Adjustment (as defined below)

Nationalization or Insolvency: Calculation Agent Adjustment (as defined below)

Calculation Agent Adjustment: For purposes of Adjustments for Potential Adjustment Events, Consequences of Merger Events and Nationalization or Insolvency, all with respect to the relevant Basket Positions which comprise the Basket from time to time, the Calculation Agent will make such adjustments to the Share price, the then applicable Basket Base Performance, the NAV Index Level and any other variable relevant to the exercise, settlement or

payment terms of the Transaction, as the Calculation Agent, acting in good faith and commercially reasonable manner, determines appropriate, with reference (as deemed appropriate) to any relevant adjustment rules and precedents in effect for any primary options exchange for exchange-traded options contracts on the relevant affected Basket Positions and in consultation with Buyer.

Additional Terms

The following additional terms shall apply to this Transaction.

3. Further Definitions:

The Basket--

"Basket" means a record maintained by the Calculation Agent for this Transaction identifying, at all times, all of the positions that (i) actually result from transactions specified by the Investment Advisor (as defined below) to be included in such record (the "Effected Positions") or (ii) are Designated Positions (as such term is defined in the Master Investment Advisory Agreement, the Designated Positions together with the Effected Positions, the "Basket Positions"). For the avoidance of doubt, any dividend, interest or any other income that would have been received or accrued on or in respect of, or any expense incurred with respect to, any Designated Position, will be deemed credited or debited to the Basket as Basket Income or Basket Expenses, as the case may be. If a Designated Position would have been entered into but for the fact that the intended Designated Position violated the Investment Guidelines and Compliance Restrictions (as defined below) at the time such transaction was specified by the Investment Advisor, then such position shall be void *ab initio* and therefore not, at any time, a component of the Basket. To the extent that a Designated Position subsequently violates the Investment Guidelines and Compliance Restrictions, it shall be deemed to have been (X) in the case of a long position, sold, and (Y) in the case of a short position, covered, as of the time such Investment Guideline violation occurred. The Basket may be divided, at any time, into sub-records, each constituting either a Trading Basket or a Term Basket (each as defined below).

"Basket Base Performance" means, during a period, the sum (expressed in USD), during such period, of (i) Basket Gains and Losses **plus** (ii) Basket Income and Expenses.

"Basket Gains and Losses" means, during a period, the difference (expressed in USD), during such period, of (i) realized and unrealized gains in respect of the Basket Positions **minus** (ii) realized and unrealized losses in respect of the Basket Positions.

"Basket Income and Expenses" during a period means (i) Basket Income **minus** (ii) Basket Expenses.

"Basket Income" during a period means: the sum, expressed in USD, of (i) dividend income (determined based on ex-dividend dates that have occurred during such period), net of the non-U.S. and U.S. withholding taxes, if any, that would be imposed on a holder of the relevant position that (a) is a resident of the Federal Republic of Germany, (b) is entitled to the benefits of income tax treaties between the Federal Republic of Germany and other countries, (c) properly treats such dividend income as effectively connected with its U.S. trade or business and (d) has provided properly completed and executed certifications claiming such treaty or effectively connected income status; provided, however, in the case of Effected Positions, dividend income will be further reduced by any additional taxes (and penalties and interest associated therewith) incurred by Seller that would not have been incurred by the Seller in the absence of the relationship between Seller and Buyer under this Transaction, **plus** (ii) interest income, receivable and received, on any USD Basket Credit Balance, such interest calculated at the relevant Benchmark Rate minus the Spread applicable to the USD Basket Credit Balance (as stated below) **plus** (iii) the product of (a) the Rebate Share Value (as defined below) on the USD Trading Basket

multiplied by (b) the difference of (1) the relevant Short Benchmark Rate (as defined below) **minus** (2) (A) to the extent such Rebate Share Value is not composed of Hard-To-Borrow Shares (as defined below), the relevant Spread on such Rebate Share Value (stated in the U.S. Spread Schedule below) and (B) to the extent such Rebate Share Value is composed of Hard-to-Borrow Shares, a short spread reflective of the Hard-To-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (iv) interest income receivable on any Non-USD Basket Credit Balance, in each case such interest calculated at the relevant Benchmark Rate minus the Spread applicable to such Non-USD Basket Credit balance, **plus** (v) the product of the Rebate Share Value for each Non-USD Trading Basket **multiplied** in each case by the relevant Benchmark Rate, **plus** (vi) total accrued and paid interest income on Term Basket realized gains and dividend income, that have been realized or paid respectively between Term Basket Reset Dates, calculated at the LIBOR Rate, **plus** (vii) all other income enumerated in the Basket Performance Report. Each interest calculation under this definition shall be performed using the currency associated with the specified Trading Basket for such Trading Basket and all non-USD amounts shall be converted to USD at the spot rate for such currency at the time the Basket Income calculation is performed. As relates to Basket Income, with respect to any Basket Position, "withholding taxes" shall include stamp and excise taxes whether or not collected by withholding.

"Basket Expenses" during a period means: the sum, expressed in USD, of (i) payments in lieu of dividends (including any U.S. or non-U.S. withholding taxes required to be withheld by Seller with respect to such payments in lieu of dividends), provided, however, that in the case of Effected Positions, Basket Expenses will be increased by any additional taxes (and penalties and interest associated therewith) incurred by Seller that would not have been incurred by Seller in the absence of the relationship between Buyer and Seller under this Transaction, **plus** (ii) any interest expenses, excluding accrued interest expenses on any USD Basket Debit Balance, **plus** (iii) total accrued and paid interest expense on the USD Basket Debit Balance, calculated at the Debit Rate on the USD Basket Debit Balance (using the applicable Spread from the U.S. Spread Schedule below), **plus** (iv) total accrued and paid interest expense on any Non-USD Basket Debit Balance, in each case calculated at the Debit Rate on such Non-USD Basket Debit Balance (using the applicable Spread from the Non-U.S. Spread Schedule below), **plus** (v) total accrued and paid interest expense on any Term Basket open long position, in each case calculated at the Debit Rate on such Term Basket open long position's notional amount (using the applicable Spread from the Non-U.S. Spread Schedule below), **plus** (vi) the stock borrow fee payable on any Non-USD Trading Basket, in each case such fee calculated as the product of the Rebate Share Value for such Non-USD Trading Basket **multiplied** by (a) to the extent such Rebate Share Value is not composed of Hard-To-Borrow Shares, the relevant Spread on such Rebate Share Value (as stated in the Non-U.S. Spread Schedule below) and (b) in the case of Hard-to-Borrow Shares composing such Rebate Share Value, a short spread reflective of the Hard-To-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (vii) the stock borrow fee payable on any Term Basket open short position, in each case such fee calculated as the product of the Term Basket open short position's notional amount **multiplied** by (a) to the extent such Term Basket open short position's notional amount is not composed of Hard-to-Borrow Shares, the relevant Spread on such Term Basket open short position's notional amount (as stated in the Non-U.S. Spread Schedule below) and (b) in the case of Hard-to-Borrow Shares composing such Term Basket open short position's notional amount, a short spread reflective of the Hard-to-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (viii) total accrued and paid interest expense on Term Basket realized losses and payments in lieu of dividends, that have been realized or paid respectively between Term Basket Reset Dates, calculated at the LIBOR Rate, **plus** (ix) all other expenses enumerated in the Basket Performance Report, **plus** (x) any investment advisor fees accrued during such period, whether or not actually paid by Seller. Each interest calculation under this definition shall be performed using the currency associated with the specified Trading Basket for such Trading Basket and all non-USD amounts shall be converted to USD at the spot rate for such currency at the time the Basket Expenses calculation is performed. As relates to Basket Expenses, with respect to any Basket Position, "withholding taxes" shall include stamp and excise taxes whether or not collected by withholding.

"Basket Performance Report" means a periodic report prepared and compiled by the Calculation Agent in its sole discretion (but after consultation with the Investment Advisor), setting forth (among other things) the Basket Base Performance, as well as such other items the Calculation Agent determines, in its

sole discretion, affects the performance of the option. The most current Basket Performance Report as of any date shall be available to Buyer on a daily basis.

"Benchmark Rate" means, (i) for the USD Trading Basket, as of any day, the **FEDSOPEN Rate** for such day (or if such day is not a Business Day as of the preceding Business Day) determined by reference to the **FEDSOPEN Index** as published by the Federal Reserve and as disseminated via Bloomberg and (ii) for each Non-USD Trading Basket, the applicable rate specified in the Non-USD Benchmark Rate Schedule on Schedule II hereto, or if no rate is so specified, the recognized overnight rate for the applicable currency as determined by the Calculation Agent, in good faith, or if such overnight rate is not available, the one week rate for such currency as determined by the Calculation Agent, in good faith.

"Debit Rate" means the sum of (i) the Benchmark Rate for any Trading Basket or the LIBOR Rate (as defined below) for any Term Basket, as the case may be **plus** (ii) for both USD Basket Positions and Non-USD Basket Positions, the Spread for the Basket Debit Balance as listed in the applicable Spread Schedule below.

"Exchange" means, in respect of each Basket Position or the related underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which such underlying security is actively traded or quoted.

"Hard-to-Borrow Shares" means, as determined by the Calculation Agent, (i) in respect of Basket Positions recorded under the USD Trading Basket, any Shares that are components of the USD Trading Basket from time to time for which the market rebate rate is lower than the normal rebate rate received on "general collateral" shares in connection with a theoretical stock borrow arrangement, and (ii) in respect of Basket Positions recorded under a Non-USD Trading Basket, any Shares that are components of such Non-USD Trading Basket from time to time for which the market fee rate is higher than the normal fee rate paid on "general collateral" shares in connection with a theoretical stock borrow arrangement.

"LIBOR Rate" means, in respect of each Term Basket, the one-month LIBOR interest rate on the Start Date (as defined below), and on each Term Basket Reset Date.

"Non-USD Basket Credit Balance" means, for each Non-USD Trading Basket, at any time, the excess, if any, of (i) the sum of (a) the cumulative realized gains on all former Basket Positions in such Non-USD Trading Basket, **plus** (b) the Short Proceeds Amount for such Non-USD Trading Basket, **over** (ii) the sum of (a) the aggregate of the initial "cost basis" of all open long Basket Positions in such Non-USD Trading Basket, **plus** (b) the cumulative realized losses on all former Basket Positions in such Non-USD Trading Basket, **and** (c) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in a currency other than USD to the Basket, but excluding accrued and unpaid income and expense items. Non-USD Basket Credit Balance determinations shall be made on a Share "settlement date" basis and shall be denominated in the currency associated with such Non-USD Trading Basket.

"Non-USD Basket Debit Balance" means, with respect to each Non-USD Trading Basket, at any time, the excess, if any, of (i) the sum of (a) the aggregate of the initial "cost basis" of all open long Basket Positions in such Non-USD Trading Basket, **plus** (b) the cumulative realized losses on all former Basket Positions in such Non-USD Trading Basket, over (ii) the sum of (a) the cumulative realized gains on all former Non-USD Basket Positions in such Trading Basket, **plus** (b) the Short Proceeds Amount for such Non-USD Trading Basket, **and** (c) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in a currency other than USD to the Basket, but excluding accrued and unpaid income and expense items, <u>provided</u>, <u>that</u>, for all Non-USD Basket Debit Balances greater than zero, solely for purposes of determining Basket Expenses, the Calculation Agent shall reduce any such Non-USD Basket Debit Balances by subtracting from the aggregate of such amounts the Unused Initial Leverage (any portion of the Unused Initial Leverage not so subtracted, the "**Remaining Unused Initial Leverage**"). The specific Non-USD Basket Debit Balances from which any Unused Initial Leverage is subtracted shall be determined by the Calculation Agent in its sole discretion but in no event shall any Non-

USD Basket Debit Balance be reduced below zero. Non-USD Basket Debit Balance determinations shall be made on a Share "settlement date" basis and shall be denominated in the currency associated with such Non-USD Trading Basket.

"Non-USD Basket Positions" means the Basket Positions recorded in a Non-USD Trading Basket.

"Non-USD Sub-Basket" means, for a given currency specified in respect of a Non-USD Trading Basket, a record maintained by the Calculation Agent identifying, at all times, all of the Non-USD Trading Baskets specifying that same currency. The Calculation Agent may elect to include in a Basket Performance Report information relating to any or all Non-USD Sub Baskets, which information shall be reported in the currency associated with such Non-USD Sub-Basket. By way of example and not of limitation, a report relating to a Non-USD Sub-Basket for a period may state (among other things) the Basket Credit Balances or Basket Debit Balances (as the case may be) of the relevant Non-USD Trading Baskets for such period, the stock borrow fees on such Non-USD Trading Baskets payable during such period, and any other information selected by the Calculation Agent for inclusion in such report, with all amounts reported in the applicable currency.

"Non-USD Trading Basket" means each Trading Basket that shall contain all Basket Positions representing Shares in respect of which the Exchange is not located in the United States.

"Rebate Share Value" means, at any time, in respect of any Trading Basket, the market value from time to time of all Basket Positions in such Trading Basket that represent open short sales of equity securities. For the avoidance of doubt, a separate Rebate Share Value may be specified for each Trading Basket, including the USD Trading Basket and all Non-USD Trading Baskets. The Rebate Share Value for a given Trading Basket shall be specified in the currency associated with such Trading Basket.

"Related Exchange(s)" means, in respect of each Basket Position or the related underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which futures and/or options contracts with respect to such underlying security are actively traded or quoted.

"Remaining Unused Initial Leverage" is as defined above in the definition of Non-USD Basket Debit Balance.

"Short Benchmark Rate" means, in respect of the USD Trading Basket, (i) for any day prior to the Scheduled Expiration Date, (a) to the extent the Rebate Share Value of the USD Trading Basket is less than or equal to the Initial Leverage, the Term Rate, and (b) for any Rebate Share Value of the USD Trading Basket in excess of the Initial Leverage, the Benchmark Rate (which rate can be expressed as a weighted average rate for the purposes of calculation and reporting); and (ii) for any day during a Pricing Period occurring on or after the Scheduled Expiration Date, the Benchmark Rate.

"Short Proceeds Amount" means, for each Trading Basket, at any time, the sale price(s) received for the Basket Positions that represent open short sales of equity securities in such Trading Basket. A Short Proceeds Amount shall be expressed in the currency of the associated Trading Basket.

"Term Basket" means a record maintained by the Calculation Agent in respect of which all of the following characteristics have been specified: (i) a country, (ii) a currency, (iii) the date on which such record is established (the "Start Date"), (iv) the relevant LIBOR Rate and (v) the date on which all of the Basket Positions included in such record are scheduled to be liquidated (the "End Date"); and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record. Solely for purposes of calculating "Basket Expenses" the Calculation Agent shall reduce (but not below zero) the notional amount of open long positions in Term Baskets by subtracting from the aggregate of such notional amounts any Remaining Unused Initial Leverage. The specific open long positions from which any Remaining Unused Initial Leverage is subtracted shall be determined by the Calculation Agent in its sole discretion.

"Term Basket Reset Date" means, in respect of a Term Basket, the 15th day of each calendar month on a Modified Following Business Day Convention.

"Trading Basket" means a record maintained by the Calculation Agent in respect of which all of the following characteristics have been specified: (i) a country and (ii) a currency; and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record.

"Unused Initial Leverage" means, at any time of determination, (i) if USD Basket Debit Balance is a negative amount, the absolute value of such amount, otherwise (ii) zero.

"USD Basket Credit Balance" means, at any time, the excess, if any, of (i) the sum of (a) the Initial Intrinsic Value, **plus** (b) the cumulative realized gains on all former USD Basket Positions, **plus** (c) the Short Proceeds Amount for the USD Trading Basket, over (ii) the sum of (a) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (b) the cumulative realized losses on all former USD Basket Positions, **plus** (c) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (d) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items. Basket Credit Balance determinations shall be made on a Share "settlement date" basis.

"USD Basket Debit Balance" means (i) on any day prior to the Scheduled Expiration Date the difference, whether positive or negative, between (a) the sum of (1) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (2) the cumulative realized losses on all former USD Basket Positions, plus (3) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (4) all adjustments for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items, **minus** (b) the sum of (1) the Initial Intrinsic Value, **plus** (2) the Initial Leverage, **plus** (3) the cumulative realized gains on all former USD Basket Positions, **plus** (4) the Short Proceeds Amount for the USD Trading Basket; and (ii) during any period beginning on the Scheduled Expiration Date and ending on the Final Valuation Date, the difference, whether positive or negative, between (a) the sum of (1) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (2) the cumulative realized losses on all former USD Basket Positions, **plus** (3) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (4) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items, **minus** (b) the sum of (1) the Initial Intrinsic Value, **plus** (2) the Short Proceeds Amount for the USD Trading Basket, **plus** (3) the cumulative realized gains on all former USD Basket Positions provided that, in the case of (i) and (ii), if on any day such difference is negative then for purposes of calculating "Basket Expenses" for such day the "USD Basket Debit Balance" shall be deemed to be zero. Basket Debit Balance determinations shall be made on a Share "settlement date" basis.

"USD Basket Positions" means the Basket Positions recorded in the USD Trading Basket.

"USD Trading Basket" means the Trading Basket that shall contain all Basket Positions in respect of which the Exchange is located in the United States.

U.S. SPREAD SCHEDULE
Applies to the USD Trading Basket

Type	Spread
Rebate Share Value	37.5 basis points (0.375%)
Basket Credit Balance	25 basis points (0.25%)
Basket Debit Balance	37.5 basis points (0.375%)

Non-U.S. SPREAD SCHEDULE
Applies to all Non-USD Trading Baskets
and all Term Baskets

Type	Spread
Rebate Share Value in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate of One-Month USD-LIBOR-BBA	60 basis points (0.60%)
Basket Credit Balance in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate of One-Month USD-LIBOR-BBA	25 basis points (0.25%)
Basket Debit Balance in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate of One-Month USD-LIBOR-BBA	35 basis points (0.35%)
Rebate Share Value in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor
Basket Credit Balance in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor
Basket Debit Balance in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor

4. Additional Provisions:

(a) Basket Position Composition: A Basket Position is a record reflecting the purchase or sale of any of the following: any equity securities in a company and listed on a recognized exchange, depositary receipts listed on a securities exchange in the United States of America, equity linked securities, OTC derivatives, index futures, exchange-traded funds, other equity linked securities (besides OTC derivatives, index futures, and exchange-traded funds), interest rate and currency transactions, or any other financial instruments that may be agreed to between the parties together with such other securities and assets arising by reason of any Potential Adjustment Events or Merger Events in respect of shares comprising the Basket from time to time (in each case, a "Share" and collectively, "Shares"). For the avoidance of doubt, Basket Positions may be records of purchase and sale transactions not actually executed.

(b) Share Pricing Method: Shares that are traded on a U.S. national securities exchange or the NASDAQ National Market System shall be valued at any time at the last sale price quoted for Shares on the Consolidated Tape on the date and at the time for which value is being determined, or, if no sale occurred on such date, then at the mean between the "bid" and the "asked" prices on such date as reported in any recognized interdealer quotation system. Other Shares traded over-the-counter shall be valued at the mean between the "bid" and the "asked" prices quoted for such Shares. Shares not so traded as described herein shall be valued at their fair market price, as determined in a commercially reasonable manner by the Calculation Agent; the Calculation Agent shall perform valuation of such

Shares in accordance with criteria regarding valuation times and share pricing methods communicated by Seller in writing to Buyer in a Basket Performance Report or otherwise. With respect to any position not described above, the Calculation Agent in valuing stocks, securities or other investments, may select such other methods of valuation as it in good faith shall deem appropriate under the circumstances and, once determined, all such valuations shall be final and conclusive in the absence of manifest bad faith. The Calculation Agent shall use the actual trade execution pricing for selling and/or acquiring the Shares (the "Share Execution Price") in connection with (i) any option expiration (including any Early Expiration Event), and (ii) determinations of any Basket Debit Balances or Basket Credit Balances. In the case of Designated Positions, except as otherwise described herein, the timing and price for the deemed selling and/or acquiring of a Designated Position shall be as determined by the Calculation Agent in good faith and a commercially reasonable manner, at such prices as would reasonably be expected to be the execution prices if the trade giving rise to the Designated Position had actually and timely been executed. The Calculation Agent's valuation of the Basket or its valuation methodology may differ from the valuation methodology it uses for its own books and records or other internal purposes.

(c) Termination and Early Expiration Notices: In connection with Termination Events under this Confirmation in which Buyer is an Affected Party and Seller has the right, upon delivery of notice to Buyer, to terminate this Transaction, then Seller may exercise such right to terminate by delivery of a Seller Termination Notice, substantially in the form attached hereto as Annex I. In connection with Termination Events under this Confirmation in which Seller is an Affected Party and Buyer has the right, upon delivery of notice to Seller, to terminate this Transaction, then Buyer may exercise such right to terminate by delivery of a Buyer Termination Notice, substantially in the form attached hereto as Annex II. Notwithstanding the provisions of Section 6(a) of the Agreement, the Early Termination Date in respect of this Transaction shall be the day on which the Seller Termination Notice or Buyer Termination Notice, as relevant, is effectively delivered provided that if such day is not an Exchange Business Day, the Early Termination Date shall be the first Exchange Business Day to occur after such day.

If an Early Expiration Event occurs, this Transaction will automatically expire at the time of such occurrence. In such instance, Seller may, solely as a courtesy and without obligation, give notice to Buyer of the occurrence of such Early Expiration Event. If Seller determines to provide such notice, it may do so substantially in the form attached hereto as Annex I. For the avoidance of doubt, notwithstanding the delivery or non-delivery of such a notice, an Early Expiration Event occurs automatically at the time the conditions described in clause (ii) of the definition of Expiration Date have occurred.

Except as otherwise specified herein, upon the occurrence of an event or circumstances giving Buyer the right to terminate this Transaction prior to the Scheduled Expiration Date (excluding an Event of Default in respect of Seller under Section 5(a)(vii) of the Agreement, but including, without limitation, any other Event of Default in respect of Seller or any Termination Event in respect of Seller), Buyer shall deliver a Buyer Termination Notice within 15 days of the accrual of such right to terminate this Transaction or Buyer shall be deemed to have waived such right to terminate this Transaction as the result of the occurrence of such event or circumstances, provided that for the purpose of determining when a Buyer's right to terminate this Transaction accrues under Section 5(a)(ii) of the Agreement or as the result of a Termination Event, Buyer shall be deemed to have delivered any notice required to be delivered by Buyer under Section 5(a)(ii) or Section 6(b)(i) of the Agreement, as the case may be, at the time Buyer learned of Seller's breach of agreement or obligation hereunder or of the facts giving rise to such Termination Event, as the case may be.

(d) Investment Advisor: Buyer acknowledges that **Renaissance Technologies LLC** (the "Investment Advisor") has been engaged by Seller to manage the composition of the Basket on a discretionary basis for the account of Seller, pursuant to (a) the Investment Guidelines and Compliance Restrictions (the "Master Investment Guidelines and Compliance Restrictions ") set forth in the Master Investment Advisory Agreement dated as of December 15, 2008, between Seller (or its specified affiliate) and the Investment Advisor (the "Master Investment Advisory Agreement,") and (b) the Supplemental Investment Guidelines and Compliance Restrictions (the "Supplemental Investment Guidelines and Compliance Restrictions," and together with the Master Investment Guidelines and Compliance

Restrictions, the "Investment Guidelines and Compliance Restrictions") set forth in the Supplemental Investment Advisory Agreement dated December 15, 2008, as may be amended from time to time, between the parties to the Master Investment Advisory Agreement, (the "Supplemental Investment Advisory Agreement," and together with the Master Investment Advisory Agreement, the "Investment Advisory Agreement"). While Seller, in the normal course of its business, shall review Investment Advisor's compliance with the Investment Guidelines and Compliance Restrictions, Seller shall have no liability to Buyer – and Buyer hereby waives any rights of action against Seller – in connection with Investment Advisor's non-compliance with said Investment Guidelines and Compliance Restrictions – or any other terms of the Investment Advisory Agreement.

If (i) the Investment Advisory Agreement or the Supplemental Investment Advisory Agreement is terminated after notice of termination by Seller for cause (as set out in the Master Investment Advisory Agreement); (ii) Seller delivers notice that it is terminating the Supplemental Investment Advisory Agreement without cause under the provisions of the Master Investment Advisory Agreement and either (x) the Investment Advisor has delivered notice, in accordance with the Master Investment Advisory Agreement, that it shall commence and manage the Liquidation or (y) three Exchange Business Days have passed without the Investment Advisor delivering such a notice, (iii) Investment Advisor delivers notice that it is terminating the Investment Advisory Agreement for cause (as set out in the Master Investment Advisory Agreement) and either (x) the Investment Advisor has delivered notice, in accordance with the Master Investment Advisory Agreement, that it shall commence and manage the Liquidation or (y) three Exchange Business Days have passed without the Investment Advisor delivering such a notice, or (iv) the Investment Advisory Agreement or the Supplemental Investment Advisory Agreement should terminate for any other reason, then for purposes of Section 5(b)(v) of the Agreement the occurrence of any of clause (i), (ii), (iii) or (iv) above shall be an Additional Termination Event with this Transaction as the sole Affected Transaction and Seller as the sole Affected Party. Upon the occurrence of such an Additional Termination Event, Seller shall timely deliver to Buyer notice of such event and Buyer shall have the right, but not the obligation, within 3 days of effective delivery of such notice (but not more than 3 days), to terminate this Transaction, by delivery of a notice to Seller substantially in the form attached hereto as Annex II. In the case of (i), (iii) or (iv), if this Transaction is terminated, the Cash Settlement Amount shall be Cash Settlement Scenario "A." In the case of (ii), if this Transaction is terminated, the Cash Settlement Amount shall be Cash Settlement Scenario "B."

(e) <u>Additional Termination Event Relating to Seller CDS Spreads</u>: The occurrence, from time to time, of a CDS Spread Event X or of a CDS Spread Event Y shall constitute an Additional Termination Event in respect of which Seller shall be the sole Affected Party and this Transaction and all other Transactions between Seller and Buyer shall be Affected Transactions. Notwithstanding the provisions of Section 6(b)(iv)(2) of the Agreement or any other provision of the Agreement to the contrary, in the event that such an Additional Termination Event occurs (the date of such occurrence being a "<u>Trigger Date</u>") and Buyer does not designate, as a result thereof, an Early Termination Date in respect of all (and not less than all) Transactions within fifteen (15) days of the related Trigger Date then Buyer shall be deemed to have waived such Additional Termination Event and no CDS Spread Event X or CDS Spread Event Y, whichever gave rise to such Additional Termination Event, may again occur during the ninety (90) day period that commenced on the related Trigger Date.

For purposes hereof the "<u>CDS Spread</u>" on any Business Day shall be the average of the mid-market (average of bid and offer for USD100,000,000 notional protection) five year senior debt credit default swap ("CDS") spreads in respect of Seller, as quoted by: Barclays Capital Inc., Citigroup Global Markets Inc., Goldman, Sachs & Co., J. P. Morgan Securities Inc. and Morgan Stanley & Co. Incorporated (each, and any successor thereto, a "Reference Dealer") (quoted at Bloomberg function CDSW, although if Buyer in good faith and in a commercially reasonable manner determines such a quote available at Bloomberg function CDSW is inconsistent with market conditions, it may confirm the quote directly with such Reference Dealer and such directly confirmed quote shall be used in place of the applicable one found at Bloomberg Function CDSW, if different), measured as of 3:00 p.m. New York time on such Business Day. In the event that, at such time, any one or more of the Reference Dealers specified above has not provided a quote of the CDS spreads in respect of Seller, the CDS Spread shall be the average of the CDS spreads quoted at such time by the other Reference Dealers <u>provided</u> that if, at such time, fewer than three of such Reference Dealers have provided such a quote, Buyer and Seller shall reasonably agree to include, in the averaging calculation, the quote of another recognized dealer or dealers, so that three such quotes have been averaged, for the purpose of determining the CDS Spread; provided, however, that if one or more Reference Dealer provides such a quote and the Buyer and Seller are unable to reasonably agree as to an additional recognized dealer or dealers (as applicable), the average of the quotes obtained from available Reference Dealers (or if only one Reference Dealer is providing a quote, such quote) shall be used to determine the CDS Spread. A CDS Spread Event X will occur if the CDS Spread is 325 basis points or more on at least three (3) consecutive Business Days. A CDS Spread Event Y will occur if the CDS Spread is at least 450 basis points on any Business Day. Buyer shall not buy, sell or otherwise engage in transactions with respect to CDS of the Seller. No affiliate of Buyer may engage in transactions with respect to CDS of the Seller for the purpose or with the intent of increasing such spread in order to trigger the provisions of this Paragraph.

(f) Fundamental Change to the Investment Guidelines and Compliance Restrictions: If Seller makes a fundamental change to the Investment Guidelines and Compliance Restrictions, as determined by Seller in its reasonable discretion, then Seller shall notify Buyer of such change and Buyer shall have the right, but not the obligation, to terminate this Transaction, by delivery of a notice to Seller substantially in the form attached hereto as Annex II. If Buyer elects to terminate this Transaction pursuant to this paragraph, the Cash Settlement Amount shall be Cash Settlement Scenario "B."

(g) Post-Settlement Adjustments: Notwithstanding anything to the contrary in the Agreement, if, (i) after the Transaction has terminated and any Cash Settlement Amount has been paid, Seller or Buyer becomes aware of (a) an operational misbooking or (b) any accrued but unpaid income or expense (as of the Final Valuation Date) that, (1) differed from the amount actually paid, (2) was determined to be in error or (3) was not actually paid in accordance with the value at which it had been booked by the Seller, and (ii) the occurrence of a situation described in clauses (a) or (b) affected the calculation of the Cash Settlement Amount, then the Party that becomes aware of such fact will notify the other Party, and the Parties will negotiate in good faith to allocate any payment adjustment between them. This provision shall survive the termination of this Confirmation or the Agreement.

(h) Change in Definition of Indemnifiable Tax: Solely for the purposes of this Transaction, the term Indemnifiable Tax will be defined to exclude any tax imposed on any payment under this Transaction that is based on, related to, in respect of, or measured by, in whole or in part, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket.

(i) Taxes: For purposes of determining Basket Base Performance, Basket Gains and Losses, Basket Income and Expenses, Basket Credit Balance, Basket Debit Balance and any other item used to calculate or affecting any of such amounts, gain, loss and any other income or expense items will be computed and taken into account without giving effect to any Tax that might be imposed in respect or by reason thereof (except to the extent that withholding taxes (including any penalties and interest associated with such taxes) are expressly included in Basket Income or in Basket Expenses).

(j) Non-Confidentiality: Except as otherwise hereinafter set forth in this paragraph, the parties hereto agree and acknowledge that the structure and tax aspects of the Transaction and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Notwithstanding anything herein to the contrary, each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Transaction and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof unless and to the extent such information is necessary or helpful in understanding the tax treatment or tax structure of the transaction). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with the Transaction, including, without limitation, that such party has entered into the Transaction with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of the Transaction hereunder. Notwithstanding the foregoing, either party may disclose any such Confidential Information if required by law or required or requested by any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

(k) Reporting. Seller represents that for tax purposes, it and any Affiliate thereof will report the Transaction, as a derivative financial instrument, and, for accounting, regulatory, tax and all other purposes, it and any Affiliate thereof will treat and report the Effected Positions and any other assets or positions that may be credited to or included within the Baskets (other than in respect of Designated Positions) as assets and positions of which Seller is the sole legal and beneficial owner and to which Seller is the party, as the case may be; provided, that in the event of a dispute between the parties as to the proper characterization of the Transaction and related assets subsequent to a Change in U.S. Tax Law, Seller will in good faith make its own determination of such characterization and treat and report the Transaction and related assets in accordance with its good faith determination. Seller represents that for U.S. federal income tax purposes all payments received under the Transaction will be treated as effectively connected with the conduct of a trade or business within the United States and as attributable to a trade or business carried on by it through a permanent establishment in the United States. (For purposes of this section the term "Change in U.S. Tax Law" means the (a) enactment, promulgation, execution or ratification of, or any change in or amendment to, the U.S. Internal Revenue Code of 1986, as amended, or the Treasury Regulations promulgated thereunder (including any proposed changes that are not required under such proposal to be prospective only) or (b) the announcement of the application or official interpretation thereof by the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires), or (c) any action taken by a taxing authority, or brought in a court of competent jurisdiction, on or after the date on which the Transaction is entered into (regardless of whether such action is taken or brought with respect to a party to the Agreement) (which includes, for the avoidance of doubt, the commencement of a tax audit of Seller (that occurs on or after the date on which the Transaction is entered into) in which Seller believes, in its sole discretion, that the auditor will propose that Seller treat the Transaction in a manner other than described above).

(l) Additional Termination Events. Notwithstanding the provisions of Section 5(a)(iv) of the Agreement, if any of the representations made by Buyer in Part 2(b) of the Schedule to the Agreement in respect of this Transaction proves to have been incorrect or misleading in any material respect when made or repeated or deemed to have been made or repeated, such incorrect or misleading representations shall constitute an Additional Termination Event under Section 5(b)(v) of the Agreement, and Buyer shall be the sole Affected Party and this Transaction shall be the sole Affected Transaction.

If during the term of the Transaction (and solely with respect to this Transaction), as a result of any event described in clauses (x) or (y) of Section 5(b)(ii) of the Agreement, (which clause (x) will include, for the avoidance of doubt, the commencement of a tax audit of Seller), Seller makes its own reasonable determination, after consultation with Buyer, that it is substantially likely that either it is under an obligation to withhold or remit any tax on account of, or relating to, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket, or it will receive dividends on such Shares net of withholding tax, in each case due to the relationship between Seller and Buyer under this Transaction, then such determination shall constitute an Additional Termination Event under Section 5(b)(v) of the Agreement, and Buyer shall be the sole Affected Party and this Transaction shall be the sole Affected Transaction.

(m) Transferability. The option constituting the Transaction shall not be transferable by Seller without the prior written consent of Buyer which consent shall not unreasonably be withheld or delayed. The option constituting the Transaction shall be transferable by Buyer (and any transferee of the option constituting the Transaction) in whole or in part at any time to another U.S. Person (other than U.S. trusts under section 7701(a)(30) of the Code unless Seller in its sole discretion consents) with the written consent of Seller upon written notice, which consent shall not be unreasonably withheld and shall be delivered within a reasonable period of time. Without limitation to the foregoing, for purposes of this provision, it shall not be unreasonable for Seller to withhold consent if the transferee (x) is not a customer of Seller (or a related party thereto) and is unwilling or unable to meet Seller's then standards for customers (y) would otherwise violate Seller's standard operating procedures (for example, on account of know-your-customer rules or limits on exposure to any particular customer) or (z) would, in the reasonable belief of Seller, increase any risk (including, without limitation, tax risk) to Seller. Any purported transfer in violation of this provision shall be void and of no effect.

(n) Termination Following Regulatory Change. Notwithstanding anything to the contrary in this Confirmation, Seller may designate an Early Termination Date and terminate this Transaction upon not less than fifteen (15) Business Days prior written notice to Buyer, in the event that in the reasonable opinion of Seller (supported by the written opinion of nationally recognized counsel reasonably acceptable to Buyer): (i) any change after the Trade Date in applicable law (including, without limitation, any laws, treaties, ordinances, rules, regulations, rulings, interpretations and authorizations of the United States or of any political subdivision, regulatory body having authority over Seller) materially and adversely affects Seller's capital charges directly resulting from the Transaction and Buyer declines (in its sole judgment) to make any additional payments determined by Seller (in its sole judgment) that would make Seller indifferent to such change, or (ii) Seller's tax position with respect to the Transaction is affected due to any Change in U.S. Tax Law (as defined in "Reporting" above). If Seller elects to terminate the Transaction pursuant to this paragraph, the Cash Settlement Amount shall be (i) Cash Settlement Scenario "A" if the change in applicable law or Change in U.S. Tax Law has become effective or (ii) Cash Settlement Scenario "B", otherwise.

5. Additional Representations:

Buyer and Seller each make (and as indicated, Buyer makes) the following additional representations:

(i) it is entering into the Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise and no other person has an interest herein.

(ii) it has, in connection with the Transaction (a) the knowledge and sophistication to independently appraise and understand the financial and legal terms and conditions of the Transaction and to assume the economic consequences and risks thereof and has, in fact, done so as a result of arm's length dealings with the other party; (b) to the extent necessary, consulted with its own independent financial, legal or other advisors and has made its own investment, hedging and trading decisions in connection with the Transaction based upon its own judgment and the advice of such advisors and not upon any view expressed by the other party; (c) not relied upon any representation (whether written or oral) of the other party, other than the representations expressly set forth hereunder and is not in any fiduciary relationship with the other party; (d) not obtained from the other party (directly or indirectly through any other person) any advice, counsel or assurances as to the expected or projected success, profitability, performance, results or benefits of the Transaction; and (e) determined to its satisfaction whether or not the rates, prices or amounts and other economic terms of the Transaction and the indicative quotations (if any) provided by the other party reflect those in the relevant market for similar transactions.

(iii) it is not a private customer (as defined in the Rules of The Securities and Futures Authority).

(iv) it understands that the offer and sale of the option constituting the Transaction is intended to be exempt from registration under the US Securities Act of 1933, as amended (the "Securities Act"), by virtue of Section 4(2) thereof. In furtherance thereof, it represents and warrants that (a) it is experienced in investing in or otherwise entering into options and other financial instruments similar to the Transaction and has determined that the Transaction is a suitable investment for it, and (b) it is an institution which qualifies as an "accredited investor" or "qualified institutional buyer" as such terms are defined under relevant regulations promulgated under the Securities Act.

(v) Buyer understands and specifically acknowledges and agrees that the composition of the Basket as well as the Basket Base Performance shall be under the sole discretionary trading authority of Investment Advisor, an investment advisor independent of Seller. A copy of the Investment Advisory Agreement has been previously made available to, and has been reviewed by, Buyer. Buyer has obtained all the information it desires regarding the Investment Advisor, including, for the avoidance of doubt, investment advisor fees. Buyer agrees and acknowledges that neither Seller nor the Designated Agent take any responsibility for such information. Buyer has made an independent judgment of the experience and expertise of the Investment Advisor. Buyer agrees that it shall not attempt to direct or influence the choice of investments in the Basket. Buyer acknowledges and agrees that Buyer has no rights under the Investment Advisory Agreement and is not a third party beneficiary thereto.

(vi) Buyer represents to Seller, that Buyer has sufficient experience with derivative transactions or similar securities or instruments to make a determination to enter into a Transaction linked to the securities underlying or referred to in such derivative transactions, and has the capacity and authority to invest directly in the securities underlying or referred to in such derivative transactions. This representation shall be deemed to be true and accurate on each day that this Confirmation remains in force and effect.

(vii) Buyer acknowledges that Basket Positions may exist in the absence of actually executed transactions. Buyer understands that the existence of a Basket Position does not necessarily indicate that an actual purchase or sale of Shares occurred, and that the Basket Base Performance and the value of the Cash Settlement Amount may be affected by records of transactions that did not actually occur. Buyer and Seller agree that nothing in this Confirmation obligates the Seller to actually purchase or sell any of the underlying securities from which a Basket Position is derived.

(viii) Buyer has received an opinion of counsel from its own tax advisor with respect to the Transaction.

(ix) Buyer and Seller acknowledge that Buyer has no rights in the Basket, including rights to receive distributions on, the proceeds from disposition of, or information received in respect of, the Basket.

(x) Buyer acknowledges that it has no voting rights in respect of any security which may be held by Seller. Buyer and Seller acknowledge and agree that Seller will not take account of the interests of the holder of the option constituting the Transaction or any third party in voting or otherwise exercising any of its rights, as owner, in the Basket.

(xi) It is the intention of the parties that the obligations of Seller in respect of the Transaction evidenced by this Confirmation are general recourse obligations of Seller. To the extent that, in any relevant proceeding or under any applicable law, Buyer should have the right to marshall, to appoint a receiver over, or otherwise have recourse to, the ownership or equity interest of Seller in the Basket, Buyer hereby waives, and agrees not to enforce, such rights provided that such waiver and agreement shall not reduce or limit the obligations of Seller hereunder.

6. **GOVERNING LAW:** THIS CONFIRMATION WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS ENTERED INTO AND TO BE PERFORMED ENTIRELY WITHIN THE STATE.

7. The time of dealing will be confirmed by Seller upon written request.

8. Deutsche Bank AG London is regulated by the Securities and Futures Authority.

9. Account Details:

Payment to **Party A**:	The Bank of NY ABA 021-000-018 Account # 8900-353570 Account Deutsche Bank
Payment to **Party B**:	To be, and as, provided by Party B.

10. Notices and other Communications:

Contact particulars for notices and other communications (including reports) shall be delivered in accordance with Section 12 of the Agreement to the relevant person or persons specified in Schedule I, hereto. Notwithstanding anything in Section 12 of the Agreement to the contrary, notices sent by e-mail shall be deemed delivered when sent.

Each Party has agreed to make payments to the other in accordance with this Confirmation. Please confirm that the foregoing correctly sets forth the terms of our agreement by sending a return executed acknowledgment hereof to such effect to the attention of Adam Tolchinsky, Legal Division (Fax No. (212) 797-4562).

[Signature Page Follows]

We are very pleased to have concluded this Transaction with you.

Regards,

DEUTSCHE BANK AG LONDON

By: Satish Ramakrishna
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By:
Name: Christopher Caruso
Title: Attorney-in-Fact

DEUTSCHE BANK SECURITIES INC.,
acting solely as Agent in connection with
this Transaction

By: Satish Ramakrishna
Name: Satish Ramakrishna
Title: Managing Director

By:
Name: Christopher Caruso
Title: Managing Director

Confirmed and Acknowledged as of the date first above written:

MOSEL EQUITIES L.P.
By Renaissance Technologies LLC,
Its General Partner

By: ______________________
Name:
Title:

[Signature page to Confirmation]

NEWYORK\53397

We are very pleased to have concluded this Transaction with you.

Regards,

DEUTSCHE BANK AG LONDON

By: ______________________
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By: ______________________
Name:
Title: Attorney-in-Fact

DEUTSCHE BANK SECURITIES INC.,
acting solely as Agent in connection with
this Transaction

By: ______________________
Name: Satish Ramakrishna
Title: Managing Director

By: ______________________
Name:
Title:

Confirmed and Acknowledged as of the date first above written:

MOSEL EQUITIES L.P.
By Renaissance Technologies LLC,
Its General Partner

By: ______________________
Name: James S. Rowen
Title: Chief Operating Officer

[Signature page to Confirmation]

NEWYORK\53397

SCHEDULE I
Contact Particulars for Notices and Other Communications

Contact Particulars for Party A:

Copies of All Notices: RentecNotification@list.db.com

Specified Contacts:

Confirmations:	Adam Tolchinsky
Telephone:	(212) 250-2537
Fax No.:	(212) 797-4562
E-mail:	adam.tolchinsky@db.com
Payments/Fixings:	Vincent Capone
Telephone:	(212) 250-7221
Fax No.:	(212) 797-4932
E-mail:	vincent.j.capone@db.com

Basket Base Performance; NAV Index Levels;Basket Performance Reports:

	Peter Brophy
Telephone:	(212) 250-7626
Fax No.:	(212) 797-8733
E-mail:	Peter.Brophy@db.com
Early Expiration Event/Notice:	Satish Ramakrishna
Telephone:	(212) 250-4928
Fax No.:	(212) 797-9358
E-mail:	satish.ramakrishna@db.com

Contact Particulars for Party B:

Early Expiration Event/Notice:	Peter Brown Bob Mercer	Thomas Kerns Mark Silber Carla Volpe Porter James Rowen
Telephone:	(631) 444-7000	(212) 486 -6780
Fax:	(631) 689-4495	(212) 758-7136
Email:	Peter@rentec.com Mercer@rentec.com TKerns@rentec.com Silber@rentec.com Carla@rentec.com JRowen@rentec.com	

Basket Base Performance; NAV Index Levels; Basket Performance Reports:

	Thomas Kerns Scott Chinsky
Telephone:	(212) 486-6780
Fax No.:	(212) 486-7291
Email:	TKerns@rentec.com Scott@rentec.com

Confirmations:	Mark Silber / Carla Volpe Porter
Telephone:	(212) 486-6780
Fax No.:	(212)758-7136
Email:	Silber@rentec.com Carla@rentec.com

SCHEDULE II

Non-USD BENCHMARK RATE SCHEDULE
Applicable to the specified Non-USD Trading Basket and the Term Basket

Country / Exchange on which securities trade	Benchmark Rate
Australia / Australian Stock Exchange (ASX)	One-Month USD-LIBOR-BBA[2]
Belgium / Euronext Brussels / NYSE Euronext	One-Month USD-LIBOR-BBA
Canada / Toronto Stock Exchange (TSE)	One-Month USD-LIBOR-BBA
Finland / Helsinki Stock Exchange (HEX)	One-Month USD-LIBOR-BBA
France / Euronext Paris / NYSE Euronext	One-Month USD-LIBOR-BBA
Germany / Frankfurt Stock Exchange	One-Month USD-LIBOR-BBA
Ireland / Irish Stock Exchange (ISE)	One-Month USD-LIBOR-BBA
Italy / Borsa Italiana	One-Month USD-LIBOR-BBA
Japan / Tokyo Stock Exchange (TSE)	One-Month USD-LIBOR-BBA
Mexico / Bolsa Mexicana de Valores (BMV)	DB Internal Funding Rate
Netherlands / Euronext Amsterdam/ NYXE Euronext	One-Month USD-LIBOR-BBA
Norway / Oslo Bors	One-Month USD-LIBOR-BBA
Singapore / Singapore Exchange (SGX)	DB Internal Funding Rate
South Africa / Johannesburg Stock Exchange (JSE)	One-Month ZAR-JIBAR-SAFEX
Spain / Bolsa de Madrid	One-Month USD-LIBOR-BBA
Sweden / Stockholmsborsen AB	One-Month USD-LIBOR-BBA
Switzerland / Swiss Exchange (SWX)	One-Month USD-LIBOR-BBA

[2] As used on this Schedule II, "USD-LIBOR-BBA" shall have the meaning specified in the 2006 ISDA Definitions.

ANNEX I

[DATE]

MOSEL EQUITIES L.P.
[FULL ADDRESS]
Attn: [ ]
Tel: [ ]
Fax: [ ]

[EARLY EXPIRATION] [SELLER TERMINATION] NOTICE

Dear Sirs:

The purpose of this notice is to inform the Buyer that pursuant to the original terms of the Barrier Option Transaction (the "Subject Transaction"), entered into between the Buyer and the Seller, and identified by the Confirmation bearing DBSI Reference Number 941-50310 (the "Confirmation"):

[At the close of business on [ ], the NAV Index Level is at [ ] which is less than or equal to the Barrier NAV Index Level. This constitutes an Early Expiration Event. The Subject Transaction has expired in accordance with the terms of the Confirmation.][3]

[The Seller is electing to terminate the Subject Transaction, under the terms of the Confirmation, in accordance with [DESCRIBE RELEVANT CONFIRMATION PROVISION], upon receipt of this notice.][4]

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

Very truly yours,

DEUTSCHE BANK SECURITIES INC.

By:____________________________
Name:
Title:

By:____________________________
Name:
Title:

[3] Delete if this notice not is not being delivered pursuant to an Early Expiration Event.
[4] Delete if this notice is being delivered pursuant to an Early Expiration Event.

ANNEX II

[DATE]

DEUTSCHE BANK AG LONDON
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Attn: Satish Ramakrishna/[Kam Singh]
Tel: (212) 250-4928

BUYER TERMINATION NOTICE

Dear Sirs:

Reference is made to the Barrier Option Transaction (the "Subject Transaction"), entered into between Mosel Equities L.P. (the "Buyer") and Deutsche Bank AG, London Branch (the "Seller"), and identified by the Confirmation bearing DBSI Reference Number 941-50310 (the "Confirmation").

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

The purpose of this notice is to inform the Seller that the Buyer is electing to terminate the Subject Transaction, under the terms of the Confirmation, in accordance with [DESCRIBE RELEVANT CONFIRMATION PROVISION], upon receipt of this notice.

Very truly yours,

MOSEL EQUITIES L.P.

By:__________________________
Name:
Title:

From: CN=Frank X Nelson/OU=db/O=dbcom
To: rdoucette@gweiss.com
cn=joe genovese/ou=db/o=dbcom@dbamericas
CC: CN=Joe Genovese/OU=db/O=dbcom@DBAmericas
Date: Oct 12 2009 09:23:35
Subject: Re: FW: DB Option - possible new development

We'll reach out to both our internal and external tax counsels and revert back. thanks.

"Rick Doucette"
<rdoucette@gweiss.
com> To
Joe Genovese/db/dbcom@DBAmericas,
10/12/2009 09:10 Frank X Nelson/db/dbcom@DBAMERICAS
AM cc

Subject
FW: DB Option - possible new
development

Frank and Joe

Both Steve and Bob, (our best tax minds), are concerned about the risk of passage and its affects on the MAPs product. Id be interested in hearing what your people and counsel feel about the risks. Talk to you later this week.

Rick

From: Robert Gendreau
Sent: Tuesday, October 06, 2009 6:50 PM
To: Steve Kleinman; Rick Doucette
Cc: Marcus Peckman; Jeffrey Dillabough
Subject: RE: DB Option - possible new development

I agree that the codification of the economic substance doctrine would be a
powerful tool for the IRS. According to Joshua Odintz, Acting Treasury Tax Legislative Counsel, codification of the economic substance doctrine is now likely. However, questions remain about ironing out differences between the various versions proposed by the administration and both houses of Congress.

For instance, Section 453 of the proposed Health Act (H.R. 3200) would institute new non-economic substance penalties ranging from 20% to as high as 40% (for transactions not adequately disclosed on the taxpayers tax return). The Health Act proposes to create a strict liability penalty one to

which
there is no defense of substantial authority, disclosure plus
reasonable
basis, basic reasonable cause and good faith, or even enhanced
reasonable
cause and good faith in the case of any underpayment attributable to any disallowance of claimed tax benefits by reason of a transaction lacking economic substance.

In addition, the proposed codification of the economic substance doctrine contains significant ambiguity, in that it would provide: The determination of whether the economic substance doctrine is relevant to a transaction (or a series of transactions) shall be made in the same manner as if this subsection had never been enacted. In other words, the code section, if enacted, will tell us how certain computations relevant to application of the economic substance doctrine are to be performed, but it will not resolve the more controversial and difficult questions when to apply the doctrine and which transactions (or portions of transactions) need to be tested separately under the doctrine. Accordingly, there is likely to be room for a large amount of good faith dispute as to the existence (or lack of existence) of any underpayment at all in many cases in which the IRS asserts that the economic substance doctrine, even in its codified form, should apply.

Again, significant details still need to be worked out as a number of versions are still floating around. However, it looks to be quite certain the codification of the economic substance doctrine will happen. It will be interesting to see how the final code section is worded, and to what extent penalties are increased.

- - Bob

From: Steve Kleinman
Sent: Tuesday, October 06, 2009 5:24 PM
To: Rick Doucette
Cc: Marcus Peckman; Robert Gendreau; Jeffrey Dillabough
Subject: DB Option - possible new development

Below is an article about the codification of the economic substance doctrine which, if enacted, could have serious implications with respect to the DB option transaction. While this proposal will not completely eliminate the benefit of the option structure, nevertheless, this will be a powerful tool for the IRS. It appears to be able to apply retroactively.

Jeff and Bob, do you agree?

Steven C. Kleinman
CFO Emeritus
Weiss Multi-Strategy Advisers LLC
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Hartford CT 06103

Tel: 860.240.8974
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Joint Committee explains economic substance codification

Commentary from: "Corporate Tax Insights on Checkpoint" by Jack Cummings

In September the Joint Committee on Taxation issued JCS-3-09 describing in great detail the President's 2010 Omnibus Budget's proposal to codify the economic substance doctrine (ESD). Of course the proposal, and earlier proposals in the Senate and the House, do not really undertake to fully codify the doctrine, but rather only to codify the test applied once the doctrine is determined to apply. Indeed, the proposal's signal feature is defining a test for economic substance while not defining when the ESD is to be applied to a taxpayer's case.

However, statements in the JCT Description make it clear that the ESD is now, and is expected to continue to be, applied as if the following were a section of the Code:

Sec. xxx. ECONOMIC SUBSTANCE DOCTRINE

GENERAL PROVISIONS. - A taxpayer whose facts (as properly determined) otherwise satisfy the requirements (as properly interpreted) for a tax benefit (whether viewed as a benefit to taxpayers generally, or beneficial due to the particular facts of the case), shall be denied that tax benefit if:

the transaction underlying those facts was motivated by a purpose to obtain that tax benefit;

the benefit was not intended by congress; and

the taxpayer fails to prove satisfaction of the statutory economic substance test once the Service asserts application of the ESD.

EXCEPTION FOR INDIVIDUALS. - This section shall not apply to a tax benefit claimed by an individual taxpayer with respect to a transaction that is not part of a trade or business or profit making activity.

ECONOMIC SUBSTANCE TEST. [the two-prong test]

PENALTIES AND INTEREST ON UNDERSTATEMENTS. - Liability for additional tax determined in whole or in part through the application of this section shall be increased by a strict liability penalty of 30 percent (20 percent for disclosed positions) of the related understatement of tax; in addition the taxpayer may not deduct interest attributable to such an understatement.

Conclusion. Of course the actual wording of the statutory language proposed does not include subsection (a). This is rather odd, once you realize what might be in subsection (a). But the proposal is not really that interested in making clear the unknown. The JCT Description states: ...the codification and

penalty regime intends to change the taxpayer's cost-benefit analysis and
deter some aggressive taxpayer behavior.

In other words, the legislation is a partial substantive rule of law that is
both severe and vague enough to hopefully scare taxpayers away from the
line
up close to which taxpayers frequently desire to walk. Enactment is expected
this year or next.

JCS-03-09 can be viewed/downloaded at:
http://www.jct.gov/publications.html?func=startdown&id=3576

From: "Jeffrey Dillabough" <jdillabough@gweiss.com>
To: Frank X Nelson <frank.x.nelson@db.com>
cn=peter brophy/ou=db/o=dbcom@dbamericas
CC: Peter Brophy <peter.brophy@db.com>
"Rick Doucette" <rdoucette@gweiss.com>
"Steve Kleinman" <skleinman@gweiss.com>
"Marcus Peckman" <mpeckman@gweiss.com>
"Robert Gendreau" <rgendreau@gweiss.com>
Date: Oct 26 2009 15:07:50
Subject: DB/Weiss MAPS option

Hi Frank,

We have had an opportunity to walk our outside tax counsel through the revised option program, the history of negotiations and where we are to date. In doing so, our tax counsel had a number of questions. Accordingly, I put together a brief issues list below that can serve as the agenda for discussion at our meeting Wednesday. Please feel free to forward it to your outside tax counsel.

1) Cash Settlement Amount: Scenario A versus Scenario B. The difference between these two scenarios is that Scenario A involves an additional forfeiture
by Weiss of the optionality value of the premium (20%). Weiss does not feel it should incur a Scenario A event unless it relates to an item under Weiss control. This flows through a number of critical events, including adverse changes in law and tax law or environment, audit events, DB credit events, unintentional breach of the investment management agreement (including investment restrictions) by Weiss, etc.

2) Cross margining: Under the old MAPS structure, Weiss could use 100% of the options market value to cross collateralize its OGI account. Under the proposed structure, DB advises that only 25% cross collateralization is permissible.

3) Cross selling: DB will not allow Weiss to cross sell positions held in the DB account to other prime brokers in connection with its routine rebalancing activities.

4) Moving positions in the case of option termination: DB will not permit Weiss to cross the positions at the end of the option into a Weiss account.

5) Third party custodian: In the event that DBs credit deteriorates in terms of CDS spread or agency ratings, Weiss requested that DB be required to transfer
some of the account balance to a third party custodian. DB advises that it cannot permit this in conjunction with the 25% cross margining described in 2) above.

Please let us know if there are any items you would like to add to this list.

Permanent Subcommittee on Investigations
EXHIBIT #29

Kind regards,

Jeff

Jeffrey D.Dillabough

General Counsel

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Email: jdillabough@gweiss.com

From: Parag Patel <parag.patel@db.com>
To: Satish Ramakrishna <satish.ramakrishna@db.com>
CC: Kam Singh <kam.singh@db.com>
Date: Nov 25 2009 05:56:03
Subject: Re: Rentec Mosel EurOption #4

Satish, could you confirm you agree we should not hedge this latest option ;

Rentech Option 4:

Term Rate = 1.883375%
Optionality Value = $60,093,490
Trade = Nov 20, 2009
Expiry = Dec 28, 2010
3mL = 26.063bps @ close 24th Nov

(See attached file: MAPs Checklist - Op#4 - 11.20.2009.xls)

WE RECEIVE FIXED Act/360 / PAY FLOAT 3mL Qtrly Act/360

Current aggregate unhedged rate exposure = $172m

$60m	option 4	exp 12/10
$72m	option 3	exp 12/10
$40m	option 2	exp 06/10
hedged	option 1	exp 12/09

Parag Patel
Tel: +44 20 7545 5212

Deutsche Bank AG
GPF Risk & Complex Prime Finance
Global Markets
London

Peter
Brophy/db/dbcom@DB
AMERICAS To
Satish
20/11/2009 14:14 Ramakrishna/db/dbcom@DBAMERICAS@DEUBA
INT
cc
Frank X Nelson/db/dbcom@DBAmericas,
Kevin Harrison/db/dbcom@DBAmericas,
Parag Patel/NewYork/DBNA/DeuBa@DBEMEA
Subject
Re: Rentec Mosel EurOption #4
(Document link: Parag Patel)

Permanent Subcommittee on Investigations
EXHIBIT #30

Term rate for Oct deal was 2.07% = Libor 1.22 + .85
Financing Tenor was 430 days
Initial Leverage was 7.06X

Term rate proposed for this deal 1.884% = Libor 1.034 + .85
Financing Tenor 391 days
Initial Leverage 8.45X

Problem is they were targeting the 7X Init Leverage again but that only gets us to a 16.6% Optionality Val.
We either need 8.45X Init Leverage or Libor + 133bps Term Rate?????

Peter P. Brophy
Global Head of Client Reporting
DB GME Global Prime Finance
60 Wall St. NY, NY 10005
Office 212-250-7626 Cell 732- 552-6308

Satish
Ramakrishna/db/dbc
om@DBAMERICAS
11/19/2009 09:55
PM

To
Peter
Brophy/db/dbcom@DBAmericas@DEUBAINT, Parag
Patel/NewYork/DBNA/DeuBa@DBEMEA,
Kevin Harrison/db/dbcom@DBAmericas,
Frank X Nelson/db/dbcom@DBAMERICAS

cc

Subject
Re: Rentec Mosel EurOption #4
(Document link: Peter Brophy)

No issues. What Libor rate was used on the last one and the new one?

Best Regards,
Satish Ramakrishna
Deutsche Bank AG, London
Global Markets Equity
Head, Prime Services Risk & Complex Prime Financing
1342, 60 Wall Street, New York

+ 1 212 250 4928 New York
[redacted]
+ 1. 212 250 4051 Asst: Magdalena Pisarczyk

----- Original Message -----
From: Peter Brophy
Sent: 11/19/2009 08:44 PM EST
To: Satish Ramakrishna; Parag Patel; Kevin Harrison; Frank Nelson
Subject: Rentec Mosel EurOption #4
Per my conversation late this afternoon with Tom Kerns and Dan Korani - Mosel has increased the size of the Option they are interested in entering into to $300M Premium with a $2.7B Notional level.

They want to execute the tomorrow or Monday at the latest.

1) Current Rolled up Levels are:
Cash $ 3.5B
LMV $10.5B
SMV $10.5B

2) Old American style option will be exercised early before y/e.
Cash outflow $2B

3) EurOption #1 expires 12/22.
Cash outflow $500M

4) Dan Korani predicts Dec 31 Rolled up Levels to be
Cash $ 1.5B
LMV $8B
SMV $8B

So at year end balance sheet usage, leverage and cash balances will all be down compared to current levels..

Rentec is looking for our approval on the $300M terms tomorrow morning.

Peter P. Brophy
Global Head of Client Reporting
DB GME Global Prime Finance
60 Wall St NY, NY 10005
Office 212-250-7626 Cell [redacted]

=

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From: Satish Ramakrishna <satish.ramakrishna@db.com>
To: Eamon McCooey <eamon.mccooey@db.com>
CC: Matthew Schwartz <matthew.schwartz@db.com>
Scott Carter <scott.carter@db.com>
Frank X Nelson <frank.x.nelson@db.com>
John Arnone<john.arnone@db.com>
John Cogman <john.cogman@db.com>
Date: Feb 17 2012 09:26:10
Subject: Re: Two Sigma Follow-up

I spoke to Matt about this. MAPS or no MAPS, how much capital are they willing to contribute? I can't see this working if, as Matt was suggesting, that we contribute all the equity, participate only in downside and receive financing spread.

I asked Matt to come back with how much equity they can contribute, haven't heard back yet. Non-recourse financing is one option (MAPS is just a name for that) - there is no MAPS trade without a MAPS premium, so they can't get a MAPS
option for free. If they want to get an equity investment, that's worth investigating.

Satish

Best Regards,
Satish Ramakrishna
Managing Director | Head, Prime Finance Americas & Global Prime Finance Risk

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From: Eamon McCooey
To: Satish Ramakrishna
Cc: Matthew Schwartz; Scott Carter; Frank X Nelson; John Arnone; John Cogman
Sent: Fri Feb 17 08:16:32 2012
Subject: Two Sigma Follow-up

Satish,

I was wondering if we could have 15 minutes next week to discuss an issue Two Sigma recently presented to us and are looking to see if we could provide a structure which could work for them. Their issue is as follows -

Background

Two Sigma has historically run a US focused high frequency equity & ETF marketing making business in their HF business (called Galileo). As you can imagine, this business is flat at days end and there is zero financing business to be had - however there is good potential for additional DMA

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EXHIBIT #31

commissions and liquidity benefits to DB. However, they trade a ton in this strategy and quarterly they do an index rebalance arb trade as well.

Historically, due to borrow constraints as far as availability and sometimes due
to cost reasons (ETFs) become expensive on the HTB front, they have tried to come up with solutions around this. Through their own internal research they found out that if they moved this strategy into their US B/D called Two Sigma Securities they then can leverage the market maker exemption rule and not have to deal w/ borrow requests (for costs, availability, etc. reasons)

However, if they move this strategy to their own BD they then run into net capital requirements, mainly due to intra-day leverage constraints which prohibits them from running this strategy effectively.

In our discussions we had thought that a MAPS "like" structure maybe a potential solution and wanted to get your feedback, We thought of doing a series
short dated (1 week) MAPS like options where they trade a portfolio for DB so they can market maker exemptions and capital relief. As stated above there would
be no to little financing revenue as the portfolio would be essentially flat at
day end but it would be good opportunity to strengthen our relationship with the
client.

Please let me know if you are around next week to discuss.

Kind regards,
Eamon McCooey

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---

Eamon McCooey
Managing Director | Head of Prime Brokerage - Americas

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Mobile [redacted]
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From: Satish Ramakrishna <satish.ramakrishna@db.com>
To: Barry Bausano <barry.bausano@db.com>
Date: Sep 14 2011 14:11:09
Subject: FW: quick summary on Rentec [I]

Classification: For internal use only

fyi

From: Satish Ramakrishna
Sent: Wednesday, September 14, 2011 2:09 PM
To: Roger Naylor
Subject: quick summary on Rentec [I]

Classification: For internal use only

Im hoping you have a rough idea of the situation re the MAPS trades.

In order to resolve the question of

- Owner of option controlling the entire underlying

- Option (really the earliest version) looks like a margin account

I was thinking of using a CPPI like structure

Equity starts at 100

Risky Index starts at 100, goes up/down every day based on the sum of

1) the performance of 100% investment in a model Long/Short portfolio (max 900/900, so max leverage 18x on the equity), run by Mosel Equities (which is the Renaissance manager) MINUS

2) the performance of 100% investment of above equity in (say) the S&P500 or some liquid benchmark index

We use the following expression for equity invested in the Risky Index

Q = (CPPI 80) leads to a multiplier M

Q > 15, M = 1

0<Q<15, M goes from 0 to 1, as Q goes from 0 to 15.

We would hedge, as usual, for a CPPI, by being long index A, short index B and would charge the index every day for financing and borrow cost charges.

On day 1, the client would pay, say 20, for this CPPI option. If the next day, the Rentec index did not budge, SPX were to gap up 20%, the option would knock out (completely delevered, so no chance of going on again and we would write that language in) and we would lose 20 on our SPX hedge, which would be compensated by the amount we got for the option.

So we would have

- independence of (large part of the) asset and option buyer

- real option CPPIs are totally legitimate transactions in the US and elsewhere

- we have gap risk, but nothing we dont already have in the transaction.

Tell me if this passes the smell test for the structure. I will obviously have to get Tax to opine SETG structurers I asked seemed to like it reminds them of a different counterpartys option that Rentec was considering.

Best Regards,

Satish Ramakrishna

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[redacted]

Email satish.ramakrishna@db.com

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cid:image004.png@01CC72E7.D5DB6980

From: Satish Ramakrishna <satish.ramakrishna@db.com>
To: Anthony Tuths <anthony.tuths@db.com>
Diana Nott <diana.nott@db.com>
Date: Nov 13 2011 17:56:55
Subject: RE: Rentec [I]

Yes, but I know what they are going to want....

Best Regards,

Satish Ramakrishna
Managing Director | Head, Prime Services Risk and Complex Financing

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-----Original Message-----
From: Anthony Tuths
Sent: Sunday, November 13, 2011 05:53 PM Eastern Standard Time
To: Satish Ramakrishna; Diana Nott
Subject: Re: Rentec [I]

Classification: For internal use only

That's the result of having a real option. They shouldn't mind this -- its the cost of the option economics they're receiving. You could subtract the cost from strategy financing but that's not economically correct.

----- Original Message -----
From: Satish Ramakrishna
To: Anthony Tuths; Diana Nott
Sent: Sun Nov 13 15:47:57 2011
Subject: Rentec

I have to work thru this slight issue. Way it works now, they don't get back any of the premium they pay us at the start, the 5.55 amt. To get it back we need to sell the put back to them after 13m, if spot were 100, for 5.55.

Need to think this thru...

Best Regards,
Satish Ramakrishna

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From: Satish Ramakrishna <satish.ramakrishna@db.com>
To: Frank X Nelson <frank.x.nelson@db.com>
Date: Dec 16 2011 17:20:16
Subject: Re: Rentec confirm and IMAs [I]

Thanks.

Best Regards,
Satish Ramakrishna

Managing Director | Head, Prime Services Risk and Complex Financing

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From: Frank X Nelson
To: Satish Ramakrishna
Sent: Fri Dec 16 15:57:18 2011
Subject: RE: Rentec confirm and IMAs [I]

Classification: For internal use only

Sorry to hear that.Hang in there

Kind regards,

Frank Nelson

Frank Nelson

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Mobile [redacted]

Email frank.x.nelson@db.com

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cid:image002.png@01CCBC13.C4ABDDA0

From: Satish Ramakrishna
Sent: Friday, December 16, 2011 4:56 PM
To: Frank X Nelson
Subject: Re: Rentec confirm and IMAs [I]

[redacted]

Best Regards,
Satish Ramakrishna

Managing Director | Head, Prime Services Risk and Complex Financing

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From: Frank X Nelson
To: Satish Ramakrishna
Sent: Fri Dec 16 15:53:18 2011
Subject: RE: Rentec confirm and IMAs [I]

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[redacted]

Kind regards,

Frank Nelson

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Email frank.x.nelson@db.com

cid:image006.png@01CCBC13.35A5A370

From: Satish Ramakrishna
Sent: Friday, December 16, 2011 4:47 PM
To: Frank X Nelson
Subject: Re: Rentec confirm and IMAs [I]

Not me. I was hoping you were. Maybe Jon???

Best Regards,
Satish Ramakrishna

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satish.ramakrishna@db.com

From: Frank X Nelson
To: Satish Ramakrishna
Sent: Fri Dec 16 15:16:30 2011

Subject: RE: Rentec confirm and IMAs [I]

Classification: For internal use only

More than happy to help but Im flying blind. Who has been privy to these conversations? They need to be involved

Kind regards,

Frank Nelson

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[redacted]

Email frank.x.nelson@db.com

cid:image002.png@01CCBC0E.11A48360

From: Satish Ramakrishna
Sent: Friday, December 16, 2011 3:28 PM
To: Frank X Nelson
Subject: Fw: Rentec confirm and IMAs [I]

I never heard they wanted changes to the confirm before. Some of this is stuff that appears to need agreement with Jim. Shall we call him?

Best Regards,
Satish Ramakrishna

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From: Anthony Tuths
To: Satish Ramakrishna; Vincent J Capone
Cc: Eamon McCooey; Manuel J Schnaidman; Diana Nott
Sent: Fri Dec 16 14:15:11 2011
Subject: RE: Rentec confirm and IMAs [I]

Classification: For internal use only

Satish

Please see below the changes to the Rentec confirm suggested by U.S. tax. I note that some of these changes are in response to changes suggested by Rentecs counsel, Winston & Strawn. I have not been privy to such communications. I trust you have been involved.

Basket Income during a period means: the sum, expressed in USD, of (i) dividend income (determined based on ex-dividend dates that have occurred during
such period), net of the non-U.S. and U.S. withholding taxes, if any, that would
be imposed on a holder of the relevant position that is either (i) (a) is a resident of the Federal Republic of Germany, (b) is entitled to the benefits of
income tax treaties between the Federal Republic of Germany and other countries,
(c) properly treats such dividend income as effectively connected with its U.S.
trade or business and (d) has provided properly completed and executed certifications claiming such treaty or effectively connected income status or (ii) a United States person (as defined in section 7701(a)(30) of the U.S. Internal Revenue Code of 1986, as amended (the Code); provided, however,
in the case of Effected Positions, dividend income will be further reduced by any additional taxes (and penalties and interest associated therewith) incurred
by Seller that would not have been incurred by the Seller in the absence of the
relationship between Seller and Buyer under this Transaction

(k) Reporting. Seller represents that for tax purposes, it
and any Affiliate thereof will report the Transaction as a derivative
financial
instrument, and, for accounting, regulatory, tax and all other purposes, it
and any Affiliate thereof will treat and report the Effected Positions and any
other assets or positions that may be credited to or included within the
Baskets
(other than In respect of Designated Positions) as assets and positions of
which
either Seller or any Affiliate is the sole beneficial owner and to which
either
Seller or any Affiliate is the party, as the case may be; provided, that in
the
event of a dispute between the parties as to the proper characterization of
the
Transaction[al] and related assets subsequent to a Change in
U.S. Tax Law, Seller will in good faith make its own determination of such
characterization [Rider 1] and treat and report (or cause its Affiliate to
treat
and report) the Transaction and related assets in accordance with its good
faith
determination. [Rider 2] Seller represents that for U.S. federal income tax
purposes all payments received under the Transaction will be treated either as
received by an Affiliate that is a United States person (as defined in section
7701(a)(30) of the Code) or as effectively connected with the conduct of a
trade
or business carried on by Seller within the United States []. For purposes of
this section the term "Change in U.S. Tax Law" means the (a) enactment,
promulgation, execution or ratification of, or any change in or amendment to,
the Code , or the Treasury Regulations promulgated thereunder (including any
proposed changes that are not required under such proposal to be prospective
only) or (b) the announcement of the application or official interpretation
thereof by the United States Internal Revenue Service (IRS) or the United
States Department of the Treasury, as the context requires), or (c) any action
taken by a taxing authority, or brought in a court of competent jurisdiction,
on
or after the date on which the Transaction is entered into (regardless of
whether such action is taken or brought with respect to a party to the
Agreement) (which includes, for the avoidance of doubt, the commencement of a
tax audit of either Seller or Buyer, which commencement occurs on or after the
date on which the Transaction is entered into) in which, as to an audit of the
Seller, the Seller has received a notification of a proposed audit adjustment
with respect to the Transaction, and Seller believes, in its sole discretion,
that the proposed audit adjustment may require it to treat the Transaction in
a
manner other than described above, and in which, as to an audit of the Buyer,
the Buyer has received a notification of a proposed audit adjustment with
respect to the Transaction auditor propose that the which adjustment would
cause the Buyer to treat the Transaction in a manner other than described
above;
Each party will provide the other party with notice of said audit proposal, as
applicable.]Riders to DB/Mosel Option Confirmation W&S DRAFT 12-7-11

Rider 1: original deleted language: [provide Buyer with notice of such
determination and, unless Buyer provides Seller with an opinion of tax counsel

in form and substance reasonably satisfactory to Seller within 90 days of such notice, Seller may]

based on written advice of counsel concluding that, as a result of such Change in U.S. Tax Law, a material risk exists in continuing to treat and report the Transaction in the manner set forth above, and will provide Buyer with notice of
such determination; Seller will

Rider 2:

Buyer represents that for tax purposes, it will report the Transaction as a derivative financial instrument generating short-term capital gain at exercise or maturity.

Rider 3: deleted language: [For purposes of this section, an action taken by the IRS pursuant to the current audits of Buyer (or the commencement of additional audits of Buyer)shall not be considered a Change in US Tax Law taking
place on or after the date the Transaction is entered into]

▬ = Redacted by the Permanent Subcommittee on Investigations

Anthony Tuths
Global Structuring, Strategic Transactions
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60 Wall Street, 10005-2836 New York, NY, USA
Tel. +1(212) 250-4997
[redacted]

Email anthony.tuths@db.com

From: Vincent J Capone
Sent: Wednesday, December 14, 2011 3:14 PM
To: Satish Ramakrishna
Cc: Anthony Tuths; Eamon McCooey
Subject: RE: Rentec confirm and IMAs [I]

Classification: For internal use only

All attached Please advise if any questions or additional information required.

Thanks

Vince

From: Satish Ramakrishna
Sent: Wednesday, December 14, 2011 3:05 PM
To: Vincent J Capone
Cc: Anthony Tuths; Eamon McCooey
Subject: Rentec confirm and IMAs [I]

Classification: For internal use only

Vince :

Please send the latest Rentec (your choice of trade there are two live ones) confirm and IMA (supplemental as well as global) to Anthony Tuths asap.

Best Regards,

Satish Ramakrishna

Managing Director | Head, Prime Services Risk and Complex Financing

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[redacted]

Email satish.ramakrishna@db.com

Applies only to current trade

INVESTMENT ADVISORY AGREEMENT

THIS AGREEMENT is made as of September 1, 2002 by and between RENAISSANCE TECHNOLOGIES CORP., a corporation organized under the laws of Delaware (the "Advisor"), and BASS EQUITIES LTD., an exempted company organized under the laws of Bermuda (the "Client").

The Client hereby engages Advisor to perform the investment management services described herein, and Advisor hereby accepts such engagement, pursuant to the following terms and conditions:

1. **Investment Management Services**. The Client hereby authorizes and appoints Advisor to manage the investment of all cash, commodities, securities and other assets comprising the investment portfolio placed under the supervision of Advisor by the Client (which portfolio, together with all additions, withdrawals, substitutions and alterations occurring during the term of this Agreement, is referred to herein as the "Account"). Advisor is authorized, without further approval by or notice to the Client, to make all investment decisions concerning the Account, including allocating any portion of the Account or the entire Account to other investment managers (the "Investment Managers"), and to further authorize such Investment Managers to make purchases and sales and otherwise to effect transactions in securities, commodities, currencies and other assets in the Account (including without limitation entering into short sales and securities lending activities). Advisor is authorized to sign, as attorney-in-fact on behalf of the Client, any documents and take any other actions which Advisor considers necessary or advisable in order to carry out the portfolio allocation or the trading for the Account, including but not limited to the following:

(a) to make all decisions relating to the allocation of the Account to the Investment Managers, including the selection of Investment Managers and amount of allocation, and to delegate such powers to Investment Managers as are necessary or advisable in order to carry out their duties;

(b) to effect (both directly or indirectly through Investment Managers) purchases and sales (including short sales) of (i) securities of any type whatsoever, denominated in any currency, whether or not issued by government entities, partnerships, trusts or corporations, (ii) any put or call options thereon (including the writing of options, whether covered or uncovered), and (iii) other securities and instruments (including derivative transactions) consistent with the Client's investment policies and program;

(c) to make (both directly or indirectly through Investment Managers) all decisions relating to the manner, method and timing of investment transactions, and to select, or to authorize the Investment Managers to select, brokers and dealers for the execution, clearance and settlement of any transactions;

(d) to trade (both directly or indirectly through Investment Managers) on margin, to borrow from banks, brokers or other financial institutions and to pledge assets of the Client in connection therewith;

(e) to direct (both directly or indirectly through Investment Managers) custodians to deliver funds or securities for the purpose of effecting transactions, and to instruct custodians to exercise or abstain from exercising any privilege or right attaching to such assets; and

(f) to make and execute, in the name and on behalf of the Client, all such documents (including, without limitation, customer agreements and other documents in connection with the establishment and maintenance of brokerage accounts) and to take all such other actions as the Investment Advisor considers necessary or advisable to carry out its investment management duties hereunder.

2. **Brokerage.** The Client hereby delegates to Advisor (which power may be further delegated to the Investment Managers) authority to designate the broker or brokers through whom all transactions on behalf of the Account will be made. Advisor (or the Investment Managers) will determine the rate or rates to be paid for brokerage services provided to the Account. In the course of selecting brokers, dealers, banks and financial intermediaries to effect transactions for the Account, Advisor (or the Investment Managers) may agree to such commissions, fees and other charges on behalf of the Account as it (or they) shall deem reasonable in the circumstances, taking into consideration all such factors as Advisor deems (or the Investment Managers deem) relevant, including the quality of research, execution and other services made available to it (or them). It is understood that the cost of such services will not necessarily represent the lowest costs available, that such services may not be used by Advisor (or the Investment Managers) for the exclusive benefit of the Account, and that Advisor is (or the Investment Managers are) under no obligation to combine or arrange orders so as to so reduce charges.

3. **Fees and Expenses.** (a) Advisor will not charge the Client a management or performance fee, it being understood that such fees are subsumed in the management and performance fees charged to the Medallion feeder funds, which own all of the shares of Medallion Holdings Ltd., which owns all of the shares of the Client.

(b) Advisor shall bear its own overhead and other internal operating costs. Operational expenses of the Client, such as interest, custodial, legal, audit and brokerage fees and any subscription or redemption charges imposed by funds in which the Client invests will be borne by the Client. The Client will also bear indirectly its proportionate share of the fees and expenses of the funds in which it invests. Organizational expenses and start-up costs of the Client will be borne by the Client and will be expensed as incurred.

4. **Investment Activities for the Account of Others.** (a) Advisor and its directors, employees and beneficial owners (and the Investment Managers and their directors, employees and

beneficial owners) may from time to time acquire and dispose of securities or other investment assets for their own accounts, for the accounts of their families, for the account of any entity in which they have a beneficial interest or for the accounts of others for whom they may provide investment advisory or other services (collectively, a "Managed Account"), notwithstanding the fact that the Client may have or may take an investment position for the Account; provided, however, that Advisor (or the Investment Managers) shall not cause the Client to purchase any asset from or sell any asset to Advisor (or the Investment Managers), or any of its (or their) partners or employees or any account or entity controlled by such persons, without the consent of the Client.

(b) It is understood that when Advisor determines (or the Investment Managers determine) that it would be appropriate for the Client and one or more Managed Accounts to participate in an investment opportunity, Advisor (or the Investment Managers) will seek to execute orders for the Client and for such Managed Accounts on an equitable basis. In such situations, Advisor (or the Investment Managers) may place orders for the Client and each Managed Account simultaneously, and if all such orders are not filled at the same price, Advisor (or the Investment Managers) may cause the Client and each Managed Account to pay or receive the average of the prices at which the orders were filled for the Client and all Managed Accounts. If all such orders cannot be fully executed under prevailing market conditions, Advisor (or the Investment Managers) may allocate the securities traded among the Client and the Managed Accounts in a manner which it considers (or they consider) equitable, taking into account the size of the order placed for the Client and each such Managed Account.

5. **Scope of Duties.** The Client recognizes that the opinions, recommendations and actions of Advisor will be based on advice and information deemed to be reliable, but not guaranteed by or to Advisor. Advisor shall have no duties or obligations to the Client pursuant to this Agreement other than as set forth herein, and Advisor shall not be liable to the Client for any act or omission in the absence of gross negligence or willful misconduct.

6. **Indemnification.** The Client shall indemnify Advisor, which shall include solely for purposes of this Section any of its directors, officers, and employees against and hold them harmless from any expense, loss, liability or damage arising out of any claim asserted or threatened to be asserted by any third party, in connection with Advisor's serving or having served as such pursuant to this Agreement; provided, however, that Advisor shall not be entitled to indemnification with respect to any expense, loss, liability or damage which was caused by its own gross negligence, willful misconduct or reckless disregard of its duties hereunder.

7. **Termination.** The Client or Advisor may terminate this Agreement at any time upon written notice, which shall be effective when received by the other party.

8. **Entire Agreement; Binding Effect; Assignment.** This Agreement represents the entire agreement among the parties, shall be binding upon and inure to the benefit of the parties hereto and their respective successors, and their rights and obligations hereunder shall not be

assignable, transferable or delegable without the written consent of the other party hereto. Any attempted assignment, transfer or delegation hereof without such consent shall be void.

9. **Waiver; Modification.** No provision of this Agreement may be waived or modified other than by a writing signed by the party to be charged with such waiver or modification. This Agreement constitutes the entire agreement between the Client and Advisor. Any supplement to this Agreement shall be in writing, signed by the parties hereto.

10. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware without giving effect to conflicts of laws.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the day and year first above written.

BASS EQUITIES LTD.

By: ______________________
Mark Silber
Vice President and Director

RENAISSANCE TECHNOLOGIES CORP.

By: ______________________
Mark Silber
Vice President

Project COLT

New Product Proposal

Confidential

28 May, 2002

Product Sponsors

Jonathan Zenios (SCM), Jerry Smith (SCM), Marty Malloy (EFG), and Mark D'Andrea (Prime Brokerage)

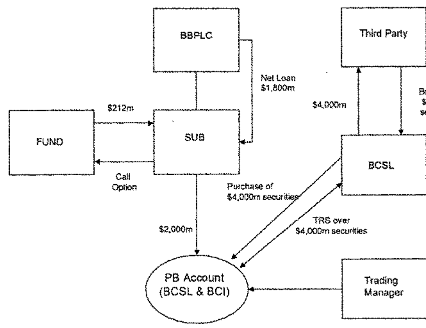
BUSINESS PROPOSAL	
1. Executive summary	COLT is an investment product for hedge funds ('**Funds**') and is based largely on the normal operation of the Prime Brokerage business that has already received approval from the US New Product Committee. In its original form, **the SCM Approvals Committee approved COLT on 27 March, 2002 and the Global New Product Committee approved COLT on 8 April, 2002**. Both approvals were subject to FSA approval to treat the SUB as a trading book for regulatory purposes. FSA approval is still outstanding, but will be obtained prior to closing the transaction. ***Changes to Existing Approved Product COLT Structure*** This product proposal differs from the previously approved structure in the following ways: 1. <u>US Equities Added – Overall Leverage Levels Enhanced</u> - US equity securities were added to the securities eligible for Project COLT. This change enhanced the Fund's tax analysis and enabled Prime Brokerage to get additional business from the transaction and gain diversity across markets. The diversity across markets was an important factor in Prime Brokerage setting the haircuts for the transaction (i.e., 5% haircut, or $200m in-the-money amount times 20 for gross trading limit of $4,000m that is split between long and short positions). 2. <u>US Tax Opinion Required and Received</u> - SUB's profits from the transaction will be taxed in the US. We received an opinion from counsel (Akin, Gump) [redacted]. 3. <u>Regulatory Opinion Required and Received</u> - SUB will borrow money from BB PLC (to accommodate the change in form of the call option as noted in #4 below). Since SUB will use that money in part to purchase US equity securities, it is important for regulatory purposes that SUB not be considered a Regulation X borrower. We received an opinion from counsel (Sullivan & Cromwell) [redacted] 4. <u>Different Call Option Mechanics</u> - Although the option written by SUB continues to be economically a zero-strike option, the mechanics of the option have been changed to enhance the Funds' tax position. Specifically, instead of a $212m premium and a zero strike price over a PB Account with a starting NAV of $200m, the new structure shows a $212m premium with an effective $1800m strike price[1] over a PB Account with a starting NAV of $2,000m. In each case, the option is in-the-money by $200m, and the overall leverage allowable in the transaction would be $3,800m (i.e., a haircut of 5%, which level is set

[1] Actual strike price would be $2,000m, but the Settlement Amount on the Call Option will in all cases be increased by $200m, which results in an effective strike price of $1,800m.

	and monitored by Prime Brokerage on the in-the-money amount). The only practical difference is that the new version contemplates $1,800m (of the total $3,800m available) leverage through the option, where the original version had all leverage "outside" the option. 5. <u>2 Prime Brokerage Accounts</u> - In addition to a prime brokerage account with Barclays Capital Securities Limited ('**BCSL**'), SUB will also open a prime brokerage account with Barclays Capital Inc ('**BCI**'). Both accounts will be governed by standard Prime Brokerage Agreements. 6. <u>No BCSL Put Option</u> – The BCSL Put Option has been removed from the transaction. Originally, the BCSL Put Option was used to explicitly place the catastrophic risk with Prime Brokerage, which takes that risk daily in its business. Subsequently, it was determined that a put option was not necessary to shift that risk, since Prime Brokerage takes that risk by entering into a prime brokerage account with SUB (since SUB has no other funds). Importantly, this is similar to risks it takes in every agreement and is identical to the risk it takes when it accepts all of a funds' equity as margin. 7. <u>Synthetic Short Sales in PB Account, as Opposed to Actual Short Sales (To address Uptick Rules)</u> – Short sales by the SUB (i.e., borrow stock from BCI or BCSL and sell it on the open market) would be restricted by the uptick rule, which generally prevents short sales of a security at the current market price if the share price has been declining. To manage this restriction, SUB will create a perfectly hedged position (i.e., pool of long equity positions in original PB Account that it would purchase from BCSL with an identical short total return equity swap position– counterparty BCSL) at the beginning of the transaction with respect to each security in the S&P 500. Since SUB will be treated as owning the securities in the PB Account (notwithstanding short TRS position held in another account), any sales of securities from that pool of long equity positions will be treated as sales of long positions (not affected by uptick rules), not short sales. The result is a synthetic short sale (i.e., the TRS is a short with respect to the securities that have been sold) that should not be constrained by the uptick rules. In substance, there should be no change to the underlying transaction or the infrastructure areas. However, certain issues are raised: a. <u>US Legal</u> – [redacted] b. <u>Risking Systems</u> – It will be necessary for the TRS to go through Prime Brokerage's existing risk system (i.e., GEFFE, which feeds EDICT). An existing project that accomplishes that task is nearing completion (should be available by end of May/first week in June). ***General Description of Product COLT Structure*** COLT is targeted at those Funds with a high proportion of US individual investors, stable year-on-year returns and strategies involving short-term trading. This gives rise to significant short-term capital gains for the investors regardless of whether or not they are invested in the fund for the shorter or

	longer term. COLT provides an after tax benefit to these investors through the conversion of their return from the fund from short term capital gains (taxed at 39.6%) to long term capital gains (taxed at 20%). This would be achieved by substituting the Fund's direct execution of its trading strategy with a cash settled call option over a SUB's proprietary account whose performance *substantially* replicates the Fund's trading strategy. Any gain on the call option would be long-term gain provided the call option is held by the Fund for at least 12 months. Due to the Call Premium (defined below) and rigorous controls (explained below), including de-leveraging and daily risk monitoring, the economic risk to Barclays in the transaction would be confined to a one-day catastrophic risk (i.e. gap risk). Structurally, this risk would reside in BCSL and BCI, specifically within their prime brokerage divisions ('**Prime Brokerage**'). Notably, Prime Brokerage currently undertakes this same risk in its day-to-day relationships with hedge funds. The intended launch date is Q2 of 2002 although pre-marketing is expected to start in Q1 of 2002. SCM would earn fee income at the onset of the transaction of approximately $12 million. Further, it is anticipated that increased revenue will be created in certain other areas within Barclays Capital: approximately $7m p.a. to $10m p.a. from increased clearing charges and execution revenue for Prime Brokerage. Further, Renaissance (the Fund that is the first target) has indicated that it will move its account to another bank if we do not provide them with this product, which would result in approx. $6m per year of lost revenue to Prime Brokerage.

2. Business Proposal description	***Structure Diagram***



Establishment of SUB

BB PLC would form a subsidiary ('**SUB**'), which would be located outside the UK (e.g., Cayman Islands). A SUB is utilized, in part, to eliminate trade reporting obligations that would be required if BB PLC participated in the transaction directly.

Loan Arranged By BCSL (EFG)

SUB would borrow $2,000m from BB PLC on an unsecured basis (the "**Net Loan**" would equal $1,800m, since $200m would be immediately repaid from the proceeds of the Call Option). Note that this would be from EFG's existing line with BB PLC. Therefore, COLT does not require a new loan and does not create any new issues with respect to large exposure reporting (as EFG's line is already covered in that regard).

Establishment of PB Account

a. SUB would establish prime brokerage trading accounts with BCSL and BCI (collectively, these will be referred to as the '**PB Account**').

b. SUB would place $2,000m into the PB Account to be used as collateral for a strategy identical to that utilized by the Fund ('**Trading Strategy**'). To replicate the Fund's strategy, SUB would hire the Fund's own investment manager ('**Trading Manager**') to manage the investments. The relationship of the amount of collateral to the riskiness of the Trading Strategy will be analysed under existing Prime Brokerage standards.

Call Option

a. Simultaneous with the establishment of the PB Account, SUB would write an American-style call option to the Fund with respect to the value of the PB

Accounts (the '**Call Option**'), for which the Fund would pay a premium ('**Call Premium**') made up of the following components:

- $200m representing the collateral for the Trading Strategy; and
- an amount representing SCM's fee from the transaction ($12m in the diagram).

b. The Call Option would have a term of 3 years and would be cash settled. The strike price of the Call Option effectively would be $1,800m plus appropriate charges for the leverage ('**Call Strike**').[2]

BCSL Borrows $4,000m of securities and SUB purchases same from BCSL in PB Account

a. With existing collateral in PB Account ($2,000m) and borrowing through normal Prime Brokerage, SUB will purchase a basket of securities worth $4,000m from BCSL, which BCSL will borrow from a third party.

b. At the same time, SUB will enter into a total return swap to BCSL over the same securities just purchased, through which SUB will pay out all dividends and receive interest.

c. In its PB Account, SUB will sell $2,000m worth of the securities it purchased from BCSL, leaving it with $2,000m worth of long positions and a short TRS position of $4,000m, or a net $2,000m short position with respect to the equities sold (a "**Synthetic Short Position**").

d. The $2,000m proceeds from the sale in "c" above would be used to purchase $2,000m of new securities (the "**Long Position**").

e. The Long Position and the Synthetic Short Position create the same type of matched position (i.e., $2,000m long and $2,000m short) planned prior to the introduction of this technique.

Risk Mitigation and Acceleration

a. The Trading Strategy will be executed through a prime brokerage account, for which the $2,000m will serve as collateral. As a result, the Trading Strategy will be subject to the risk parameters approved for the Prime Brokerage group[3] (similar but slightly more restrictive). BCSL's risk to the Trading Strategy will be managed in the following ways:

- De-leveraging:
    - Description in Original Approvals Paper - Suppose that the $200m of collateral provided through the Call Premium supports $4,000m gross positions (i.e., 20 times multiple), which would allow $2,000m of long positions and $2,000m of short positions in the Trading Strategy. If the Trading Strategy loses $10m, only $190m of collateral would remain. Since $190m would only support $3,800m of gross positions,

[2] See Footnote #1, which discusses the effective strike price.

[3] Prime Brokerage clears trades for hedge funds and provides leverage with respect to trading levels, based upon i) collateral received from the hedge fund, ii) ongoing risk analysis of the strategies employed, and iii) the market environment. As losses reduce collateral on hand, Prime Brokerage manages risk of loss in two ways: i) it can request increased collateral to rationalize the same trading level, or ii) it can force a reduction of positions to conform the trading level to an acceptable risk profile.

the Trading Manager would be forced to liquidate enough of its positions to meet those parameters. [redacted] Although more labour intensive, the deleveraging process should manage risk as effectively as requesting more collateral.

- Change due to increased collateral – The result would be precisely the same in the new version, but the formula would be slightly different (because the initial collateral would be $2000m instead of $200m). In this version, gross trading level would be calculated as 20 times (collateral less $1,800m). Therefore, on a loss of $10m, the gross trading level would be $3,800m, calculated as 20 times ($1,990m less $1,800m).

- Removal of Manager: ultimately if the collateral dropped sufficiently, the Trading Manager could be fired and the positions could be liquidated.

b. The Trading Strategy will allow the Trading Manager to execute trades with other broker-dealers that are cleared with Prime Brokerage. That ability to "trade away" must be controlled to ensure that the Trading Manager does not exceed daily trading limits during the course of the day. A tri- party agreement between the Trading Manager, executing broker and SUB would specify the daily notional buy/sell limits that the executing broker must adhere too. All trades will be reported to Prime Brokerage at the end of the day and if limits are exceeded Prime Brokerage (on behalf of SUB) would have the right, at its discretion, to reject the trades that exceed the limits. In addition, the executing brokers that could be used by the Trading Manager will be limited and pre-approved before trading. The agreement and limited executing brokers will be used to control the executing risk for the structure.

Targeted Funds

Transacting with hedge funds can be risky (a notable example is LTCM), but careful selection of a hedge fund and appropriate ongoing risk analysis can make it both safe and profitable. Hedge funds range from aggressive growth funds to the more conservative market neutral funds. For COLT, we intend to target the more conservative market neutral funds, which focus on obtaining returns that have a low correlation to the market.[4] Generally, these strategies involve paired positions (*i.e.*, long and short positions) designed to take advantage of market inefficiencies. In fact, most will be "relative value/arbitrage" strategies, which rely on the expected convergence of a long and short strategy.

This approval is confined to Funds that trade equities (long and/or short). In the current case, Renaissance employs a strategy or portfolio construction general known as "Statistical Arbitrage" or equity relative value trading. They have a proprietary (and closely guarded) trading model which generates short, medium, and long term buy and sell signals based on statistically significant historical indicators. While the trading crosses many asset classes for the

[4] Initial targets are Funds that already utilize BB PLC's Prime Brokerage, but new Funds will also be targeted in this process.

	fund, it is only their equity specific models that we are considering for the initial COLT product.
3. Strategic overview	This product is part of the strategy to build significant presence in the hedge fund market through the trading of structured products with high added value yielding strong P/L.
4. Financial Projections	SCM's fee (i.e. $12m in the illustration) would be determined at the onset of the transaction as a percentage of Fund's principal investment. The minimum SCM fee approved in the SCM Approvals process is $6m, without vesting. In addition, BCSL would earn i) increased revenue from additional volume in Prime Brokerage, which has been estimated at between $7m p.a. and $10m p.a. ii) increased revenue from volumes of trades executed with Barclays' traders, and iii) increased exposure for our hedge fund sales team. Further, this trade with Renaissance has the added benefit that it would prevent Prime Brokerage from losing their account, which accounts for approximately $6m p.a. **Estimated Costs** Legal fees for documentation of each trade. Initial cost of SUB and any annual cost of maintaining books and records.
5. Projected Trade volumes, Clients and Markets	*Trade Volume* It is anticipated that 1 to 3 transactions would be completed in 2002, with an investment from each client equal to approximately $100 million to $200 million (USD). *Clients* Initial targets are Funds that already utilize Prime Brokerage, but new Funds will also be targeted in this process. *Markets* Publicly traded equities [long and short, including synthetic shorts utilizing a total return swap].
INFRASTRUCTURE AREAS	
6. Operations ***Betsy Konvalinka – (UK)*** ***[(US) – John Brosnan/John Rodefeld]***	No Issues.
7. Information technology ***Marty Malloy (EFG) (Collateralized Finance and prime brokerage)*** ***[(US) Stuart Writtle]***	Prime Brokerage systems would track each investment in the same manner that the system tracks positions of its customers. In the normal course of its business, Prime Brokerage automatically feeds the position information into EDICT, which is the credit monitoring system that determines the worst expected loss from the portfolio. In addition, Prime Brokerage securities are automatically sent to Compliance for determining whether Barclays has exceeded any percentage ownership

	limitations for companies located in various countries. In these respects, COLT will operate in the same manner as a typical third-party customer of Prime Brokerage. [With respect to the synthetic short sale positions involving total return swaps over equities, GEFFE and EDICT are being updated to accommodate risking these types of transactions.] On behalf of the SUB, SCM Product Control would receive a daily report of the positions in the PB Account. As an initial matter, SCM Product Control will coordinate with EFG Product Control and Paul Merriman to arrange an appropriate electronic feed from Prime Brokerage. As discussed below, SCM Product Control will input summary amounts into the appropriate systems (SOPHIS) to track the accounting and regulatory impact of the transaction. In addition, Market Risk (Alistair Rew or similar person) will receive a daily feed of the positions within the PB Account. Market Risk will review on a weekly basis whether the trading strategy has been confined to the investment guidelines agreed with each Trading Manager. If the positions are deemed to be outside the investment guidelines, Market Risk will immediately report such breach to SCM Product Control (Helen Macgregor) and Prime Brokerage (Mark D'Andrea and James Sixsmith).
8. Risk management ***UK*** ***Iain Douglas*** ***Cindy Gargano*** ***Simon Gurney*** ***Alistair Rew*** ***Simon Tweddle*** ***[US*** ***Credit –*** ***Ian Prior/Keith Hafner/Charlie Churchill/Cindy Gargano*** ***Market Risk –*** ***Adam Litke]***	Risk in the PB Account is generally confined to catastrophic risk. That risk is drastically reduced by the fact that the PB Account is hedged by the Call Option. In fact, BB PLC's risk profile is much more akin to a collateralised Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time. Therefore, risks of COLT generally are reduced by the risk management techniques approved for use by BCSL's Prime Brokerage group when transacting with hedge funds. In addition to those techniques, specific investment guidelines will be agreed with each prospective Trading Manager, and the Market Risk team will undertake to analyze adherence to those investment guidelines. *Prime Brokerage Risk Management Techniques* Trading levels will be constantly monitored and will be reduced as trading strategies become more risky. In a Prime Brokerage relationship, a Fund would post collateral, say $200. BB PLC's internal risk analysts (both credit and market) would assign a multiple to the Fund based upon the relative risk of the strategy to be traded and the current market conditions. In the example of $200 collateral, a multiple of 20 would mean that the Fund could acquire up to $2,000 long positions and $2,000 short positions (note that the multiple is for gross positions, or $4,000 gross, but that is generally split between long and short positions, or $2,000 each side). Two events could cause the maximum trading positions to be affected: i) BB PLC's internal risk analysts decide to lower the multiple to reflect increased risk in the strategy or in the market (i.e., lowering the multiple to 15 times means that at the same $200 of collateral trading levels of only $1,500 per side would be warranted), or ii) the Fund's strategy loses money, in which case the collateral is decreased and it can no longer support the same trading level (i.e., loss of $10 means $190 of collateral remaining, times gross multiple of 20 = gross maximum of $3,800, or $1,800 long and $1,800 short positions).

	The only meaningful difference between a typical prime brokerage relationship and COLT relates to the possible remedies available with respect to the trading level. In a typical relationship, a Fund could do one of two things: i) provide more collateral to rationalize the same trading level (i.e., pay $10 to bring the collateral up from $190 to $200 if the multiple remains at 20 times), or ii) remove positions to reduce the trading level to the currently authorized level (i.e., bring the long/short positions down from $2,000 to $1,800). For COLT, only the second remedy exists. Notwithstanding the fact that both remedies address the same concerns, risk limits typically rely more heavily on the notion that a Fund would be able to access more cash to increase collateral. In the normal course of its business, Prime Brokerage automatically feeds the portfolio information into EDICT, which is the credit monitoring system that determines the worst expected loss from the portfolio (the outcome from which will enable Credit to establish whether appropriate leverage exists in the PB Account or, alternatively, whether deleveraging must occur). To be clear, however, deleveraging would occur in accordance with limits imposed by Prime Brokerage even if EDICT does not indicate that the collateral is insufficient. For example, if 20 times leverage on $200m supports $4,000m gross positions, a loss of $50m would mandate a reduction of $1,000m of gross positions, even if EDICT determined that a trading level of $4,000m was still appropriate. Credit (Cindy Gargano) will be responsible for interpreting the EDICT Data and notifying Prime Brokerage (Mark D'Andrea and/or James Sixsmith) when the risk level of the portfolio dictates that insufficient collateral is on hand. Prime Brokerage (Mark D'Andrea and/or James Sixsmith) will be responsible for conveying this information to SCM Product Control (Helen Macgregor) and to the Trading Manager. Further, Prime Brokerage (Mark D'Andrea and/or James Sixsmith) will be responsible to make sure that the portfolio has been reduced to a point that is supported by the collateral on hand. Since COLT eliminates the ability to access more collateral from the Fund, the risk limits in the case of COLT would be slightly more conservative when compared to its existing prime brokerage business. *Specific Investment Guidelines* A limited framework must be agreed within which the portfolio will be managed and stress risks controlled. This framework will include measures to encourage portfolio diversification and minimise the related market risk, event risk and gap risk exposures. Market Risk and Credit Risk will sign-off on each proposed Trading Manager Agreement and proposed PB Account. In addition, Market Risk (Alistair Rew or similar person) will receive a daily feed of the positions within the PB Account. Market Risk will review on a weekly basis whether the trading strategy has been confined to the investment guidelines agreed with the Trading Manager. If the positions are deemed to be outside the investment guidelines, Market Risk will immediately report such breach to SCM Product Control (Helen Macgregor) and Prime Brokerage (Mark D'Andrea and James Sixsmith). Upon consultation with Prime Brokerage, SCM Product Control will decide whether to fire the Trading Manager (See Product Control below).

Julian Shaw	**Modelling** No Issues. Standard models will be used to risk the Call Option.
9. Legal ***Alex Cameron & Rod Smith (UK)*** ***Richard Knaub (US)*** ***[(US) - Guy Dempsey/Alan Kaplan/Malyn Sheridan]***	[redacted]
10. Compliance ***(UK)*** ***Frank Mcgarahan*** ***Robert Nowicki*** ***Tim Broome*** ***[(US)*** ***Steve Stombelline]***	*Controlling Trading Manager's Ability to "Trade Away"* The Trading Strategy will allow the Trading Manager to execute trades with other broker-dealers that are cleared with Prime Brokerage. That ability to "trade away" must be controlled to ensure that the Trading Manager does not exceed daily trading limits during the course of the day. A tri- party agreement between the Trading Manager, executing broker and SUB would specify the daily notional buy/sell limits that the executing broker must adhere too. All trades will be reported to Prime Brokerage at the end of the day and if limits are exceeded Prime Brokerage (on behalf of SUB) would have the right, at its discretion, to reject the trades that exceed the limits. In addition, the executing brokers that could be used by the Trading Manager will be limited and pre-approved before trading. The agreement and limited executing brokers will be used to control the executing risk for the structure. *Trade Reporting* Since the SUB is not a regulated entity, the SUB would not be subject to the trade reporting requirements faced by BB PLC and/or BCSL with respect to the equities it trades. *Notification of Significant Holdings in Various Jurisdictions* Prime Brokerage must already report significant holdings to Compliance with respect to the trades it clears (since the securities are held as collateral in the name of BCSL). As a result, positions held through COLT's Prime Brokerage account will be reported in the same manner. Further, since Renaissance is an existing Prime Brokerage Client, COLT creates no additional burden.
11. Finance ***(UK)*** ***Michael Blackburn*** ***Pritesh Pankhania*** ***John Shone***	**Accounting** London Finance (Pritesh Pankhania) has provided advice, which has been agreed by PWC. a. SUB will be consolidated with BB PLC.

<table>
<tr>
<td>[(US)
Mike Montgomery
Ray Garguilo]</td>
<td>
b. COLT will be accounted for on trading book [and should be allocated to the US branch of BB PLC (in accordance with notion that accounting and tax books will be identical in the US)].
c. Fee income of $12M should be recognizable immediately.
d. The Call Option and the PB Account would be marked to market and should offset in the income statement (i.e., there is no intrinsic value to the Call Option).
e. On the balance sheet, the mark-to-market value of the option and the Call Premium would be reported as "Amounts Arising from Off-Balance Sheet Derivatives", and the positions in the SUB would be reported as "Equity Securities" or other, depending upon the nature of the investments.
f. [The synthetic short position should not cause any difficulties from an accounting perspective, because the total return swap and the stock borrowing between BCSL and the SUB will be eliminated in consolidation.]
<u>Regulatory</u>[5]
Regulatory treatment has been agreed with Financial Control (John Shone and Michael Blackburn).
Since the analysis is very fact specific, it must be undertaken for each trade and will take into account the specific positions contemplated within the PB Account. Although specific treatment would vary with respect to each strategy, the general parameters are set forth below:
<blockquote>Positions would have to be analysed for Position Risk Requirement ('PRR') and Credit Risk Requirement ('CRR'). However, since the Call Option would offset PRR, and CRR would be mitigated by margin and various netting agreements, this number should be relatively small.</blockquote>
FSA approval will be sought for the SUB to treat its transactions as trading book transactions (following the accounting treatment). In that event, no WRAs would reside in the SUB, because a) the Call Option would offset the PRR inherent in the PB Account (except for catastrophic risk which would be valued at zero under the MARS model), and b) no CRR would be triggered by the PB Account, since the SUB would not be extending any credit in the transaction with Renaissance. This COLT approval will be subject to receiving this FSA approval.
The residual risk in the SUB is catastrophic risk (i.e. gap risk) that Prime Brokerage currently undertakes in its day-to-day relationships with hedge funds. GFRM (Iain Douglas, Simon Gurney, and Simon Tweddle) is
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</table>

[5] Equity positions acquired by the SUB would be limited by BB PLC's FSA-imposed limitation related to investments in financial institutions. In that regard, BB PLC has received a trading book concession from the FSA, which allows BB PLC to invest up to 10% of its share capital (estimated limit is £880m) into shares of financial institutions. The FSA will be approached to extend this concession to the SUB. Once accomplished, part of the concession must be allocated to this trade. A further limitation would relate to how much BB PLC stock could be acquired by the SUB. Since this is a scarce resource, SUB will be prohibited from acquiring BB PLC stock.

	comfortable with this type of risk (from experience in Derivatives Funds business and Prime Brokerage), and it believes that no WRAs would result from that type of market exposure. That is borne out by models that determine risk from options, given various volatilities and strike prices.
12. Product Control (SCM) ***Andrew Westenberger*** ***Helen Macgregor*** ***(Prime Brokerage/EFG)*** ***Greg Stevens*** ***[US*** ***Jim Kacergis]***	*Regulatory and Accounting feed into SOPHIS* As noted above in the IT section, SCM Product Control would coordinate with Prime brokerage to arrange for an appropriate electronic feed from Prime Brokerage. The feed would provide information about each position and would sum the market values of each long position, short position and cash balance. On a periodic basis, SCM Product Control would feed these sums into SOPHIS to ensure that the appropriate accounting and regulatory information is captured. *Directors* Directors of the SUB would be US employees of BB PLC. *Firing Trading Manager if transact outside investment guidelines.* As noted above in the IT section, SCM Product Control (Helen Macgregor) would be notified by Market Risk (Alistair Rew) and/or Prime Brokerage (Mark D'Andrea or James Sixsmith) as to whether the Trading Manager has breached the investment guidelines associated with the PB Account. After consulting with Prime Brokerage, SCM Product Control will inform the directors of the breach and the directors will determine whether to terminate the Trading Manager. *Executing agreements on behalf of SUB* The directors of the SUB will have authority to execute contracts on the SUB's behalf. Further, to the extent authorized by the directors, the Trading Manager will have the authority to execute trades on the SUB's behalf.
13. Tax ***UK – David Williams/Jon Taylor/Priya Shah*** ***[US – Barry Berlin]***	UK Tax No Issues, but reserve the right to view each structure prior to close. Since the transaction will be completed by a Cayman Islands subsidiary of BB PLC, but will be managed and controlled from the United States, no UK tax would arise directly in the transaction. [redacted] US Tax SUB's profits from the transaction will be taxed in the US. [redacted]

	Withholding risk (relevant only if SUB is not treated as the tax owner of the underlying securities) will be borne by the counterparty in this transaction. The counterparty would arrange for a US nominee to receive all payments from SUB, which would transfer all US withholding obligation from SUB to the nominee. The counterparty would also grant SUB a complete indemnity for withholding taxes and penalties, if any. Information reporting risk (again, relevant only if SUB is not treated as the tax owner of the underlying securities) will be borne by counterparty.
APPENDICES	
1. SCM Approvals Paper (Approved 27/03/02)	
2. Global NPSO Approval Paper (Approved 08/04/02)	
3. Barclays' Reg. X Opinion from Sullivan & Cromwell	
4. Barclays' US Tax Memorandum from Akin, Gump	
5. Barclays' UK Tax Memorandum from Freshfields	

FSA)
DF
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Thursday, 4 July 2002

Ralph Mountford
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Major Financial Groups Division
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BARCLAYS

Dear Ralph

PROJECT COLT

INTRODUCTION

With regard to project Colt we are seeking FSA's non objection to the following:

1. To extend the Barclays Bank consolidated trading book to include the subsidiary ('SUB'), which has been specifically formed to undertake the business described below.

2. An exemption from having to calculate PRR for the subsidiary on a daily basis. By virtue of the type of business undertaken by the SUB and the controls that it would be subjected to, no PRR charge would arise and that any exposures arising on the equity positions would be offset, so long as the option is in the money. Controls regarding the levels and type of business undertaken by the 'SUB' will minimise any losses resulting from extreme market moves.

3. An exemption from having to monitor exposures arising in the 'SUB' for the purposes of reporting large exposures. For the reasons explained in 2 above, there will be no exposure for purposes of large exposure reporting.

BACKGROUND

This transaction is designed to provide hedge funds with a tax effective means of undertaking the business and for Barclays it would generate both a structuring fee and additional volume for the prime brokerage business.

Project Colt is an investment product for hedge funds, ('FUND') whereby a newly incorporated subsidiary of the Barclays Group ('SUB') replicates the trading strategy of the FUND having an initial value of $2bn. At the end of the period the Fund exercises a cash-settled call option with respect to the value of trading strategy. During the period of the transaction SUB funds its ongoing activities with margin received from the FUND, (by way of the premium on the call option) through prime brokerage facilities entered into with Barclays Capital Inc ('BCI') and Barclays Capital Securities Limited ('BCSL') (External prime brokers will not be used.). Whilst the SUB will engage the investment manager of the FUND to act as investment advisor regarding its trading strategies, Barclays controls the type and level of business undertaken using the prime brokerage agreement and the investment management agreement. The structure is designed to be market risk neutral, with the risk arising in SUB from the trading strategies being fully offset by the call option, so long as the option remains in the money. Controls exist within the prime brokerage business to ensure that the risk of loss is minimized, and this structure contemplates additional controls to further minimize the risk. Notwithstanding those controls, if the equity positions funded using the prime brokerage accounts lose enough to make the option go out of the money, the equity positions held by the SUB would cease to be hedged and give rise to equity exposure. However, the controls are designed to take effect before this occurs, and includes the ability to terminate, the services of the investment manager and to liquidate the equity positions (in the same manner as currently approved for the prime brokerage business). The option is structured with a strike price of $2 bn which equates with the collateral placed with the Subs prime brokers. Thus this option will be in the money from the outset.

Further details of the structure are attached, including the additional transaction necessary at the outset to create a long position in US securities in subs.

The risk to the Barclays Group is controlled through the operation of the SUB's prime brokerage accounts opened with BCSL and BCI

1. The written call option by the SUB to the Fund ensures that any surplus on the prime brokerage account ('PB account') will be returned to the Fund (so upside on the PB account passes to the Fund).

2. The premium on the written call also acts as the mechanism for passing margin funds to the SUB's prime brokerage account. ('The Margin')

3. The Investment Management Agreement links the Investment Manager (the Fund's investment manager) to the performance of the PB agreement of the SUB and additionally sets boundaries on the type of trading allowed within the PB account. The boundaries on trading within the PB account act as an additional control to those normally in place with a PB relationship. Adherence to these controls will be monitored by Barclays Capital Market Risk. In the event of an exception the investment management agreement would be terminated, and SUB would be able to liquidate outstanding positions (through BCSL/BCI prime brokers in ordinary course of business).

4. The Prime Brokerage Agreements between the SUB and BCSL/BCI sets out the level of Equity required in the account. If this Equity level is not met then there are a number of remedies available to BCSL/BCI such as:-

   (i) Deleverage of the account by the Investment Manager, ie selling positions to get above the required equity levels.

   (ii) BCI/BCSL taking control of the account if the margin level is eradicated.

   These are the same remedies that apply to dealing with any PB account, though the additional standard remedy in a PB relationship of obtaining additional margin is not available in this mechanism.

The operation of the SUB's PB account and review of the level of equity will take place through the current infrastructure around the PB business. As described above, there will be an additional control over the investment strategy of the PB account by Barclays Capital Market Risk reviewing the account on a daily basis to ensure it complies with the Investment Management Agreement.

Consequently the risk, both credit and market risk, of this structure is the same as any other prime brokerage ('PB') arrangement with a hedge fund. Therefore BCSL/BCI (as providers of the PB accounts) are subject to gap risk arising over a very short time frame (i.e. if the controls in place for prime brokerage do not operate in time to enable the positions to be deleveraged in order to ensure that an appropriate level of Margin continues to be maintained). In addition, although BBPLC is owner of the SUB it has no direct risk exposure to the positions in the PB account since the combination of the option and underlying positions in the PB Account transfer such risk to the Fund and BCSL/BCI, respectively.

TRADING BOOK TREATMENT

We seek to extend the scope of the trading book to include the activities of the SUB. The SUB will be holding short term positions in equities, funded using the prime brokerage accounts and held with trading intent. The trading strategy of the SUB will involve transacting a high volume of equity transactions, each position being held for a short period. We confirm that the positions would be marked to market daily on a prudent and consistent basis as part of the internal Product Control process. The prime brokerage transactions would take the form of reverse repos which fall within the definition of a trading book asset per chapter CB SECTION 3.2.1

CALCULATION OF THE POSITION RISK REQUIREMENT

As explained above, the level of risk carried by the SUB is controlled through the operation of the prime brokerage accounts. In this way the option should, barring gap risk, always be in the money. In which case it will have a delta of 1 and provide a perfect offset against the net assets held by SUB. Consequently, as no equity PRR will arise in SUB we seek a dispensation from having to calculate the PRR for the SUB. This would apply so long as the option remains in the money.

LARGE EXPOSURE REPORTING

Similar to the analysis applied to the treatment of position risk above, individual exposures arising in the SUB will (so long as the call option is in the money) be offset by the synthetic exposures created by the call option. Consequently for the purposes of large exposure reporting, no exposures to the issuers of the equity would arise in these circumstances.

SUMMARY

We seek FSA's consent to extend the trading book to include the SUB. In addition we seek an exemption from having to calculate the PRR for the subsidiary on a daily basis as the structure is designed to be risk neutral and this would be ensured by applying the controls referred to above. Similarly no exposures would arise in the SUB for the purposes of large exposure reporting.

The first transaction is due to close at the end of July. We would be grateful if you could give this your consideration.

Yours sincerely

John Shone.

John Shone
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Financial Control
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0506 COLT

Friday, 16 August 2002

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Gareth Truran.
Financial Services Authority
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BARCLAYS

Dear Gareth,

PROJECT COLT

INTRODUCTION.

Further to a telephone conversation with Ralph, yesterday evening, I understand that the FSA may require the application of the carveout methodology to calculate the PRR arising on the sold covered call option. The purpose of this letter is to explain the approach we would propose to adopt.

Given the business deadlines we are seeking to progress this in Ralph's absence and are hoping it will be possible to arrange an opportunity to discuss it early next week.

BACKGROUND.

With respect to the subsidiary ("Palomino") in Project COLT, we believe that Palomino should be treated as having a Trading Book on the basis that

a. The instruments (cash, equity securities and Call Option) booked in Palomino are each Financial Instruments, and
b. Each Financial Instrument will be marked to market daily in appropriate systems; and
c. The activities of the entity involve trading intent.

In response to Ralph's comments we would apply carve out methodology to calculate the PRR arising on the Call option in Palomino, as set out in chapter TE section 5.3.2 of the FSA's Interim Prudential Sourcebook for Banks. As a sold covered option, that is in the money, the PRR would be based upon the market value of the underlying position times P% less the mark to market value of the option.

Importantly, you should note that application of that methodology would ***in all cases*** result in nil capital for Palomino (see "Proof" below for a detailed discussion).

This result is based largely on the fact that all market risk that would otherwise be present in Palomino from the option arrangement has been passed to BCI and BCSL as a contractual matter (this is discussed in more detail in the discussion below under the definition "Assets at Risk"). Although one might argue that Palomino is left with a credit exposure to BCI and BCSL, any such risk is an intra-group risk that would not trigger a capital charge.

Since, as discussed, Palomino will not have any risk to which capital should be attached, the remaining issue relates to the appropriate capital treatment of BCI and BCSL. In that regard, it is important to note that the risks borne by BCI and BCSL are the ***same risks*** borne by BCI and BCSL in the context of their prime brokerage business. For them, this transaction is no different than if a client deposited $200m (i.e., the call option premium) directly with either of their prime brokerage divisions. In fact, but for some US regulatory efficiencies created for the client by using an option, the transaction would have been documented as a traditional prime brokerage account with $200m as initial collateral.

Proof

Looking at the appropriate formula best supports the result of nil capital:

(Assets at Risk) x (PRA = 16%) - (Value of Call Option) = Capital in Palomino

"Assets at Risk" means the amount of equity securities and cash that are at risk at any time. On the numbers previously submitted, $2,000m of equity and/or cash will be in Palomino's prime brokerage accounts (split between BCI and BCSL). With nothing further stated, one might conclude that $2,000m would be the Assets at Risk for Palomino. However, that is not the case because of specific provisions in the prime brokerage agreements with BCI and BCSL that ensure that Palomino will ***in all cases*** receive at least $1,800m back from BCI and BCSL (in relevant proportions). Given that, the true amount of "Assets at Risk" for Palomino is only $200m (i.e., $2,000m assets less $1,800m in effect guaranteed by BCI and BCSL).

An example of the return profile for Palomino is as follows:

Total Value of Equities plus Cash at Termination (combined BCI and BCSL accts)	Amount returned by BCI prime brokerage to Palomino (assume 75% of portfolio)	Amount returned by BCSL prime brokerage to Palomino (assume 25% of portfolio)	Total Amount received by Palomino
$2,500m	$1,875m	$625m	$2,500m
$1,900m	$1,425m	$475m	$1,900m
$1,700m	$1,350m	$450m	$1,800m
$0	$1,350m	$450m	$1,800m

"PRA" means 'percentage risk addition', which we have assumed a value of 16%.

"Value of Call Option" means the value of the call option as determined by SOPHIS (our equity derivative reporting system), based upon the appropriate inputs, including the value of the underlying, the strike price, and applicable volatility numbers. Generally speaking, the value of the call option at any time will equal the value of the underlying less the strike price. Since, as described above, the value of the underlying will never fall below $1,800m AND the strike price is set at $1,800m, the option is really equivalent to an option over $200m of underlying (i.e., $2,000m of assets less $1,800m) with a strike price of $0. As such, the value of the option would always equal the amount by which the underlying assets exceed $1,800m. In other words, the Value of the Call Option will always equal the Assets at Risk.

Given the above definitions, examples of the calculation of capital for Palomino using the Carve Out Methodology are as follows –

(a) Value of Underlying	(b) Value at Risk = (a) less guaranteed return amount	(c) (b) times PRA (16%)	(d) Value of Call Option = (a) less strike price	(e) Capital = (c) less (d), but not less than $0
$2,000m	$200m	$32m	$200m	$0
$2,100m	$300m	$48m	$300m	$0
$2,500m	$700m	$112m	$700m	$0
$3,000m	$1,200m	$192m	$1,200m	$0
$1,900m	$100m	$16m	$100m	$0
$1,850m	$50m	$8m	$50m	$0
$1,800m	$0	$0	$0	$0
$1,000m	$0	$0	$0	$0
$0	$0	$0	$0	$0

As suggested, we will ring Bas Rooijmans on Monday to discuss how best to progress this. Unfortunately, I am out of the office next week, in my absence Nadim Sheikh will be handling this matter.

Yours sincerely

John Shone.

John Shone
Director
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Cc Ralph Mountford.

FSA . File.

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Thursday, 5 September 2002

Bas Rooijmans
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BARCLAYS

Dear Bas

PROJECT COLT

I am writing to respond to the various questions that the FSA have raised following the conference call held on Wednesday afternoon to discuss Project Colt.

1. Does the option give rise to market risk?

   As a sold call option with effectively a zero strike price it does not give rise to market risk within Palomino Limited. As such it is equivalent to a forward sale.

2. Set out the basis for the proposed capital treatment.

   Please refer to the attached paper, which specifically relates to BCSL. BCinc would follow the same principles. Both these entities are consolidated applying an aggregation plus based approach.

3. Provide confirmation as to the internal approvals obtained.

   Within Barclays Capital the Executive Committee and New Products Committee have approved the structure. It has also been reviewed by the SCM Approvals Committee and is due to be submitted for final approval by this committee on Monday.

   Group approvals obtained include Group Treasury, The Finance Director, The Group Risk Director and Capital Applications Process.

4. Leverage appears high for hedge fund business, is this prudent?

   It is not possible to make a general statement about leverage with hedge funds, since the leverage level relates primarily to the level of risk in the strategy employed by the hedge fund (which vary markedly). This structure is targeted at more conservative market neutral hedge funds that trade equities and focus on obtaining returns that have a low correlation to the market. Generally, these strategies involve paired positions (i.e., long and short positions) designed to take advantage of market inefficiencies. In this transaction if the fund goes directional (either net long or short) then the margin requirement will be increased (and correspondingly the leverage levels will decrease). In fact, a full directional strategy will be allowed to have at most 4 times leverage.

Specific levels of leverage, which are in line with other transactions, have been agreed with GFRM as part of the approvals process.

5. What is the purpose of the transaction – why did we structure it this way?

   The main reason for Barclays was cost efficiencies. We did not need this structure to get around any US regulatory constraints relating to leverage. In fact, we could have carried out the transaction using BCSL directly, but it would have been punitive re: costs in clearing US securities in BCSL through the DTC. The current structure avoids those costs and provides some tax efficiencies for the client.

Please do not hesitate to contact me should you wish to discuss any of these points further.

Yours sincerely

John Shone.

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FSA

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13 September 2002

By e-mail and post

Dear John

PROJECT COLT

I refer to your letter of 5 September 2002 to Bas in which you requested individual guidance on the regulatory capital treatment for Project COLT.

You have provided us with further information on this transaction in several letters, emails and meetings over the last few weeks. In the course of our discussions you have confirmed the following:

- Neither Barclays Bank plc nor BCSL/BCI incur market risk through the option contract with Palomino.
- Credit and operational controls around this transaction are equivalent to those that are in place for a standard prime brokerage transaction.
- All relevant internal approvals for this transaction have been obtained.
- The prime brokerage agreement between Palomino and BCSL/BCI complies with the requirements set out in annex 1 of IPRU (INV) Chapter 10 under 'reverse repurchase agreement'.

As a result, I confirm that you may calculate the capital charge for this transaction on the basis of IPRU(INV) Rule 10-173(2).

If you wish to use a similar structure for future transactions with other hedge fund counterparties I would be grateful if you could inform us advance.

I have written separately today to Richard Pattinson in response to his associated request for amended treasury concession limits.

The reliance that can be placed on the individual guidance in this letter is described in section 9.4 of the Supervision manual.

Please contact me or Bas if you have any queries.

Yours sincerely

Gareth Truran

Gareth Truran

Memo

Barclays Capital

To	Iain Abrahams, Alex Cameron, Patrick Clackson, Paul Emney, David Fail, Roger Jenkins, Linda King, Ian Menzies-Conacher, Robert Nowicki, Jon Taylor, David Williams
Cc	Helen MacGregor
From	Jonathan Zenios, Jerry Smith, Structured Capital Markets
Date	Thursday, 22 August 2002
Subject	SCM Approvals paper – Project COLT

BARCLAYS

1. BACKGROUND

Structured Capital Markets ('**SCM**') is seeking approval for Project COLT, a new investment opportunity for US Hedge Funds ('**Funds**'). It should be noted that SCM Approvals Committee previously approved Colt on 27 March 2002, but it has since gone through a number of changes. The purpose of this further memorandum is to present the final Colt Structure. It should further be noted that the **global NPSO Committee (including NY NPC) approved this new structure on 30 July 2002**.

COLT is targeted at those funds with a high proportion of US individual investors, stable year-on-year returns and strategies involving short-term trading. This gives rise to significant short-term capital gains for the investors regardless of whether or not they are invested in the fund for the shorter or longer term.

COLT provides an after tax benefit to these investors through the conversion of their return from the fund from short term capital gains (taxed at 39.6%) to long term capital gains (taxed at 20%).

This would be achieved by substituting the Fund's direct execution of its trading strategy with a cash settled call option over a Barclays proprietary account whose performance *substantially* replicates the Fund's trading strategy. Any gain on the call option would be long-term gain provided the call option is held by the Fund for at least 12 months.

Due to the Call Premium (defined below) and rigorous controls (explained below), including de-leveraging and daily risk monitoring, the economic risk to Barclays in the transaction would be confined to a one-day catastrophic risk (i.e. gap risk). Structurally, this risk would reside in the prime brokerage business ('**PB**') of Barclays Capital Securities Limited ('**BCSL**') and Barclays Capital Incorporated ('**BCI**'). Importantly, PB currently takes this type of risk for existing clients.

SCM would earn fee income at the onset of the transaction of $9.5m. Further, it is anticipated that increased revenue will be created in certain other areas within Barclays Capital: approximately $7m p.a. to $10m p.a. from increased clearing charges and funding revenue for Prime Brokerage. Further, Renaissance (the Fund that is the first target) has indicated that it will move its account to another bank if we do not provide them with this product, which would result in approx. $6m per year of lost revenue to Prime Brokerage.

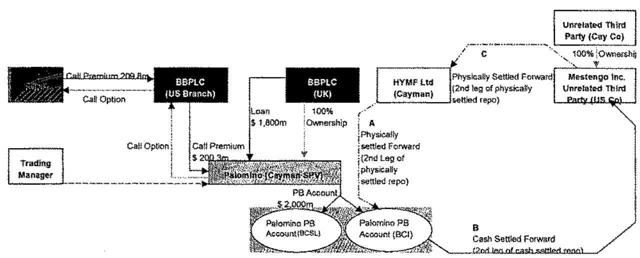
COLT is based largely on the Prime Brokerage business that has received NPSO approval.

Key financial data is set out below:

Proposed product limit	TBD
Estimated revenue	\$9.5 million one off Fee Income for SCM \$7m - \$10m per annum revenue for PB
Tax capacity Return on tax capacity	N/A
WRAs Return on WRAs	N/A

2. DETAILED TRANSACTION DESCRIPTION

Structure Diagram:



Establishment of Palomino (Cayman) Ltd and HYMF (Cayman) Ltd; Transaction with Mestengo Inc.

BB PLC would form two entities: Palomino Ltd, a Cayman Island company ("Palomino"), and HYMF Ltd, a Cayman Island Company ("HYMF"). Further, our Cayman Island lawyers would set up a Cayman Island company ("Cay Co"), which would in turn set up a US corporation ("Mestengo") to participate in the transaction.

Palomino is utilized to 1) eliminate trade reporting obligations that would be required if BB PLC participated in the transaction directly, and 2) to create a US tax resident entity that is not confined by US regulatory rules that apply to US-formed entities.

HYMF and Mestengo Inc would be used as part of a cost-efficient structure that would enable Palomino to sell US securities without being subject to the "up tick" rules that restrict short sales of US securities.

Group Treasury, through Capital Application and/or LERC process, has approved each of Palomino, HYMF and Mestengo.

Loan from BBPLC (UK)

Palomino would borrow $1,800m from BB PLC (UK) on an unsecured basis. Note that this would be from EFG's existing line with BB PLC. Therefore, this transaction does not require a new loan and does not create any new issues with respect to large exposure reporting (as EFG's line is already within existing limits).

Establishment of PB Account

Palomino would establish a prime brokerage trading account with both BCSL and BCI (collectively referred to as the '**PB Account**').

Palomino would place $2,000m into the PB Account to be used as collateral for a strategy identical to that utilized by the Fund ('**Trading Strategy**'). To replicate the Fund's strategy, Palomino would hire the Fund's own investment manager ('**Trading Manager**') to manage the investments. The Trading Strategy would be confined to sales and purchases of equity securities.

Back-to-Back Call Options

a. Simultaneous with the establishment of the PB Account, the US branch of BB PLC would write an American-style call option to the Fund with respect to the value of the PB Account (the '**Call Option**'), for which the Fund would pay a premium ('**Call Premium**') of $209.8m comprising:
- $200.3m representing the collateral for the Trading Strategy; and
- an amount representing SCM's fee from the transaction ($9.5m in the diagram).

b. The Call Option would have a term of 3 years and would be cash settled. The effective strike price of the Call Option would be $1,800, plus an appropriate charge for leverage ('**Call Strike**').

c. Simultaneous with its writing of the Call Option, BB PLC would purchase an identical option from Palomino. The only difference being that the call premium would be $200.3m, as opposed to $209.8m.

Arrangement between Palomino, Mestengo, and HYMF to address "up tick" restriction

Absent the arrangement between Palomino, Mestengo and HYMF, short sales of US securities by Palomino (i.e., borrow stock from BCI or BCSL and sell it on the open market) would be restricted by the "up tick" rule, which generally prevents short sales of a US security at the current market price if the share price has been declining. To manage this restriction, Palomino would create identical amounts of physically long and synthetically short positions in a large number of US securities so that where Palomino makes sales of securities they will always be from the pool of long equity positions. As a result, for NYSE purposes they will be treated as sales of long positions (not affected by up tick rules), not short sales. [redacted]

As a result of a series of simultaneous transactions, each of Palomino, Mestengo and HYMF would have equal long and short positions (interests in cash or equity settled forward contracts) in the same basket of US equity securities. A reduction by Palomino of its long position in certain US equity securities would create the synthetic short position discussed above.

Risk Mitigation and Acceleration:

All market risk from the transaction is borne by the Fund (to extent of $200m premium from the Call Option) and by Prime Brokerage (to the extent the value of the PB Account drops below $1,800m). Prime Brokerage's risk is triggered by the fact that it will in all cases pay at least $1,800m (i.e., the value of the loan between Palomino and BB PLC) back to Palomino at the end of the transaction. This risk borne by Prime Brokerage has been approved by GFRM (market and credit risk) in the NPSO process.

Generally speaking, the Trading Strategy will be monitored using the traditional risk parameters approved for the Prime Brokerage group[1] (similar but slightly more restrictive). Although the technical equity in the PB Account would be $2,000m, collateral for risk monitoring purposes will be limited to the $200m provided by the Fund as premium. As a result, all numbers related to risk analysis will assume only $200m of collateral. With that in mind, Prime Brokerage's risk to the Trading Strategy will be managed in the following ways:

- De-leveraging: Suppose that the $200m of collateral (determined as discussed above) supports $600m of long and $600m of short positions (i.e., six times gross multiple, split evenly between long and short positions) in the Trading Strategy. If the Trading Strategy loses $10m, only $190m of collateral would remain. Since $190m would only support $570m of long/short positions, the Trading Manager would be forced to liquidate enough of its positions to meet those parameters. (This is because the only structural way to obtain more collateral would be through increasing the Call Premium and this significantly weakens the Fund's tax analysis). Although more labour intensive, the deleveraging process should manage risk as effectively as requesting more collateral.

- Removal of Manager: The Trading Manager could be fired and the positions could be liquidated at any point with 10 business days notice and immediately for cause.

The Trading Strategy will allow the Trading Manager to execute trades with other broker-dealers that are cleared with Prime Brokerage. That ability to "trade away" would be controlled to ensure that the Trading Manager does not exceed certain investment guidelines during the course of any day. All trades will be reported to Prime Brokerage at the end of the day, and if limits are exceeded Prime Brokerage would have the right, at its discretion, to reject the trades that exceed the limits and transfer the trades into a Prime Brokerage Account held by the Trading Manager (i.e., trades will be for Trading Managers account). In addition, the executing brokers that could be used by the Trading Manager will be limited and pre-approved before trading. The ability to reject trades exceeding investment guidelines and limited executing brokers will be used to control the execution risk for the structure.

[1] Prime Brokerage clears trades for hedge funds and provides leverage with respect to trading levels, based upon i) collateral received from the hedge fund, ii) ongoing risk analysis of the strategies employed, and iii) the market environment. As losses reduce collateral on hand, Prime Brokerage manages risk of loss in two ways: i) it can request increased collateral to rationalize the same trading level, or ii) it can force a reduction of positions to conform the trading level to an acceptable risk profile.

Targeted Funds[2]
This approval is confined to Funds that trade equities (long and/or short). In the current case, Renaissance employs a strategy or portfolio construction general known as "Statistical Arbitrage" or equity relative value trading. They have a proprietary (and closely guarded) trading model which generates short, medium, and long term buy and sell signals based on statistically significant historical indicators. While the trading crosses many asset classes for the fund, it is only their equity specific models that we are considering for the initial COLT product.

The trading we see currently crosses the major European markets and Japan. The volume varies from 1000 to 2000 transactions per day.

3. ECONOMICS AND ECONOMIC DRIVERS

BBPLC & BCSL
SCM's structuring fee would be $9.5m.

In addition, BCSL would earn i) increased revenue from additional volume in Prime Brokerage, which has been estimated at between $7m p.a. and $10m p.a. ii) increased revenue from volumes of trades executed with Barclays' traders, and iii) increased exposure for our hedge fund sales team.

Further, this trade with Renaissance has the added benefit that it would prevent Prime Brokerage from losing their account, which accounts for approximately $6m p.a.

Fund
US individual investors of a Fund would obtain 1) operational and cost efficiencies due to certain regulatory efficiencies (including lack of up tick restriction on short sales), 2) no withholding tax on dividends from US securities, and 3) a post-tax benefit, because all the gain on the Call Option would be treated as a long-term gain for US tax purposes and would therefore be taxed at 20%, as opposed to 39.6%.

4. TAX ANALYSIS

BB PLC[3]

UK Tax (See attached opinion from David Taylor of Freshfields)

The transaction will utilize the US branch of BB PLC and two subsidiaries of BB PLC located in the Cayman Islands. [redacted]

US Tax (See attached opinion from Stuart Leblang of Akin, Gump and related opinion from Ed Cohen of Coudert Brothers on [redacted])

[2] Strategies for the "Targeted Funds" would be limited by BB PLC's FSA-imposed limitation related to investments in financial institutions. In that regard, BB PLC has received a trading book concession from the FSA, which allows BB PLC to invest up to 10% of its share capital (estimated limit is £880m) into shares of financial institutions. The FSA will be approached to extend this concession to the SPV. Once accomplished, part of the concession must be allocated to this trade. A further limitation would relate to how much BB PLC stock could be acquired by the SPV. Since this is a scarce resource, SPV will be prohibited from acquiring BB PLC stock.
[3] See attached tax opinion for a more detailed discussion.

The following entities in the transaction are US taxpayers – US branch, Palomino (check-the-box election will be made to disregard as separate entity and therefore treated as part of US branch of BB PLC), HYMF (check-the-box election will be made to disregard as separate entity and therefore treated as a branch of HYMF, Inc., a US corporation) and Mestengo (as it is a US corporation).

SCM's profit from the transaction will be earned in the US branch of BB PLC and therefore will be taxed in the US. [redacted]

Tax Shelter Disclosure/List-Keeping –

SCM has taken the position that COLT would be subject to the proposed Tax Shelter List-Keeping Regulations issued in February 2000, as amended, and COLT will be covered by its existing policies on this.

Fund[4]
Investors in Funds, rather than the Funds themselves, are subject to US tax with respect to the Fund's annual net income. For US individual investors, that income is typically taxed at a 39.6% federal rate of tax, because Fund investments mainly trigger 'short-term capital gains' and 'ordinary income'. By changing the investment of the Fund from various positions that turn-over frequently during the year to a single Call Option that remains outstanding for at least one year, COLT accomplishes two goals:

a. Conversion - the Fund recognizes only long-term capital gains (i.e., gains recognized for an asset held more than 12 months), which are taxed to the individual investors in the Fund at a maximum federal rate of 20%; and

b. Deferral - income is recognized only in the year in which the Call Option is recognized (i.e., in year 3).

5. TAX RISK

There is no tax risk for BB PLC from COLT[redacted].

6. ACCOUNTING

London Finance (Pritesh Pankhania) has provided advice, which has been agreed by PWC.

[4] See attached tax opinion for a more detailed discussion.

a. Palomino (Cayman), HYMF (Cayman) Ltd and Mestengo Inc, as a quasi-subsidiary, will be consolidated with BB PLC.

b. Palomino (Cayman) will be accounted for on trading book.

c. Fee income of $9.5m should be recognizable immediately.

d. The Call Option and the PB Account would be marked to market and should offset in the income statement (i.e., there is no intrinsic value to the Call Option).

e. On the balance sheet, the mark-to-market value of the option and the Call Premium would be reported as "Amounts Arising from Off-Balance Sheet Derivatives", and the positions in Palomino would be reported as "Equity Securities" or other, depending upon the nature of the investments.

7. REGULATORY CAPITAL

Regulatory treatment has been agreed with Financial Control (John Shone and Michael Blackburn). FSA approval has been sought for the following:

1. Palomino may be treated as a trading book;
2. Since Position Risk Requirements for Palomino will in all cases be nil, there is no need to calculate such on a daily basis;
3. Since Large Exposures for Palomino to equity names will in all cases be nil, there is no need to calculate such on a daily basis.
4. The catastrophic risk passed on to Prime Brokerage should be treated in the same manner as a typical P.B. account.

Although approval is outstanding, preliminary indications show that a positive response should be achievable.

8. CREDIT

As discussed above, Palomino will not have any credit risk or market risk in the transaction, due to the fact that the its PB Account is hedged by the Call Option and Prime Brokerage effectively has taken the downside risk (since it must in all cases return at least $1,800m to Palomino.). The risk borne by Prime Brokerage is akin to the risks taken in a normal collateralised Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time.

Therefore, risks of COLT generally are reduced by the risk management techniques approved for use by BCSL's and BCI's Prime Brokerage group when transacting with hedge funds. In addition to those techniques, specific investment guidelines will be agreed with each prospective Trading Manager, and the Market Risk/Credit teams will undertake daily risk monitoring.

Prime Brokerage Risk Management Techniques

Trading levels will be constantly monitored and will be reduced as trading strategies become more risky.

In a Prime Brokerage relationship, a Fund would post collateral, say $200. BB PLC's internal risk analysts (both credit and market) would assign a multiple to the Fund based upon the relative risk of the strategy to be traded and the current market conditions. In the example of $200 collateral, a multiple of 10 would mean that the Fund could acquire up to $1,000 long positions and $1,000 short positions (note that the multiple is for gross positions, or $2,000 gross, but that is generally split between long and short positions, or $1,000 each side). Two events could cause the maximum trading positions to be affected: i) BB PLC's internal risk analysts decide to lower the multiple to reflect increased risk in the strategy or in the market (i.e., lowering the multiple to 4 times means that at the same $200 of collateral trading levels of only $400 would be warranted), or ii) the Fund's strategy loses money, in which case the collateral is decreased and it can no longer support the same trading level (i.e., loss of $10 means $190 of collateral remaining, times gross multiple of 10 = gross maximum of $1,900, or $950 long and $950 short positions).

The only meaningful difference between a typical prime brokerage relationship and COLT relates to the possible remedies available with respect to the trading level. In a typical relationship, a Fund could do one of two things: i) provide more collateral to rationalize the same trading level (i.e., pay $10 to bring the collateral up from $190 to $200 if the multiple remains at 10 times), or ii) remove positions to reduce the trading level to the currently authorized level (i.e., bring the long/short positions down from $2,000 to $1,900). For COLT, only the second remedy exists. Notwithstanding the fact that both remedies address the same concerns, risk limits typically rely more heavily on the notion that a Fund would be able to access more cash to increase collateral.

Since COLT eliminates the ability to access more collateral from the Fund, the risk limits in the case of COLT would be slightly more conservative when compared to its existing prime brokerage business.

Specific Investment Guidelines

A limited framework must be agreed within which the portfolio will be managed and stress risks controlled. This framework will include measures to encourage portfolio diversification and minimise related market risk, event risk and gap risk exposures. It is expected that the agreed mandate will be similar to general risk limits previously agreed for the Hedge Fund Derivatives Business, though specific limits will be agreed on a case-by-case basis.

Risk Management and Credit Risk will sign-off on each proposed Trading Manager Agreement and proposed PB Account.

Daily Risk Monitoring (Trading Strategy)

a. Risk Management will be involved in the initial and continual due diligence of the strategies employed by the Trading Manager.

b. Risk Management will reconcile Prime Brokers reports on a daily basis and immediately report any issues to Prime Brokerage.

c. High levels of liquidity and full transparency are provided by the fact that assets would be held directly by a subsidiary of BB PLC.

9. NPSO APPROVAL

NPSO approval was obtained on 30 July 2002.

10. APPENDICES

a. Minutes from NPSO meeting on 30 July 2002
b. NPSO approvals Paper (original paper from 28 May 2002 and addendum from 30 July 2002)
c. BB PLC US tax opinion from Akin Gump
d. US tax ownership opinion from Coudert Brothers (referred to within US tax opinion)
e. BB PLC UK tax opinion from Freshfields (David Taylor)
f. Memo from Counsel Davis Polk [redacted]
g. SCM Internal Memo on Coudert Brothers Tax Opinion.

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BARCLAYS

September 30, 2002

Bass Equities Ltd.
c/o MQ Services Ltd.
Chancery Hall
52 Reid Street
Hamilton HM12
Bermuda

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the Transaction entered into between Barclays Bank PLC ("Party A"), New York Branch, and Bass Equities Ltd. ("Party B") on the Trade Date specified below (the "Transaction").

This Confirmation constitutes a complete and binding agreement between Party A and Party B as to the terms and conditions of the Transaction to which this Confirmation relates, and it supercedes all prior or contemporaneous written or oral agreements between Party A and Party B in relation to the Transaction (except to the extent explicitly stated in any other written agreement between the parties hereto executed contemporaneously herewith). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below.

The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 1996 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc., are incorporated by reference into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern, and in the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern. For purposes of the Equity Definitions, this Transaction shall constitute an Index Option Transaction.

This Confirmation supplements, forms part of, and is subject to, the ISDA Master Agreement dated as of September 30, 2002, as amended and supplemented from time to time (the "Agreement"), between Party A and Party B. All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

1. The terms of the particular Transaction to which this Confirmation relates are as follows:

General Terms:

Trade Date:	October 1, 2002
Option Style:	American
Option Type:	Call
Seller:	Party A
Buyer:	Party B
Index:	The Basket Value
Number of Options:	One
Multiple Exercise:	Inapplicable
Strike Price:	USD 1,250 million
Premium:	USD 131,237,500, of which USD 50,000,000 constitute and are referred to herein as "Amortizable Premium".
Premium Payment Date:	The 3rd (third) Business Day immediately following the Trade Date.
Premium Payment Time:	The date and time at which the Premium is paid.
Reference Accounts:	The BCSL Account, the BCI Account and the Synthetic Account, as defined below.
Trading Strategy:	A trading strategy to be exclusively implemented based on and in accordance with the Investment Guidelines, as defined below.
Exchange(s):	Each exchange or quotation system, which constitutes with respect to any of the Shares, the principal exchange or quotation system on which such Share is actively traded, as reasonably determined by the Calculation Agent.
Business Day:	New York

Procedure for Exercise:

Latest Exercise Time:	5 p.m. (local time in New York City)
Expiration Time:	5 p.m. (local time in New York City)
Expiration Date:	The date which is the earlier of: (i) September 30, 2005 (the "Scheduled Expiration Date"), or (ii) an Early Termination Date designated by either party in respect of this Transaction.
Exercise Date:	The Exchange Business Day during the Exercise Period on which the Option is or is deemed to be exercised by Party B.
Automatic Exercise:	Applicable
Designated Agent's Telephone Number and Telex and/or Facsimile Number and Contact Details for Purpose of Giving Notice to Seller:	Attn: Mark D'Andrea Tel: (212) 412-7673 Fax: (212) 412-1775

Valuation:

Valuation Time:	At the close of trading on each Exchange.
Valuation Date:	The earlier of: (i) the 4th (fourth) Valuation Exchange Business Day immediately following the Exercise Date, or (ii) the ninth (9th) Business Day immediately following the Exercise Date.
Valuation Period:	The period commencing on the Trade Date and ending at the Valuation Time on the Valuation Date.
Valuation Exchange Business Day:	An Exchange Business Day during which there has not been (i) a Trading Suspension in securities that comprise, on the commencement of such day, more than 20 percent, in value, of (A) the long Designated Positions, or (B) the short Designated Positions then credited to, included or deemed included within the Reference Accounts,

or (ii) an event of force majeure beyond the control of Party A (or any Affiliate thereof) occurring after the Trade Date, preventing the execution of transactions within the Reference Accounts or making the execution of such transactions impossible or impracticable.

For purposes of this Confirmation, the term "Trading Suspension" means, with respect to any security a suspension of trading (by reason of movements in price exceeding limits permitted by the relevant Exchange or otherwise) on the relevant Exchange for a period of more than one (1) hour.

Settlement Terms:

Cash Settlement:	Applicable
Cash Settlement Amount:	An amount equal to the greater of (i) zero, and (ii) the sum of (A) the Settlement Price, minus (B) the Strike Price, plus (C) the Premium Settlement Amount.
Settlement Price:	The level of the Index at the Valuation Time on the Valuation Date.
Basket Value:	The sum of (i) the amount of the Initial Funds, plus (ii) Basket Gains, minus (iii) Basket Losses, minus (iv) Basket Cost.
Federal Funds Rate:	For any day, the rate set forth in H.15(519) for the first Business Day immediately preceding such day, opposite the caption "Federal funds (effective)". If for any relevant Business Day such rate is not so published by 5:00 p.m., New York City time, on the first New York City Banking Day immediately following such relevant Business Day, the rate for such Business Day will be the arithmetic mean of the rates for the last transaction in overnight U.S. Dollar Federal funds arranged by each of three leading brokers of U.S. Dollar Federal funds transactions in New York City selected by the Calculation Agent, prior to 9:00 a.m., New York City time, on that Business Day.

Settlement Currency:	USD
Cash Settlement Payment Date:	The 3rd (third) Business Day immediately following the Valuation Date.

Adjustments:

Method of Adjustment:	Calculation Agent Adjustment

Extraordinary Events:

Consequences of Potential Adjustment Events, Merger Events, Nationalization or Insolvency:	The Calculation Agent shall use reasonable best efforts to determine, in good faith, based on commercially reasonable judgment and upon consultation with Party B, the consequences of Potential Adjustment Events, Merger Events, Nationalization or Insolvency in respect of Shares, and the adjustments to the Basket Gains, Basket Losses, Basket Value and any other variable relevant to this Transaction.
Shares:	Equity interests and other securities which, at any time during the Valuation Period, constitute (or underlie) Designated Positions.
Issuer:	The issuer of the relevant Shares.

2. Calculation Agent: Party A shall be the Calculation Agent. The Calculation Agent will notify Party B promptly after the Valuation Date of the determined Cash Settlement Amount and of the determination of each variable and component used to calculate, or affecting, directly or indirectly, the Cash Settlement Amount.

3. Account Details:

Account for payments to Party A:

Bank:	Federal Reserve Bank of New York, New York
ABA No:	026-0025-74
A/C:	Barclays Bank PLC, New York
Favor:	Barclays Swaps & Options Group, New York
A/C No:	050-01922-8
Swift:	BARCUS33

Account for payments to Party B:
To be, and as, provided by Party B.

4. Additional Terms and Definitions:

For purposes of this Confirmation, the following terms shall have the meaning specified or referred to in this Section 4:

a. "BCSL Account" means the prime brokerage account established by and in the name of Palomino Limited ("Palomino") with Barclays Capital Securities Limited ("BCSL"), account no. 400262 pursuant to the Prime Brokerage Agreement, dated September 26, 2002 (the "BCSL Agreement").

b. "BCI Account" means the prime brokerage account established by and in the name of Palomino with Barclays Capital Inc. ("BCI"), account no. 21000200 pursuant to the Prime Broker Margin Account Agreement, dated September 26, 2002 (the "BCI Agreement").

c. "Synthetic Account" means a record prepared by the Calculation Agent and titled "Reference Synthetic Positions", identifying, at all times, (A) the outstanding Repos and CSFs effected by Palomino pursuant to the Trading Strategy and designated by Palomino to be included in such record, and (B) the outstanding Synthetic Positions (as defined in paragraph 7 below).

d. "Investment Guidelines" means the Investment Guidelines set forth in Annex A to the Investment Management Agreement entered into between Palomino and Renaissance Technologies Corp. (the "Advisor"), dated September 30, 2002, a copy of which is attached hereto as Annex A (the "Investment Management Agreement").

e. "Designated Positions" means equity securities, Repos, CSFs, Synthetic Positions and other financial positions (whether long or short), excluding cash, credited to, included or deemed included within the Reference Accounts at any time during the Valuation Period.

For purposes of this Confirmation, the terms "Repos" and "CSFs" shall have the meanings ascribed to these terms in the Investment Guidelines.

f. "Basket Gains" means the sum of all (i) gains realized in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at any time during the Valuation Period, (ii) unrealized gains (at the Valuation Time on the Valuation Date) in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the Valuation Time on the Valuation Date, (iii) dividends accrued (based on ex-dividend dates) at any time during the Valuation Period in respect of long Designated Positions, adjusted as set forth below, and (iv) interest and other income received or accrued on or in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at any time during the Valuation Period.

g. "Basket Losses" means the sum of all (i) losses realized in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at any time during the Valuation Period, (ii) unrealized losses (at the Valuation Time on the Valuation Date) in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the Valuation Time on the Valuation Date, and (iii) dividend and interest equivalent amounts paid or accrued (based on ex-dividend and ex-interest dates, as applicable) at any time during the Valuation Period in respect of short Designated Positions.

h. "Basket Cost" means the (positive or negative) sum of (i) all commissions and fees in connection with the execution of transactions to acquire, create, dispose of or otherwise terminate Designated Positions, to the extent authorized under the Investment Management Agreement (excluding any fees paid to the Advisor), paid or accrued in connection with the trading of Designated Positions in accordance with the Investment Management Agreement during the Valuation Period, plus (ii) the product obtained by multiplying (A) the Strike Price, by (B) the Applicable Factor, minus (iii) the Total Amortized Premium, minus (iv) any realized and unrealized (at the Valuation Time on the Valuation Date) gains, interest and other income received or accrued in respect of cash, property or other financial positions credited to, included or deemed included in the Reference Accounts or otherwise credited to the Reference Accounts (excluding gain and income items included in Basket Gains) during the Valuation Period.

For purposes of determining Basket Gains, Basket Losses and Basket Cost, (i) gain, loss and any other income or expense items will be computed and taken into account without giving effect to any Tax that might be imposed in respect or by reason thereof, (ii) any portion of a dividend paid or accrued in respect of shares of stock of a corporation incorporated in any of the countries listed in Annex B hereto (as amended from time to time by the parties hereto), which will be subject to withholding tax by the country in which such corporation is incorporated, shall be adjusted by multiplying the original amount of such portion by the percentage set forth next to the name of the applicable country in the column "Percentage of Dividends Received on Long Positions", and (iii) any dividend equivalent amount paid or accrued in respect of a short position in stock of a corporation incorporated in any of the countries listed in Annex B hereto (as amended from time to time by the parties hereto) shall be adjusted by multiplying the original amount of such dividend equivalent amount by the percentage set forth next to the name of the applicable country in the column "Percentage of Dividends Paid on Short Liabilities".

"Applicable Factor" means the number, denoted by AF, calculated in accordance with the following formula:

$$AF = \left\{ \sum_{k=1}^{K} \left[\prod_{n_k=1}^{N_k} \left(1 + \frac{FFR_{n_k}^{k}}{365}\right) - 1 \right] \right\} \times 0.9 \text{, where:}$$

"K" is the number of calendar months fully or partially included within the period commencing on, but excluding, the Premium Payment Date and ending on, and including, the Valuation Date (the "Applicable Period", and each such calendar month an "Applicable Month");

"k" is a series of whole numbers from one to K, each representing the corresponding kth Applicable Month, where all of such calendar months are arranged in chronological order from, and including, the first calendar month (fully or partially) included within the Applicable Period to, and including, the last calendar month (fully or partially) included within the Applicable Period;

"N_k" is the number of calendar days in the portion of the kth Applicable Month included within the Applicable Period;

"n_k" is, for each Applicable Month, a series of whole numbers from one to N_k, each representing the corresponding day in the portion of the Applicable Month included within the Applicable Period, where all of the days in such period are arranged in chronological order from, and including, the first day of such Applicable Month which is included in the Applicable Period to, and including, the last day of such Applicable Month which is included within the Applicable Period; and

"$FFR^{k}_{n_k}$", for any day in the Applicable Period, is equal to the Federal Funds Rate for the n_kth day of the kth Applicable Month plus 25 basis points.

i. "Premium Settlement Amount" means USD 125 million minus the Total Amortized Premium.

j. "Total Amortized Premium" means the product obtained by multiplying (i) the Amortized Daily Premium, by (ii) the number of calendar days in the period commencing on, and including, the Trade Date and ending on, and including, the Exercise Date.

k. "Amortized Daily Premium" means the quotient obtained by dividing (i) the Amortizable Premium, by (ii) the number of calendar days in the period commencing on, and including, the Trade Date, and ending on, and including, the Scheduled Expiration Date.

5. This Option and the rights and obligations thereunder are not transferable by either party without the prior written consent of the other party.

6. Additional Representations:

Party A and Party B each makes (and as indicated, only Party A or only Party B makes) the following additional representations:

a. It is entering into this Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise, and no other person has any interest herein.

b. Its execution and delivery of this Confirmation and its entering into the Transaction to which this Confirmation relates have been authorized by all required internal actions and do not violate any laws of its jurisdiction of organization or residence, or the terms of any agreement to which it is a party.

c. Upon due execution and delivery of this Confirmation, this Confirmation will constitute its legal, valid and binding obligations, enforceable against it in accordance with its terms, subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally, and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or in law).

d. It is acting for its own account, and has made its own independent decision to enter into this Confirmation and to participate in the Transaction to which this Confirmation relates and as to whether this Confirmation and the Transaction is appropriate or proper for it based upon its own judgment and upon advice of such advisors as it deems necessary.

e. It acknowledges, agrees and confirms that (i) it has not received any advice or counsel from, and is not relying, and has not relied, upon any communication (written or oral) of, the other party or any Affiliate thereof with respect to the legal, accounting, tax or other implications of this Confirmation or the Transaction (including the expiration, sale, assignment or other termination thereof), and that it has conducted its own due diligence review and analyses of the legal, accounting, tax, regulatory and other implications of this Confirmation and the Transaction, including, without limitation, registration or disclosure requirements in respect of the Transaction under any applicable securities, tax or other laws, (ii) information and explanations related to the terms and conditions of this Confirmation and the Transaction shall not be considered investment advice or a recommendation to enter into this Confirmation or to participate in the Transaction, (iii) it has taken independent tax advice with respect to this Confirmation and the Transaction, (iv) it is entering into this Confirmation and is participating in the Transaction with a full understanding of all of the terms and risks hereof (economic and otherwise), is capable of evaluating and understanding (on its own behalf or through independent professional advice), and understands and accepts, such terms and risks, and is capable of assuming (financially and otherwise), and assumes, those risks, (v) neither the other party nor any Affiliate thereof is acting as a fiduciary for or an advisor to it in respect of this Confirmation or the Transaction, (vi) it has a valid business purpose for entering into this Confirmation and participating in the Transaction, and the transactions contemplated herein are consistent with its overall business and investment strategy, and (vii) it participated with the other party in the structuring of the Transaction, and in the negotiation and drafting of the Confirmation and the other agreements, documents and instruments to be entered into in connection with the Transaction.

f. Party B further represents that more than 50 percent of (i) the voting power of the voting stock thereof is owned, and (ii) the value of the stock thereof is ultimately beneficially owned, by persons which are not U.S. persons. The Parties hereto agree that each will comply with all applicable tax and other laws (including such laws applicable upon termination) in connection with the Transaction.

g. Party A represents and agrees that (i) at the Premium Payment Time, the aggregate cash amount held on deposit by Palomino in the Reference Accounts is USD 1,250 million (the "Initial Funds"), (ii) the Initial Funds constitute the only assets or other property credited to or included within the Reference Accounts at the Premium Payment Time (except for Designated Positions executed in accordance with the Investment Guidelines on or after the Trade Date), (iii) no liability or any other obligation is included in any of the Reference Accounts at the Premium Payment Time (except for those incurred at the instruction of the Advisor on or after the Trade Date), (iv) the Initial Funds will be used exclusively to effect transactions based on the Trading Strategy in accordance with the Investment Guidelines, (v) Palomino is an existing corporation, incorporated under the laws of the Cayman Islands, and will remain in existence and in good standing throughout the term of this Transaction, (vi) it directly owns, and will directly own at all times during the term of this Transaction, all of the outstanding stock of Palomino, (vii) the BCSL Agreement and the BCI Agreement will not be amended or modified in any way during the term of this Transaction, unless a written notice has been delivered to the Advisor at least ten (10) Business Days prior to the effective date of the relevant amendment or modification, (viii) the BCSL Agreement and the BCI Agreement will not be terminated prior to the close of the Cash Settlement Payment Date, (ix) until the close of the Cash Settlement Payment Date, no cash, securities, any other property or any financial positions (whether long or short) will be (A) distributed or withdrawn from any of the Reference Accounts (except for (x) cash withdrawals in an aggregate amount with all prior such cash withdrawals not to exceed at any time the product obtained by multiplying the Strike Price by the Applicable Factor (computed by deeming the Applicable Period to end on, but exclude, the day immediately preceding the relevant time considered, and (y) transfers of cash, securities or other property between the Reference Accounts)), or (B) deposited, contributed or assigned to any of the Reference Accounts, except in connection with the settlement of transactions effected within the

Reference Accounts based on the Trading Strategy, and (x) Palomino will be the sole title and legal beneficial owner of all of the Designated Positions and of any other assets or other positions that may be included within the Reference Accounts, and (xi) Palomino has elected to be "disregarded as an entity separate from its owner" for U.S. federal income tax purposes and will retain this status throughout the entire term of the Option.

7. The parties agree, that if the Advisor designates the execution of any transaction in accordance with the Investment Guidelines and the execution of such transaction is denied by Party A (or any Affiliate thereof), such transaction will be treated as if it were actually executed; any stock, securities and other financial positions (whether long or short) that would have been credited to or included in the Reference Accounts if such transaction were actually executed will be treated as included in the Synthetic Account as of the date on which the Advisor designated the execution of the relevant transaction (a "Synthetic Position") and will be treated as disposed of or otherwise terminated on the day so designated by the Advisor; any stock, securities and other financial positions (whether long or short) that would have been disposed of or otherwise terminated if such transaction were actually executed shall be treated as if actually disposed of or otherwise terminated, and excluded from the relevant Reference Account, on the day so designated by the Advisor; and any dividend, interest or any other income that would have been received or accrued on or in respect of Synthetic Positions if such transaction were actually executed will be credited to the relevant Reference Account in which such transaction would have been executed.

8. Upon exercise or deemed exercise of the Option hereunder, Party A shall cause the commencement of an orderly liquidation and reduction to USD cash of the assets and financial positions (whether long or short) then credited to, included or deemed included within the Reference Accounts over the period commencing on the Exercise Date to and including the Valuation Date, with the objective of minimizing risk and preserving the equity value of the Designated Positions (the "Liquidation" and the "Liquidation Period", respectively). In the event that Palomino has replaced the Advisor with respect to any of the Reference Accounts, Palomino has otherwise assumed management of any of the Reference Accounts or the Advisor is prevented, for any reason from effectively managing the Reference Accounts, Party A shall cause the Liquidation to be effected in an "equal dollar weighted" manner in approximately equal proportions over the Liquidation Period, such that approximately 25% of the Designated Positions credited to, included or deemed included within the Reference Accounts at the beginning of the Liquidation Period are liquidated on each Valuation Exchange Business Day during such period, and with due regard to effecting proportionate reductions of "long" positions and corresponding "short" positions, provided, however, that the Liquidation may be effected in a different commercially reasonable manner that would minimize risk and preserve the equity value of the Designated Positions, if and to the extent so consented to by the Advisor (which for the avoidance of any doubt does not include any replacement advisor); and provided further that no such consent of the Advisor will be required if the estimated Cash Settlement Amount, calculated by valuating all of the Designated Positions as set forth in section 9 below on the Exercise Date, payable to Party B is equal to zero.

9. Party A and Party B agree that for purposes of this Confirmation and the Transaction, including, without limiting the foregoing, for purposes of determining the Basket Gains and Basket Losses, Designated Positions and any other relevant stock, securities or other financial positions (whether long or short) will be valued according to the following valuation

methods: (i) stock, securities and other financial positions which are traded on an Exchange shall be valued at any time at the last sales price quoted for the securities on (A) the consolidated tape on the date and at the time for which value is being determined, or (B) if no sale occurred on such date, at the mean between the "bid" and the "asked" prices on such date as reported in a recognized interdealer quotation system, (ii) stock, securities and other financial positions which are not traded on an Exchange, but are traded over the counter, shall be valued at the mean between the "bid" and the "asked" prices quoted for such securities, and (iii) stock, securities and other financial positions that are not described in subsections (i) and (ii) above, shall be valued based on a method of valuation to be agreed upon by Party A and Party B.

10. Each of Party A and Party B agrees that for accounting, regulatory, tax and all other purposes, it and any Affiliate thereof will treat and report the Transaction as a derivative financial instrument and treat and report the Designated Positions and any other assets or positions that may be credited to or included within the Reference Accounts as assets and positions of which Party A or Palomino is the sole legal and beneficial owner and to which Palomino is the sole party, as the case may be, provided, however, that if any party hereto reasonably determines that due to a Change in U.S. Tax Law, as defined in Section 14 below, the Designated Positions and any other assets or positions included within the Reference Accounts are required to be treated and reported for U.S. federal income tax purposes as assets and positions of which Party B (or any Affiliate thereof) is the beneficial owner, Party A and Party B shall consult with each other and agree, in good faith and with the objective of preserving, to the maximum extent possible, the objectives of this Transaction and the tax and economic implications that would have resulted to each party had such a Change in U.S. Tax Law not occurred, regarding the appropriate treatment and reporting of such assets and positions.

11. Party B shall pay any and all documentary, stamp, registration or similar taxes and charges that may be payable in respect of (i) the execution of this Confirmation, (ii) the exercise of the Option, and (iii) the Payment of the Premium.

12. This Confirmation shall be governed by and construed in accordance with the laws of the State of New York.

13. Each of Party A and Party B shall use its reasonable best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper and advisable to consummate and make effective as promptly as practicable the transactions contemplated by this Confirmation and the Transaction to which it relates in accordance with the terms and conditions hereof and thereof, including (a) using reasonable best efforts to remove any legal impediment to the consummation of such transactions, and (b) the execution and delivery of all such deeds, agreements, assignments and further instruments of transfer and conveyance, necessary, proper or advisable to consummate and make effective the transactions contemplated by this Confirmation and the Transaction in accordance with the terms and conditions hereof and thereof, provided that any such action or thing would not materially prejudice the legal or commercial position of the relevant party.

14. Notwithstanding anything to the contrary in this Confirmation, Party A may, in its sole discretion, terminate this Confirmation upon ten (10) Business Days prior written notice to Party B, in the event that (i) any change in applicable law (including, without limitation, any laws, treaties, ordinances, rules, regulations, rulings, interpretations and authorizations of the

United States or the United Kingdom or of any political subdivision, regulatory body having authority over Party A or taxing authority thereof or therein) materially and adversely affects Party A's capital charges directly resulting from this Transaction, or (ii) due to the enactment, promulgation, execution or ratification of, or any change in or amendment to, the U.S. Internal Revenue Code of 1986, as amended, or the Treasury Regulations promulgated thereunder (or in the application or official interpretation thereof by the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires) that occurs on or after the date on which the Transaction is entered into (a "Change in U.S. Tax Law"), Party A is required to treat and report the Designated Positions and any other assets or positions included within the Reference Accounts as assets and positions of which Party B (or an Affiliate thereof) is the beneficial owner for U.S. federal income tax purposes.

15. Except as otherwise hereinafter set forth, the parties hereto agree that the structure and tax aspects of the Transaction and all materials provided by either party with respect to such structure and tax aspects are non-confidential, are not the proprietary information of either party and may be disclosed to any and all persons, and used, by either party (and each employee, representative, or other agent thereof), without limitation of any kind of disclosure and without the consent of the other party (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with this Transaction, including, without limitation, that such party has entered into this Transaction with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of the Transaction hereunder. Notwithstanding the foregoing, either party may disclose any such Confidential Information if required by law or any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

[Signature page follows]

Please confirm that the foregoing correctly sets forth the terms of our agreement by executing the copy of this Confirmation enclosed for that purpose and returning it to us to the attention of Mark D'Andrea, c/o Barclays Bank PLC, New York Branch, 200 Park Avenue, New York, NY 10166, Facsimile no.: (212) 419-1775.

Yours sincerely,

BARCLAYS BANK PLC,
NEW YORK BRANCH

By: ______________________
Name:
Title:

Confirmed as of the date
first above written:

BASS EQUITIES LTD.

By: ______________________
Name:
Title:

ANNEX A
INVESTMENT MANAGEMENT AGREEMENT

ANNEX B

DIVIDENDS AND DIVIDEND EQUIVALENT AMOUNTS ADJUSTMENT SCHEDULE

Country of Company Paying a Dividend	Percentage of Dividends Received on Long Positions	Percentage of Dividends Paid on Short Liabilities	
ARGENTINA	TBD	TBD	
AUSTRALIA	100	100	
AUSTRIA	85	100	
BELGIUM	85	100	
BRAZIL	TBD	TBD	
CANADA	85	85	
DENMARK	85	85	
FINLAND	100	100	
FRANCE	100	100	
GERMANY	85	85	
HONG KONG	100	100	
INDONESIA	TBD	TBD	
IRELAND	100	100	
ITALY	100	100	Risp 87.5 (long and short)
JAPAN	85	85	
MEXICO	TBD	TBD	
NETHERLANDS	85	85	
NEW ZEALAND	85	85	
NORWAY	85	85	
PHILIPPINES	TBD	TBD	
PORTUGAL	TBD	TBD	
SINGAPORE	100	100	
SOUTH AFRICA	TBD	TBD	
SOUTH KOREA	TBD	TBD	
SPAIN	85	85	
SWEDEN	95	95	
SWITZERLAND	85	100	
UNITED STATES	45	100	

Memo

Barclays Capital

To SCM Approvals Committee

Cc
From Structured Capital Markets
Date Friday, 04 April 2003
Subject SCM Approvals paper – Project COLT (Renaissance II)

BARCLAYS

1. BACKGROUND

Structured Capital Markets ('**SCM**') is seeking approval to transact a further Project COLT transaction with a fund managed by Renaissance Technologies ('**Fund**'). This transaction (the '**Second Renaissance Transaction**') would be almost identical to the first COLT transaction, which was with the same Fund. Importantly, the Second Renaissance Transaction would use the same entities and accounts used for the previous transaction, so there would be minimal impact on infrastructure areas. Slight changes from the original transaction are as follows –

1. Synthetic Call Option Between BB PLC and Palomino (as opposed to an explicit call option) This creates a neutral risk position for BB PLC and Palomino, but the components of the synthetic call option allow all trades to occur in the same accounts as in the first transaction (which is a tremendous selling point for the client). The reference point for the Call Option in this transaction is a total return swap, which is one component of the synthetic call option. That total return swap represents [20%] of the value of the prime brokerage accounts set up for the First Renaissance Transaction (defined below). This insures that the new option relates only to an appropriate part of the prime brokerage account AND that the old option does not include activity appropriately targeted for the Second Renaissance Transaction; AND

2. Removal of Manager for No Reason – In the first transaction, we have the right to remove the investment manager immediately for cause and at any time upon 10 business days' notice. The client has requested that we amend the notice period from 10 business days to 60 calendar days for situations where cause is not relevant. Since these types of structures take a long time to structure, they have requested this extra time to help transition to another provider if we decide we no longer want to be in the transaction.

The first Project COLT was approved by the SCM Approvals Committee on 2 September, 2002 and by the NPC (both Global and US) on 30 July, 2002, and it was executed on 30 September, 2002 (the '**First Renaissance Transaction**').

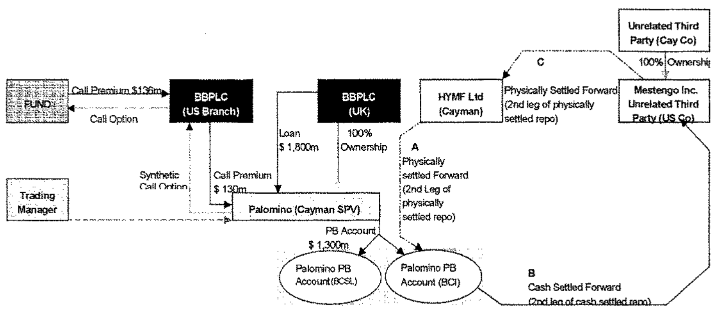
During the first six months after signing the First Renaissance Transaction, the transaction has been running as expected with no infractions by the investment manager hired to perform the trading strategy. Further, internal audit has reviewed the First Renaissance Transaction and has only minor comments related to the execution and ongoing maintenance of the transaction.

SCM would earn fee income at the onset of the Second Renaissance Transaction of [$6m]. Further, it is anticipated that increased revenue will be created in certain other areas within Barclays Capital: approximately [$5m] p.a. to [$7m] p.a. from increased clearing charges and funding revenue for the Collateralized Finance Group ('**CFG**').

Key financial data is set out below:

Estimated revenue	[$6m] one off Fee Income for SCM [$5m – $7m] per annum revenue for CFG
Tax capacity Return on tax capacity	N/A
WRAs Return on WRAs	N/A

2. DETAILED TRANSACTION DESCRIPTION



Use of Palomino (Cayman) Ltd ('Palomino'), HYMF Ltd ('HYMF'), and Mestengo, Inc. ('Mestengo')

Palomino, HYMF and Mestengo are existing entities that were used for the First Renaissance Transaction.

Palomino is utilized to 1) eliminate trade reporting obligations that would be required if BB PLC participated in the transaction directly, and 2) to create a US tax resident entity that is not confined by US regulatory rules that apply to US-formed entities.

HYMF and Mestengo are used as part of a cost-efficient structure that enables Palomino to sell US securities without being subject to the "up tick" rules that restrict short sales of US securities. The structure involving these entities has already been created, so no new structuring would be required for the Second Renaissance Transaction.

Loan from BBPLC (UK)

[APG]

Palomino has already borrowed $1,800m from BB PLC (UK) on an unsecured basis (out of CFG's existing line with BB PLC and within the treasury concession). CFG believes that this existing loan would be sufficient to fund the Second Renaissance Transaction, so no new funding would be required.

Use of existing PB Accounts

The Second Renaissance Transaction would utilize the existing prime brokerage trading accounts held with both BCSL and BCI (collectively referred to as the '**PB Account**').

Back-to-Back Positions – Call Option and Synthetic Call Option

a. Identical to the First Renaissance Transaction, the US branch of BB PLC would write an American-style call option to the Fund with respect to the value of the PB Account (the '**Call Option**'), [1] for which the Fund would pay a premium ('**Call Premium**') of [$136m] comprising:

- [$130m] representing the collateral for the Trading Strategy; and
- an amount representing SCM's fee from the transaction ($6m in the diagram).

b. The Call Option would have a term of 3 years and would be cash settled. The effective strike price of the Call Option would be [$1,170m], plus an appropriate charge for leverage ('**Call Strike**').

c. Simultaneous with its writing of the Call Option, BB PLC would enter into a position that matches identically the obligation that BB PLC has under its Call Option (the '**Synthetic Call Option**'). Instead of writing an explicit call option as in the First Renaissance Transaction, Palomino would create a Synthetic Call Option with the same net economic exposure as the Call Option. First, Palomino would write a total return swap to BB PLC (a '**TRS**'), the reason for which is set out in footnote 1. To make sure that the profile to BB PLC is entirely neutral, BB PLC and Palomino will sign a separate side letter ('**Side Letter**'), stating that BB PLC will have no obligation to make payments to Palomino under the TRS due to losses in the PB Accounts. The TRS and the Side Letter together comprise the Synthetic Call Option that is designed to perfectly match BB PLC's obligations under the Call Option.

Risk Mitigation and Acceleration:

The Second Renaissance Transaction will use the risk monitoring process already in place as a result of the First Renaissance Transaction.

Accordingly, Palomino will not have any credit risk or market risk in the transaction, due to the fact that the its PB Account is hedged by the Synthetic Call Option and Prime Brokerage effectively has taken the downside risk. The risk borne by Prime Brokerage is akin to the risks taken in a normal collateralised Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time.

[1] Since the PB Account is the same as the first deal, it will be necessary for the Call Option to be restricted to only the portion of the PB Account representing the new activity. Likewise, the Call Option from the First Renaissance Transaction must be restricted so it does not include the activity related to the option in the Second Renaissance Transaction. To accomplish this, Palomino will write a TRS to BB PLC with respect to [50%] of the value of the PB Accounts. The new Call Option will reference that TRS, thereby insuring that only [50%] of the value of the PB Accounts will be covered by the Second Renaissance Transaction. Further, the short TRS position will be within the PB Account and will make sure that the call option from the First Renaissance Transaction does not include the value of the call option written in the Second Renaissance Transaction.

[APG]

Therefore, risks of COLT generally are reduced by the risk management techniques approved for use by BCSL's and BCI's Prime Brokerage group when transacting with hedge funds. In addition to those techniques, specific investment guidelines have been agreed with the Trading Manager, and the Market Risk/Credit teams will undertake daily risk monitoring.

Specific risk mitigation techniques are discussed within the "Credit" section of this paper discussed in detail above.

3. ECONOMICS AND ECONOMIC DRIVERS

BBPLC & BCSL
SCM's structuring fee would be [$6m].

In addition, BCSL would earn i) increased revenue from additional volume in Prime Brokerage, which has been estimated at between [$3m p.a. and $5m p.a], ii) increased revenue from volumes of trades executed with Barclays' traders, and iii) increased exposure for our hedge fund sales team.

Fund
US individual investors of a Fund would obtain 1) operational and cost efficiencies due to certain regulatory efficiencies (including lack of up tick restriction on short sales), 2) no withholding tax on dividends from US securities, and 3) a post-tax benefit, because all the gain on the Call Option would be treated as a long-term gain for US tax purposes and would therefore be taxed at 20%, as opposed to 39.6%.

TAX ANALYSIS

BB PLC

UK Tax

[redacted]

US Tax

Analysis is identical to the First Renaissance Transaction, which follows:

The following entities in the transaction are US taxpayers – US branch, Palomino (check-the-box election will be made to disregard as separate entity and therefore treated as part of US branch of BB PLC), HYMF (check-the-box election will be made to disregard as separate entity and therefore treated as a branch of HYMF, Inc., a US corporation) and Mestengo (as it is a US corporation).

SCM's profit from the transaction will be earned in the US branch of BB PLC and therefore will be taxed in the US. We received an opinion from counsel (Akin, Gump) [redacted]

[APG]

[redacted] we have received an opinion from counsel (Coudert Brothers) [redacted]

Tax Shelter Disclosure/List-Keeping –

Under the final Tax Shelter Regulations, we would not be required to disclose or keep a list for this Second Renaissance Transaction.

Fund
Investors in Funds, rather than the Funds themselves, are subject to US tax with respect to the Fund's annual net income. For US individual investors, that income is typically taxed at a 39.6% federal rate of tax, because Fund investments mainly trigger 'short-term capital gains' and 'ordinary income'. By changing the investment of the Fund from various positions that turn-over frequently during the year to a single Call Option that remains outstanding for at least one year, COLT accomplishes two goals:

a. Conversion - the Fund recognizes only long-term capital gains (i.e., gains recognized for an asset held more than 12 months), which are taxed to the individual investors in the Fund at a maximum federal rate of 20%; and

b. Deferral - income is recognized only in the year in which the Call Option is recognized (i.e., in year 3).

4. TAX RISK

There is no tax risk for BB PLC from COLT and [redacted].

5. ACCOUNTING

London Finance (Pritesh Pankhania) has provided advice, which has been agreed by PWC.

a. Palomino (Cayman), HYMF (Cayman) Ltd and Mestengo Inc, as a quasi-subsidiary, will be consolidated with BB PLC.

b. Palomino (Cayman) will be accounted for on trading book.

c. Fee income of [$6m] should be recognizable immediately.

d. The Call Option and the PB Account would be marked to market and should offset in the income statement (i.e., there is no intrinsic value to the Call Option).

On the balance sheet, the mark-to-market value of the option and the Call Premium would be reported as "Amounts Arising from Off-Balance Sheet Derivatives", and the positions in Palomino would be reported as "Equity Securities" or other, depending upon the nature of the investments.

[APG]

6. REGULATORY CAPITAL

Regulatory treatment has been agreed with Financial Control (Nadim Sheikh and Michael Blackburn). FSA approval was received for the original COLT transaction using Palomino and included the following:

1. Palomino may be treated as a trading book;
2. Since Position Risk Requirements for Palomino will in all cases be nil, there is no need to calculate such on a daily basis; and
3. Since Large Exposures for Palomino to equity names will in all cases be nil, there is no need to calculate such on a daily basis.

The FSA approved this further COLT transaction on 20 February.

7. CREDIT

Risk Mitigation will be identical to the framework created for the First Renaissance Transaction. Below is a reminder of those provisions -

All market risk from the transaction is borne by the Fund (to extent of [$130m] premium from the Call Option) and by Prime Brokerage (to the extent the value of the PB Account drops below [$1,170m]). Prime Brokerage's risk is triggered by the fact that it will in all cases pay at least [$1,170m] (i.e., the value of the loan between Palomino and BB PLC) back to Palomino at the end of the transaction. This risk borne by Prime Brokerage has been approved by GFRM (market and credit risk) in the First Renaissance Transaction.

Generally speaking, the Trading Strategy will be monitored using the traditional risk parameters approved for the Prime Brokerage group[2] (similar but slightly more restrictive). Although the technical equity in the PB Account would be [$1,300]m, collateral for risk monitoring purposes will be limited to the [$130m] provided by the Fund as premium. As a result, all numbers related to risk analysis will assume only [$130m] of collateral. With that in mind, Prime Brokerage's risk to the Trading Strategy will be managed in the following ways:

- <u>De-leveraging:</u> Suppose that the [$130m] of collateral (determined as discussed above) supports $1,300m of long and $1,300m of short positions (i.e., twenty times gross multiple, split evenly between long and short positions) in the Trading Strategy. If the Trading Strategy loses $10m, only [$120m] of collateral would remain. Since [$120m] would only support $1,200m of long/short positions, the Trading Manager would be forced to liquidate enough of its positions to meet those parameters. (This is because the only structural way to obtain more collateral would be through increasing the Call Premium and this significantly weakens the Fund's tax analysis). Although more labour intensive, the deleveraging process should manage risk as effectively as requesting more collateral.

- <u>Removal of Manager</u>: The Trading Manager could be fired and the positions could be liquidated immediately for cause and at any point with a notice given within a specifically agreed upon period of time.

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[2] Prime Brokerage clears trades for hedge funds and provides leverage with respect to trading levels, based upon i) collateral received from the hedge fund, ii) ongoing risk analysis of the strategies employed, and iii) the market environment. As losses reduce collateral on hand, Prime Brokerage manages risk of loss in two ways: i) it can request increased collateral to rationalize the same trading level, or ii) it can force a reduction of positions to conform the trading level to an acceptable risk profile.

[APG]

The Trading Strategy will allow the Trading Manager to execute trades with other broker-dealers that are cleared with Prime Brokerage. That ability to "trade away" would be controlled to ensure that the Trading Manager does not exceed certain investment guidelines during the course of any day. All trades will be reported to Prime Brokerage at the end of the day, and if limits are exceeded Prime Brokerage would have the right, at its discretion, to reject the trades that exceed the limits and transfer the trades into a Prime Brokerage Account held by the Trading Manager (i.e., trades will be for Trading Managers account). In addition, the executing brokers that could be used by the Trading Manager will be limited and pre-approved before trading. The ability to reject trades exceeding investment guidelines and limited executing brokers will be used to control the execution risk for the structure.

8. NPSO APPROVAL

Since no new issues arise in this transaction, we believe a notification to the NPSO committees (as opposed to a new approval) is appropriate

10. APPENDICES

None.

[APG]

BADGER HOLDINGS L.P.

LIMITED PARTNERSHIP AGREEMENT

August 17, 2004

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BADGER HOLDINGS L.P.

LIMITED PARTNERSHIP AGREEMENT

This Limited Partnership Agreement is made effective as of the 17th day of August, 2004 by and among the person whose name is subscribed at the end hereof as general partner and those persons whose names are subscribed at the end hereof as limited partners.

ARTICLE I.

DEFINITIONS

For purposes of this Agreement:

"Act" means the Delaware Revised Uniform Limited Partnership Act, as in effect on the date hereof, and as amended from time to time, or any successor law.

"Agreement" means this Limited Partnership Agreement, as amended from time to time.

"Capital Account" means with respect to each Partner the capital account established and maintained on behalf of such Partner as described in Section 3.3.

"Certificate" means the certificate of limited partnership referred to in Section 2.1.

"Code" means the Internal Revenue Code of 1986, as amended and as hereafter amended, or any successor law.

"Fiscal Period" means the period which starts on August 17, 2004 and thereafter each period which starts on the day immediately following the last day of the preceding Fiscal Period, and which ends on the first to occur of (a) the last day of any fiscal quarter, or (b) any other date as of which any withdrawal or distribution of capital is made by or to any Partners or as of which a contribution to capital is accepted by the Partnership from any new or existing Partner, other than any withdrawal, distribution or contribution which does not result in any change of any Partner's Partnership Percentage.

"Fiscal Year" means each period commencing on January 1 of each year and ending on December 31 of each year (or on the date of a final distribution pursuant to Section 6.1(a)(iii)), unless the General Partner shall elect another fiscal year for the Partnership which is a permissible tax year under the Code.

"General Partner" means Renaissance Technologies Corp., a corporation organized under the laws of the State of Delaware, or any successor to the business of the General Partner.

"Limited Partner" means each of Medallion Fund L.P., Medallion Associates L.P., Medallion International Ltd., Medallion USA L.P., Medallion Capital Investments Ltd. and Medallion RMP Fund L.P., and any other person executing this Agreement as a Limited Partner until the entire limited partnership interest of any such person has been withdrawn pursuant to Section 5.5 or a substitute Limited Partner or Partners are admitted with respect to such person's entire limited partnership interest.

"Net Assets" means the total value, as determined by the General Partner in accordance with Section 7.2, of all assets of the Partnership (including any net unrealized appreciation or depreciation of securities held directly by the Partnership and accrued interest and dividends receivable net of withholding taxes), less an amount equal to all accrued debts, liabilities and obligations of the Partnership (including any reserves for contingencies established by the General Partner.

"Net Loss" means the excess of the Net Assets on the first day of a Fiscal Period over the Net Assets on the last day of the same Fiscal Period, after excluding in each case the effects of additional capital contributions, withdrawals or distributions during the period.

"Net Profit" means the excess of the Net Assets on the last day of a Fiscal Period over the Net Assets on the first day of the same Fiscal Period, after excluding in each case the effects of additional capital contributions, withdrawals or distributions during the period.

"Partner" means the General Partner or any of the Limited Partners, except as otherwise expressly provided herein, and "Partners" means the General Partner and all of the Limited Partners.

"Partnership" means the limited partnership governed by this Agreement.

"Partnership Percentage" means a percentage established for each Partner on the Partnership's books as of the first day of each Fiscal Period. The Partnership Percentage of a Partner for a Fiscal Period shall be determined by dividing the amount of the Partner's Capital Account as of the beginning of the Fiscal Period (after adjustment for any contributions to the capital of the Partnership which are effective on such date) by the sum of the Capital Accounts of all of the Partners as of the beginning of the Fiscal Period (after adjustment for any contributions to the capital of the Partnership which are effective on such date). The sum of the Partnership Percentages of all Partners for each Fiscal Period shall equal one hundred percent (100%).

ARTICLE II.

ORGANIZATION

2.1 Formation of Limited Partnership.

(a) The Certificate of Limited Partnership was filed with the Secretary of State of Delaware and the Partnership formed under and pursuant to the Act on August 6, 2004.

(b) The General Partner shall execute, acknowledge and file any amendments to the Certificate as may be required by the Act and any other instruments, documents and certificates which, in the opinion of the Partnership's legal counsel, may from time to time be required by the laws of the United States of America, the State of Delaware or any other jurisdiction in which the Partnership shall determine to do business, or any political subdivision or agency thereof, or which such legal counsel may deem necessary or appropriate to effectuate, implement and continue the valid and subsisting existence and business of the Partnership. Any required amendment to the Certificate shall be filed by the General Partner promptly following the event requiring said amendment. All amendments may be signed either personally or by an attorney-in-fact.

2.2 Name of Partnership.

The name of the Partnership shall be Badger Holdings L.P. or such other name as the General Partner may hereafter adopt upon causing an amendment to the Certificate to be filed with the Secretary of State of the State of Delaware. The Partnership shall have the exclusive ownership and right to use the Partnership name so long as the Partnership continues, despite the withdrawal, expulsion, resignation or removal of any Partner, but upon the Partnership's termination, the Partnership shall assign such name and the goodwill attached thereto to the General Partner.

2.3 Registered Office and Agent.

The Partnership shall have its registered office at 1209 Orange Street, City of Wilmington, County of New Castle or at such other place as the General Partner may designate from time to time, and its initial registered agent in Delaware shall be Corporation Trust Company.

2.4 Objectives of Partnership.

The objectives of the Partnership shall be to purchase, sell (including short sales), invest, trade and deal in securities and other financial instruments, including options or other derivative instruments, and to engage in financial transactions relating thereto.

2.5 Actions by Partnership.

The Partnership may execute, deliver and perform all contracts, agreements and other undertakings and engage in all activities and transactions as may in the opinion of the General Partner be necessary or advisable to carry out the foregoing objectives.

ARTICLE III.

CAPITAL

3.1 Contributions to Capital.

(a) The General Partner may permit any Partner, including any additional Partner admitted pursuant to Section 5.1, to make additional capital contributions. No other contribution to the capital of the Partnership may be made by any Partner unless such contribution shall have been approved in advance in writing by the General Partner.

(b) Except as otherwise permitted by the General Partner, all contributions to the capital of the Partnership by any Partner shall be payable in cash or in such securities which the General Partner may agree to accept on behalf of the Partnership.

3.2 Rights of Partners in Capital.

(a) No Partner shall be entitled to interest on his contributions to the capital of the Partnership.

(b) No Partner shall have the right to distributions or the return of any contribution to the capital of the Partnership except (i) upon withdrawal of such Partner pursuant to Section 5.5, (ii) upon the dissolution of the Partnership pursuant to Section 6.1 or (iii) as provided in Section 3.6. The entitlement to any such return at such time shall be limited to the value of the Capital Account of the Partner. The General Partner shall not be liable for the return of any such amounts.

3.3 Capital Accounts.

(a) The Partnership shall maintain a separate Capital Account for each Partner.

(b) Each Partner's Capital Account shall have an initial balance equal to the amount of cash and the value of any securities constituting such Partner's initial contribution to the capital of the Partnership.

(c) Each Partner's Capital Account shall be increased by the sum of (i) the amount of any additional contributions by such Partner to the capital of the Partnership pursuant to Section 3.1, plus (ii) the portion of any Net Profit allocated to such Partner's Capital Account pursuant to Section 3.4.

(d) Each Partner's Capital Account shall be reduced by the sum of (i) the amount of any withdrawals or distributions to such Partner pursuant to Sections 3.6, 5.5 or 6.1, plus (ii) the portion of any Net Loss allocated to such Partner's Capital Account pursuant to Section 3.4.

3.4 Allocation of Net Profit and Net Loss.

As of the last day of each Fiscal Period, any Net Profit or Net Loss for the Fiscal Period shall be allocated among and credited to or debited against the Capital Accounts of the Partners in proportion to their respective Partnership Percentages for the Fiscal Period.

3.5 Allocations for Income Tax Purposes.

In each Fiscal Year, items of income, deduction, gain, loss or credit that are recognized for income tax purposes shall be allocated among the Partners, General and Limited, in such manner as to reflect equitably amounts credited to or debited against each Partner's Capital Account, whether in such Fiscal Year or in prior Fiscal Years. To this end, the Partnership shall establish and maintain records which shall show the extent to which the Capital Account of each Partner shall, as of the last day of each Fiscal Year, be comprised of amounts which have not been reflected in the taxable income of such Partner. To the extent deemed by the General Partner to be feasible and equitable, taxable income and gains in each Fiscal Year shall be allocated among the Partners who have enjoyed the related credits, and items of deduction, loss and credit in each Fiscal Year shall be allocated among the Partners who have borne the burden of the related debits. Taxable gain or loss realized from the sale of securities which were contributed in kind by a Partner (other than gain which was recognized by such contributing Partner upon such contribution pursuant to Section 721(b) of the Code) shall be allocated to the contributing Partner to the extent required under Section 704(c) of the Code and the regulations promulgated thereunder.

3.6 Distributions.

The General Partner may make distributions in its discretion. All distributions pursuant to this Section 3.6 shall be made to the Partners pro rata in proportion to their Partnership Percentages.

ARTICLE IV.

MANAGEMENT

4.1 Rights, Duties and Powers of the General Partner.

(a) Subject to the terms and conditions of this Agreement, the General Partner shall have complete and exclusive responsibility for managing and administering the affairs of the Partnership, and shall have the power and authority to do all things necessary or proper to carry out its duties hereunder.

(b) Without limiting the generality of the General Partner's duties and obligations hereunder, the General Partner shall have full power and authority:

(i) to open, maintain and close bank accounts and custodial accounts for the Partnership and draw checks and other orders for the payment of money;

(ii) to receive from Partners contributions to the capital of the Partnership;

(iii) to pay all expenses relating to the organization of the Partnership.

(iv) to engage such attorneys, accountants and other professional advisers and consultants as the General Partner may deem necessary or advisable for the affairs of the Partnership;

(v) to maintain the books and records of the Partnership, and cause to be prepared an annual audited balance sheet and income statement and periodic unaudited financial statements;

(vi) to disburse payments or distributions to Partners and to third parties to pay the expenses of the Partnership and as otherwise provided for in this Agreement;

(vii) to commence or defend litigation that pertains to the Partnership or any Partnership assets;

(viii) to cause the Partnership, if and to the extent the General Partner deems such insurance advisable, to purchase or bear the cost of any insurance covering the potential liabilities of the Partnership, the General Partner and their partners, officers, employees and agents;

(ix) in the normal course of the Partnership's business and for any Partnership purpose, including without limitation payment of the Partnership's operating expenses, to cause the Partnership to borrow money and make, issue, accept, endorse and execute promissory notes, drafts, bills of exchange, guarantees and other instruments and evidences of indebtedness, and secure the payment thereof by mortgage, pledge or assignment of or security interest in all or any part of the securities and other property then owned or thereafter acquired by the Partnership; and

(x) subject to the other terms and provisions of this Agreement, to execute, deliver and perform such contracts, agreements and other undertakings, and to engage in all activities and transactions, as it may deem necessary or advisable for, or as may be incidental to, the conduct of the business contemplated by this Section 4.1, including, without in any manner limiting the generality of the foregoing, contracts, agreements, undertakings and transactions with any Partner or with any other person, firm or corporation having any business, financial or other relationship with any Partner or Partners.

(c) The General Partner shall be the tax matters partner for purposes of Section 6231(a)(7) of the Code. Each Partner agrees not to treat, on its personal U.S. federal income tax return or in any claim for a refund, any item of income, gain, loss, deduction or credit in a manner inconsistent with the treatment of such item by the Partnership. The General Partner shall have the exclusive authority and discretion to make any elections required or permitted to be made by the Partnership under any provisions of the Code or any other revenue laws.

4.2 Investment Management.

(a) The General Partner shall have complete and exclusive responsibility for all investment and investment management decisions to be undertaken on behalf of the Partnership and shall have the power and authority to do all things necessary or proper to carry out its duties hereunder.

(b) Without limiting the generality of the General Partner's duties and obligations hereunder, the General Partner shall have full power and authority, at the expense of the Partnership:

(i) to purchase, sell, exchange, lend, trade and otherwise deal in and with investments and other property of the Partnership;

(ii) to make all decisions relating to the manner, method and timing of investment and trading transactions, to select brokers for the execution, clearance and settlement of any transactions (including, subject to applicable federal securities laws, principal and agency cross transactions with one or more brokers) on such terms as the General Partner considers appropriate, and to grant limited discretionary authorization to such persons with respect to price, time and other terms of investment and trading transactions;

(iii) to make all decisions relating to the investment of Partnership assets in other investment vehicles (including entities managed or advised by an affiliate of the General Partner) on such terms as the General Partner considers appropriate;

(iv) to cause investments owned by the Partnership to be registered in the Partnership's name, in the name of a nominee or other fiduciary, or to be held in street name in a Partnership account, as the General Partner, in its sole discretion, shall determine;

(v) to trade on margin, to borrow from banks or other financial institutions, and to pledge Partnership assets as collateral therefor;

(vi) to enter into repurchase agreements, reverse repurchase agreements, short sales, or other such arrangements with respect to Partnership assets;

(vii) to open and maintain bank accounts and brokerage accounts on behalf of the Partnership and to pay the customary fees and charges applicable to transactions in all such accounts;

(viii) to arrange for the custody of portfolio securities and other assets acquired or held on behalf of the Partnership, to direct custodians to deliver funds or Investments for the purpose of effecting transactions, and to instruct custodians to exercise or abstain from exercising any right or privilege attaching to assets; and

(ix) to engage (directly or indirectly through investments in pooled investment vehicles) investment managers and other financial advisors and consultants as the General Partner may deem necessary or advisable in connection with the investment activities of the Partnership and to compensate such persons for their services from the assets and/or profits of the Partnership.

(c) In the course of selecting brokers for execution, clearance and settlement of transactions for the Partnership, the General Partner may agree to such commissions, fees and other charges on behalf of the Partnership as it shall deem reasonable in the circumstances, taking into account all such factors as it deems relevant and proper under the circumstances, including the value of any products or services (as described by the General Partner in written disclosures to Limited Partners from time to time, as the same may be modified from time to time) provided by the broker or paid for by the broker (either by direct or reimbursement payments or by commissions, or by mark-ups or credits, or by any other means), whether within or without the safe-harbor of Section 28(e) under the Securities Exchange Act of 1934; it being understood that, none of such products or services need to be for the benefit or exclusive benefit of the Partnership, the cost of the services of the broker (*e.g.*, commissions) related to such products or services need not represent the lowest cost available, the Broker shall be under no obligation to combine or arrange orders so as to obtain reduced charges, and that all of the foregoing is subject to any more limiting or expansive written disclosures given to Limited Partners by the General Partner from time to time, as the same may be modified from time to time.

4.3 Delegation of Duties

(a) The General Partner may delegate to any person or persons any of the duties, powers and authority vested in it hereunder on such terms and conditions as it may consider appropriate.

4.4 Rights of Limited Partners.

Except as otherwise provided in this Agreement, the Limited Partners shall take no part in the management or control of the Partnership's business. Limited Partners shall have no right or authority to act for the Partnership or to vote on matters other than the matters set forth in this Agreement or as required by applicable law. Except as otherwise provided by law, the liability of each Limited Partner is limited to the amount of his capital contributions (plus any accretions in value thereto prior to withdrawal).

4.5 Other Activities of Partners.

(a) The General Partner shall not be required to devote full time to the affairs of the Partnership, but shall devote such time as may be reasonably required therefor.

(b) Each Partner agrees that any other Partner (and any partner, director, officer, shareholder, affiliate or employee of any Partner) may engage in or possess an interest in other business ventures or commercial dealings of every kind and description, independently or with others, including, but not limited to, management of other accounts, investment in, or financing, acquisition and disposition of, securities, investment and management counseling, brokerage services, serving as director, officer, adviser or agent of any other company, partner of any partnership, or trustee of any trust, or entering into any other commercial arrangements, whether or not any such activities may conflict with any interest of the parties with respect to the Partnership. The Partners expressly agree that neither the General Partner nor the Limited Partners shall have any rights in or to such activities, or any profits derived therefrom, as a result of this Agreement. Without in any way limiting the foregoing, each Partner hereby acknowledges that: (i) neither the General Partner, any Limited Partners, nor their respective partners, directors, officers, shareholders, affiliates or employees shall have any obligation or responsibility to disclose or refer any of the investment or other opportunities obtained through activities contemplated by this Section 4.5(b) to the General Partner or the Limited Partners, but may refer the same to any other party or keep such opportunities for their own benefit; and (ii) the General Partner, the Limited Partners and their respective partners, directors, officers, shareholders, affiliates and employees are hereby authorized to engage in activities contemplated by this Section 4.5(b) with, or to purchase, sell or otherwise deal or invest in securities issued by, companies in which the Partnership might from time to time invest or be able to invest or otherwise have any interest in, without the consent or approval of the Partnership or any other Partner.

(c) The parties hereto hereby waive, and covenant not to sue on the basis of, any law (statutory, common law or otherwise) respecting the rights and obligations of the Partners *inter se* which is or may be inconsistent with this Section 4.5.

4.6 Duty of Care; Indemnification.

(a) Neither the General Partner nor its officers, directors, employees, shareholders, or affiliates shall be liable, responsible or accountable in damages or otherwise to the Partnership or any of its Partners, successors, assignees or transferees for any loss or damage occasioned by any acts or omissions in the performance of its services under this Agreement, unless such loss or damage is due to the gross negligence, fraud, recklessness or willful misconduct of the General Partner or its respective officers, directors, employees, shareholders, or affiliates. Moreover, neither the General Partner, nor its officers, directors, employees, shareholders, or affiliates, shall have any liability to the Partnership or any of its Partners, successors, assignees or transferees for any losses or damages suffered due to the action or inaction of any agent retained by the Partnership, whether through negligence, dishonesty or otherwise, provided that the agent was selected by the General Partner without gross negligence, fraud, recklessness or willful misconduct or as otherwise required by law. The General Partner may consult with counsel and accountants in respect of the Partnership's affairs and be fully protected and justified in any action or inaction which is taken in accordance with the advice or opinion of such persons, provided that they were selected with reasonable care.

(b) The General Partner (which shall include for this purpose each director, officer, employee or agent of, or any person who controls, the General Partner, and their executors, heirs, assigns, successors or other legal representatives) shall be indemnified to the full extent permitted by law by the Partnership (but not the Partners individually) against any cost, expense (including attorneys' fees), judgment or liability reasonably incurred by or imposed upon it in connection with any action, suit or proceeding (including any proceeding before any administrative or legislative body or agency) to which it may be made a party or otherwise be involved or with which it shall be threatened by reason of being or having been the General Partner; provided, however, that the General Partner shall not be so indemnified to the extent such cost, expense, judgment or liability shall have been finally determined in a decision on the merits in any such action, suit or proceeding to have been incurred or suffered by the General Partner by reason of willful misfeasance, bad faith, gross negligence, or reckless disregard of the duties involved in the conduct of the General Partner's office. The right to indemnification granted by this Section 4.6 shall be in addition to any rights to which the General Partner may otherwise be entitled and shall inure to the benefit of the successors or assigns of such General Partner. The Partnership shall pay the expenses incurred by the General Partner in defending a civil or criminal action, suit or proceeding in advance of the final disposition of such action, suit or proceeding, upon receipt of an undertaking by the General Partner to repay such payment if there shall be an adjudication or determination that it is not entitled to indemnification as provided herein. The General Partner may not satisfy any right of indemnity or reimbursement granted in this Section 4.6 or to which it may be otherwise entitled except out of the assets of the Partnership, and no Partner shall be personally liable with respect to any such claim for indemnity or reimbursement. The General Partner may obtain appropriate insurance on behalf of the Partnership to secure the Partnership's obligations hereunder.

(c) All rights to indemnification permitted in this Agreement and payment of associated expenses shall not be affected by the termination and dissolution of the Partnership or the removal, withdrawal, insolvency, bankruptcy, termination, or dissolution of the General Partner or Limited Partners.

ARTICLE V.

ADMISSIONS, TRANSFERS AND WITHDRAWALS

5.1 Admission of Limited Partners.

The General Partner may admit additional Limited Partners at any time, in which event the required capital contribution of any such additional Limited Partner shall be determined by the General Partner, subject to Section 3.1(b).

5.2 Admission of Additional General Partner.

The General Partner may admit one or more additional general partners, who may be natural persons, partnerships or companies, to the Partnership only if such action is approved by the affirmative vote of all Limited Partners.

5.3 Transfer of Interests of Limited Partners.

No transfer or assignment of, or pledge of or grant of a security interest in, any Limited Partner's interest in the Partnership, whether voluntary or involuntary, shall be valid or effective, and no transferee shall become a substituted Limited Partner, unless the prior written consent of the General Partner has been obtained, which consent may be granted or refused in its sole discretion. Until approved by the General Partner, any successor to the interest of a Limited Partner shall be entitled to the allocations and distributions attributable to such interest and to withdraw such interest as provided in Section 5.5 but shall not have any of the other rights of a Limited Partner.

5.4 Transfer of Interest of General Partner.

The General Partner may not transfer its interest as General Partner in the Partnership other than with the approval of all of the Limited Partners.

5.5 Withdrawal of Interests of Partners.

(a) The interest of a Partner in the Partnership may not be withdrawn from the Partnership prior to its dissolution except (i) in whole or in part effective as of the end of any Fiscal Year upon at least ninety (90) days written notice to the General Partner or (ii) with the prior written consent of the General Partner.

(b) The General Partner may at any time require any Partner to withdraw from the Partnership in whole or in part.

(c) A withdrawing Partner shall be entitled to receive the balance of such Partner's Capital Account as of the date of withdrawal, which shall be paid to the withdrawing Partner, at the election of the General Partner, either (i) without interest within ninety (90) days after the effective date of withdrawal, or (ii) with interest at the London Interbank Offered Rate for thirty (30) day deposits of $1,000,000 as quoted in The Wall Street Journal from the effective date of the withdrawal until paid, in equal annual installments over a period of not more than three (3) years from the date of withdrawal. A withdrawn Partner shall not share in the income, gains and losses of the Partnership or have any other rights as a Partner after the effective date of the withdrawal except as provided in this Section 5.5(c).

ARTICLE VI.

LIQUIDATION

6.1 Liquidation of Partnership Assets.

(a) Upon dissolution of the Partnership, the General Partner shall promptly liquidate the business and administrative affairs of the Partnership, except that if the General Partner is unable to perform this function, a liquidator elected by Limited Partners whose Partnership Percentages represent more than fifty percent (50%) of the aggregate Partnership Percentages of all Limited Partners shall liquidate the business and administrative affairs of the Partnership. Net Profit and Net Loss during the Fiscal Periods which include the period of liquidation shall be allocated pursuant to Article III. The proceeds from liquidation shall be divided in the following manner:

(i) the debts, liabilities and obligations of the Partnership, other than debts to Partners, and the expenses of liquidation (including legal and accounting expenses incurred in connection therewith), up to and including the date that distribution of the Partnership's assets to the Partners has been completed, shall first be paid;

(ii) such debts as are owing to the Partners shall next be paid; and

(iii) the Partners shall next be paid amounts pro rata in accordance with, and up to the positive balances of their respective Capital Accounts, as adjusted pursuant to Article III to reflect allocations for the Fiscal Period ending on the date of the distributions under this Section 6.1(a)(iii).

(b) Anything in this Section 6.1 to the contrary notwithstanding, the General Partner or liquidator may distribute ratably in-kind rather than in cash, upon dissolution, any assets of the Partnership; provided, however, that if any in-kind distribution is to be made, (i) the assets distributed in kind shall be valued by the General Partner in good faith as of the actual date of their distribution, and charged as so valued and distributed against amounts to be paid under Section 6.1(a) above, and (ii) any gain or loss (as computed for book purposes) attributable to property distributed in-kind shall be included in the Net Profit or Net Loss for the Fiscal Period ending on the date of such distribution.

ARTICLE VII.

ACCOUNTING AND VALUATIONS; BOOKS AND RECORDS

7.1 Accounting and Reports.

(a) The Partnership may adopt for tax accounting purposes any accounting method which the General Partner shall decide in its sole discretion is in the best interests of the Partnership and which is permissible for U.S. federal income tax purposes.

(b) As soon as practicable after the end of each taxable year, the General Partner shall furnish to each Limited Partner such information as may be required to enable each Limited Partner properly to report for federal and state income tax purposes his distributive share of each Partnership item of income, gain, loss, deduction or credit for such year.

7.2 Determinations by General Partner.

(a) All matters concerning the determination and allocation among the Partners of the amounts to be determined and allocated pursuant to Section 3.4 hereof, and the items of income, gain, deduction, loss and credit to be determined and allocated pursuant to Section 3.5 hereof, including any taxes thereon and accounting procedures applicable thereto, shall be determined by the General Partner unless specifically and expressly otherwise provided for by the provisions of this Agreement, and such determinations and allocations shall be final and binding on all the Partners.

(b) The General Partner may make such adjustments to the computation of Net Profit or Net Loss, or any component items comprising either of the foregoing, as it considers appropriate to reflect fairly and accurately the financial results of the Partnership and the intended allocation thereof among the Partners.

7.3 Books and Records.

The General Partner shall keep books and records pertaining to the Partnership's affairs showing all of its assets and liabilities, receipts and disbursements, realized income, gains and losses, Partners' Capital Accounts and all transactions entered into by the Partnership. Such books and records of the Partnership shall be kept at its principal office, and all Partners and their representatives shall at all reasonable times have free access thereto for the purpose of inspecting or copying the same.

ARTICLE VIII.

GENERAL PROVISIONS

8.1 Amendment of Partnership Agreement.

(a) This Agreement may be amended, in whole or in part, only with the written consent of (i) the General Partner and (ii) all of the Limited Partners.

8.2 Notices.

Notices which may or are required to be given under this Agreement by any party to another shall be given by hand delivery or by registered or certified mail, return receipt requested, and shall be addressed to the respective parties hereto at their addresses as set forth on Exhibit A hereto or to such other addresses as may be designated by any party hereto by notice addressed to the General Partner in the case of notice given by any Limited Partner, and to each of the Limited Partners in the case of notice given by the General Partner. Notices shall be deemed to have been given when delivered by hand or on the date indicated as the date of receipt on the return receipt.

8.3 Agreement Binding Upon Successors and Assigns.

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, but the rights and obligations of the General Partner hereunder shall not be assignable, transferable or delegable except as provided in Sections 5.2 and 5.4, and any attempted assignment, transfer or delegation thereof which is not made pursuant to the terms of Section 5.2 or Section 5.4 shall be void.

8.4 Governing Law.

This Agreement, and the rights of the Partners hereunder, shall be governed by and construed in accordance with the laws of the State of Delaware, without regard to the conflict of laws rule thereof. The parties hereby consent to exclusive jurisdiction and venue for any action arising out of this Agreement in the Chancery Court of the State of Delaware for Kent County or the Federal District Court for the District of Delaware. Each Partner consents to service of process in any action arising out of this Agreement by the mailing thereof by registered or certified mail, return receipt requested, to such Partner's address set forth in the Schedule of Partners. In any action to enforce any provision of this Agreement, the prevailing party shall be entitled to recover all expenses, including reasonable attorneys fees, incurred in connection therewith.

8.5 Not for Benefit of Creditors.

The provisions of this Agreement are intended only for the regulation of relations among Partners and between Partners and former or prospective Partners and the Partnership. This Agreement is not intended for the benefit of non-Partner creditors and no rights are granted to non-Partner creditors under this Agreement.

8.6 Consents.

Any and all consents, agreements or approvals provided for or permitted by this Agreement shall be in writing and a signed copy thereof shall be filed and kept with the books of the Partnership.

8.7 Miscellaneous.

(a) The captions and titles preceding the text of each Section hereof shall be disregarded in the construction of this Agreement.

(b) This Agreement may be executed in counterparts, each of which shall be deemed to be an original hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

GENERAL PARTNER:

RENAISSANCE TECHNOLOGIES CORP.

By: ______________________

LIMITED PARTNERS:

MEDALLION FUND L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION ASSOCIATES L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION USA L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION RMP FUND L.P.
By: Renaissance Technologies Corp.
its General Partner

By: ______________________
Mark Silber, Vice President

MEDALLION INTERNATIONAL LTD.

By: ______________________
Mark Silber, Director

MEDALLION CAPITAL INVESTMENTS, LTD.

By: ______________________
Mark Silber, Director

Page

EXHIBIT A

Addresses of Partners for Notices

Partner	Address
Medallion Fund L.P.	c/o Renaissance Technologies Corp. 800 Third Avenue New York, New York 10022
Medallion Associates L.P.	c/o Renaissance Technologies Corp. 800 Third Avenue New York, New York 10022
Medallion USA L.P.	c/o Renaissance Technologies Corp. 800 Third Avenue New York, New York 10022
Medallion RMP Fund L.P.	c/o Renaissance Technologies Corp. 800 Third Avenue New York, New York 10022
Medallion International Ltd.	c/o MQ Services Ltd. Chancery Hall, 52 Reid Street Hamilton HM12, Bermuda
Medallion Capital Investments Ltd.	c/o MQ Services Ltd. Chancery Hall, 52 Reid Street Hamilton HM12, Bermuda

Memo

Barclays Capital

To	**SCM Approvals Committee**
From	**Jonathan Zenios**
Date	3 September 2004
Subject	Approvals paper – COLT V: Renaissance Restructuring

BARCLAYS CAPITAL

1. SUMMARY

Structured Capital Markets ("**SCM**") is seeking approval for a restructuring of an existing Project COLT transaction with a fund managed by Renaissance Technologies Corp. The new transaction (the '**Fifth Renaissance Transaction**') will involve the purchaser of existing COLT options (Bass Equities Limited ("**Bass**")) exercising all such options and a newly formed US partnership (Badger Holdings L.P. ("**Fund**")) purchasing substantially similar options on the same day.

Since Fund will be a United States partnership for US tax purposes, BBPLC-NY Branch should not be required to withhold US withholding tax on any payments to Fund, regardless of their characterization for tax purposes. This change will allow removal on the restrictions of Palomino receiving dividends on US equities. This additional activity will generate a larger trading balance in Palomino and incremental revenue for the Collateralised Finance Group ("**CFG**").

This Fifth Renaissance Transaction uses existing infrastructure from the previous transactions, and it will involve writing options that are almost identical to the options written in the Second, Third and Fourth Renaissance Transactions (the only difference is the place of formation of the option purchasing entity) Further, the size of the trading positions is expected to increase by at least $1.5 billion – in aggregate the transaction will have on average around 9,000 to 12,000 trades per day, approximately $5 billion long and $5 billion short, and approximately 4,500 names in the portfolio.

Economic Benefit

The Fourth Renaissance transaction generated $9.5 million of fee income for SCM. SCM will earn only a nominal additional fee for this restructuring transaction since this transaction (i) follows only three months after the Fourth Renaissance transaction, (ii) does not use any SCM attributes and (iii) involves no restructuring for Barclays.

However, Collateralized Finance Group ('**CFG**') will recognize even greater benefits created [redacted] Project COLT transactions - profits will increase by $[3] million to approximately $[27]m p.a., [redacted] the group's largest profit source by a factor of two and will be placed at risk if we do not execute the Fifth Renaissance Transaction. CFG's large returns arise from this transaction for the following reasons –

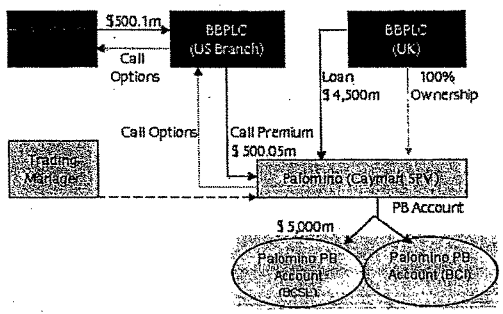
- The Fund spreads its very large balances among 3 main prime brokers – two, including us, that have a COLT-type structure, and one that is an historic relationship of the Fund -
    - Due to COLT, CFG will be able to increase access to a larger piece of the Fund's US activity (of which it previously had none), and
    - Due to COLT, CFG has received an even larger piece of the non-US activity (of which it had about USD 6m in the past and would have lost if not for the first COLT execution);
- To maximize benefits from the COLT transaction, transactions must be kept running for at least 12 months, which contributes to a stable gross position size and consequently a stable revenue stream that is driven largely by the size of those positions; and
- Consistently good service from Barclays (CFG on day-to-day business and from SCM from structuring and execution of new transactions) has led to winning new execution business for different parts of the COLT portfolio (business that initially was only cleared by CFG, but is now executed and cleared by CFG).

The key financial data is set out below:

Proposed product limit	n/a
Estimated revenue	$[3]m per annum for CFG for 3 years
Tax capacity *Return on Tax capacity*	None *N/a*
WRAs *Return on WRAs*	No new WRAs (CFG has existing utilised WRAs allocation that will be utilised by this transaction) *N/a*
PUG	FINANCIAL INFORMATION WHICH IS NOT RELEVANT
Tenor	3 Years

This Approvals paper contains a description of all significant tax, credit, market and operational risks.

2. DETAILED TRANSACTION DESRCIPTION



2.1 Day 1 Flows

Identical to the previous transactions, the NY branch of BB PLC will write American-style call options to the Fund with respect to the value of the PB Account (collectively, the '**Call Option**'), for which the Fund will pay a premium ('**Call Premium**') of $[500.1]m comprising:

- $[500]m representing the collateral for the Trading Strategy;
- $[100,000] representing SCM structuring fee.

The Call Option will have a term of 3 years and will be cash settled. The notional of the Call Option will be $[5,000]m and the strike price will be $[4,500]m, plus an appropriate charge for leverage ('**Call Strike**').

Simultaneous with its writing of the Call Option, BB PLC will enter into an explicit call option with Palomino that will perfectly match BB PLC's obligations under the Call Option.

Palomino Limited ('**Palomino**') has already borrowed $1,900m out of a possible line of $2,500m from BB PLC (UK) on an unsecured basis (out of CFG's existing line with BB PLC and within the treasury concession). CFG believes that this existing line will be sufficient to fund the Fifth Renaissance Transaction, so no new funding will be required.

2.2 Ongoing Flows

No ongoing flows are anticipated among the Fund, BB PLC, and Palomino. Trading activity will continue to occur in Palomino's existing prime brokerage trading accounts held with both BCSL and BCI (collectively referred to as the '**PB Account**'). Trading activities in the BCI prime brokerage margin account is expected to increase as a result of this restructured COLT transaction.

The PB Account will continue to be managed by Renaissance Technologies Corp, which is the '**Trading Manager**' that has managed the PB Account since 30 September, 2002.

2.3 Unwind Flows

When the Fund exercises the Call Option, BB PLC's option with Palomino will automatically become exercised. Therefore, Palomino will pay BB PLC the settlement value out of cash from the PB Account (which will be on hand as equity), and BB PLC will in turn pay the same settlement value to the Fund.

3. ECONOMICS AND ECONOMIC DRIVERS

3.1 Fund Benefit

US individual investors of the Fund would obtain a post-tax benefit if the Call Option is exercised after 12 months, because all the gain on the Call Option would be treated as a long-term gain for US tax purposes and would therefore be taxed at 15%, as opposed to 35%.

3.2 BB PLC Benefit

Collateralized Finance Group ('**CFG**') will recognize even greater benefits created by the Project COLT transactions - profits will increase by a further $[3] million to approximately $[27]m p.a. which is the group's largest profit source by a factor of two and will be lost if we do not execute the Fifth Renaissance Transaction.

4 TAX ANALYSIS

4.1 Barclays

4.1.1 UK Tax

Same analysis as previous COLT transactions. Palomino is a CFC, which makes $50,000 for this Fifth COLT transaction. All profits from the transaction will be distributed to BB PLC under an acceptable distribution policy.

4.1.2 US Tax

Same analysis as previous transactions, which follows:

Both BB PLC's NY branch and Palomino (check-the-box election will be made to disregard as separate entity and therefore treated as part of NY branch of BB PLC) are US taxpayers.

SCM's profit, in the event SCM earns a fee income from the transaction, will be earned in the NY branch of BB PLC and therefore will be taxed in the US. We received an opinion from counsel (Akin, Gump) that LPP

LPP we have received an opinion from counsel (Coudert Brothers) that LPP As in previous transactions, we will obtain a new opinion to cover the new options written in this transaction (an opinion that Coudert Brothers has agreed to write in the context of this new transaction).

L.P.P.

This conclusion is analysed and supported in the expanded tax opinion that Coudert Brothers has agreed to provide. Draft of this new opinion has already been reviewed by Group Tax in NY and London.

4.1.3 US Tax Shelter Disclosure/List-Keeping Rules

Under the final Tax Shelter Regulations, we should not be required to disclose or keep a list for this Fifth Renaissance Transaction. However, our current procedures are to maintain a list and determine at the time of an IRS request whether we must submit such list – we will follow these procedures.

4.2 Fund – US Tax

LPP

5. TAX RISK

Since this transaction involves the tax position of the Fund, as opposed to our own, the risk to Barclays is confined to our reputation.

6. ACCOUNTING

The treatment will follow the previous transactions, which was provided by London Finance (Ritesh Pankhania) and was agreed by PWC.

- Palomino will continue to be consolidated with BB PLC and accounted for on trading book.
- SCM Fee, if any, will be recognizable immediately.
- The Call Option and the PB Account will be marked to market and should offset in the income statement (i.e., there is no time value to the Call Option).
- On the balance sheet, the mark-to-market value of the Call Option and the Call Premium will be reported as "Amounts Arising from Off-Balance Sheet Derivatives", and the positions in Palomino will be reported as "Equity Securities".

7. CREDIT AND MARKET RISK

The Fifth Renaissance Transaction will use the risk monitoring process already in place as a result of the previous transactions.

Accordingly, Palomino will not have any credit risk or market risk in the transaction, due to the fact that its PB Account is hedged by the back-to-back Call Option and Prime Brokerage effectively has taken the downside risk. The risk borne by Prime Brokerage is akin to the risks taken in a normal collateralised Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time.

Therefore, risks of COLT generally are reduced by the risk management techniques approved for use by BCSL's and BCI's Prime Brokerage group when transacting with hedge funds. In addition to those techniques, specific investment guidelines have been agreed with the Trading Manager, and adherence to those investment guidelines will continue to be monitored on a daily basis. Importantly, there have been no violations of those investment guidelines during the previous twenty two months of this transaction.

8. REGULATORY CAPITAL

FSA approval was received to treat the positions on Palomino's books in the following manner -

- Palomino may be treated as a trading book; and
- Since Position Risk Requirements for Palomino will in all cases be nil, there is no need to calculate such on a daily basis;
- The document asserts that the existing Palomino fund is sufficient for the additional trade and hence no additional funding will be required. Therefore, no additional treasury concession usage for funding.
- Whilst the options are back to back there will be a Large Exposure ("LE") for BB plc solo equal to the mark to market of the bought option (to be marked against the underlyings of the fund)
- At the consolidated level the assets are deemed on balance sheet and the LE will be calculated via PRMS. No offset is available from the sold call to the fund.

9. PROVISION

9.1 FINANCIAL INFORMATION WHICH IS NOT RELEVANT

10. CLIENT ENGAGEMENT

- Bruce Yablon (Relationship Manager) and Carla Porter (Counsel) have been engaged. Further Mark Silber (Tax Director) has overseen the documentation work on this transaction.
- SCM will confirm that the COLT transaction has been approved the Trading Manager and the Fund prior to actual execution of transaction documents.

11. MATERIALITY OF DEAL WITH COUNTERPARTY

- The Fund or its partners do not publicly publish their financial statements - as such information on tax rate and tax disclosures are not publicly available.
- In assessing the materiality of COLT on the Funds profit and loss account the following should be considered:
  - The Fund itself will not be subject to US tax. It will provide its partners with a partnership statement and the partners would be subject to US tax based on the performance of the fund. See section 4.2
  - US individual investors of the Fund would obtain a post-tax benefit if the Call Option is exercised after 12 months, because all the gain on the Call Option will be treated as a long-term gain for US tax purposes and would therefore be taxed at 15%, as opposed to 35%. See section 3.1.

12. OTHER

- Since this transaction is identical to existing transactions, we propose that a notification to the US NPC is the appropriate approvals process for this transaction (which is the same approach utilized for the Fourth Renaissance Transaction that was executed in June of 2004).
- Barclays does not provide any directors for any external entity. No external person will be a Director of any Barclays entity involved in this transaction.

INDEMNITY AGREEMENT

DATED AS OF OCTOBER 1, 2004

AMONG

BARCLAYS BANK PLC

PALOMINO LIMITED

BADGER HOLDINGS L.P.

MEDALLION INTERNATIONAL LIMITED

MEDALLION CAPITAL INVESTMENTS LTD.

MEDALLION ASSOCIATES L.P.

MEDALLION FUND L.P.

MEDALLION USA L.P.

AND

MEDALLION RMP FUND L.P.

NEWYORK 4363031v3

INDEMNITY AGREEMENT

THIS INDEMNITY AGREEMENT (this "Agreement") is entered into as of the 1st day of October, 2004, by and among BARCLAYS BANK PLC, a corporation organized and existing under the laws of the United Kingdom ("Barclays"), PALOMINO LIMITED, a company organized and existing under the laws of the Cayman Islands ("Palomino"), BADGER HOLDINGS L.P., a limited partnership formed and existing under the laws of the State of Delaware ("Badger"), MEDALLION INTERNATIONAL LIMITED, a company organized and existing under the laws of Bermuda ("International"), MEDALLION CAPITAL INVESTMENTS LTD., a company organized and existing under the laws of Bermuda ("MCI"), MEDALLION ASSOCIATES L.P., a limited partnership formed and existing under the laws of the State of Delaware ("Associates"), MEDALLION FUND L.P., a limited partnership formed and existing under the laws of the State of Delaware ("MFL"), MEDALLION USA L.P., a limited partnership formed and existing under the laws of the State of Delaware ("MUSA"), and MEDALLION RMP FUND L.P., a limited partnership formed and existing under the laws of the State of Delaware ("RMP"). (Hereinafter, International, MCI, Associates, MFL, MUSA and RMP are referred to, collectively, as "Medallion".)

WITNESSETH:

WHEREAS, Barclays and Badger have entered, simultaneously with the execution of this Agreement, into certain option transactions (the "Options") by executing the confirmation letters attached hereto as Annex A (as may be amended by the parties thereto from time to time, the "Confirmations") and the ISDA Master Agreement and Schedule attached hereto as Annex B (together, as may be amended by the parties thereto from time to time, the "ISDA Agreement");

WHEREAS, Palomino entered into certain prime brokerage agreements with Barclays Capital Securities Limited ("BCSL") and with Barclays Capital Inc. ("BCI"), dated October 1, 2004, copies of which are attached hereto as Annex C (as may be amended by the parties thereto from time to time, the "Prime Brokerage Agreements"), and into an investment management agreement with Renaissance Technologies Corp., a copy of which is attached hereto as Annex D (as may be amended by the parties thereto from time to time, the "Investment Management Agreement");

WHEREAS, Barclays and Badger may enter into additional option transactions in respect of the Reference Accounts, as defined below, and designate one or more of such additional option transactions in accordance with Section 2.7 hereof to be governed by this Agreement (each such designated option transaction, a "New Option"), by executing in respect of each such New Option a confirmation letter governed by the ISDA Agreement (each, as may be amended by the parties thereto from time to time, a "New Confirmation");

WHEREAS, all of the limited partnership interests in Badger are owned by Medallion; and

NEWYORK 4363031v3

WHEREAS, Badger and Medallion have agreed to indemnify and hold harmless Barclays and its Affiliates from and against Indemnified Amounts as provided in this Agreement;

NOW, THEREFORE, in consideration of the premises, covenants and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto, intending to be legally bound, hereby agree as follows:

ARTICLE I
DEFINITIONS

Section 1.1 Definitions. For purposes of this Agreement, the following terms shall have the meanings specified or referred to in this Section 1.1:

"After-Tax Basis" has the following meaning: if either party (the "Payor") is required under this Agreement to pay a specified amount on an After-Tax Basis to the other party (the "Payee"), the Payor must pay the amount which, after subtraction of the net increase, if any, in the amount of Taxes required to be paid by the Payee as a result of the receipt or accrual of such payment (taking into account any deduction, credit or other Tax Benefit allowable to, or obtainable by the Payee (or any Affiliate thereof) as a result of any Tax paid or accrued in respect of such payment, any Indemnified Amount paid or accrued or the events or circumstances giving rise to such payment), shall equal such specified amount.

"Agreement" has the meaning set forth in the preface above.

"Applicable Rate" means, for each applicable day, the applicable Federal Funds Rate for such day plus 50 basis points.

"Article" references in this Agreement are to articles of this Agreement, unless otherwise indicated.

"Associates" has the meaning set forth in the preface above.

"Barclays" has the meaning set forth in the preface above.

"Badger" has the meaning set forth in the preface above.

"BCI" and "BCSL" have the respective meanings set forth in the recitals above.

"Code" means the United States Internal Revenue Code of 1986, as amended, and any successor law.

"Confirmation" means each of the Confirmations and each New Confirmation.

"Confirmations" has the meaning set forth in the recitals above.

"Contest Notice" has the meaning set forth in Section 2.2 below.

"Deemed Tax Benefit" has the meaning set forth in Section 3.1 below.

"Indemnified Amounts" has the meaning set forth in Section 2.1 below.

"Indemnified Penalties" means, in respect of each Option, U.S. federal penalties, together with any interest thereon, imposed under Code Sections 6651, 6662, 6721, 6722, 6723 or 6724(c) and the Treasury Regulations thereunder (or any successor provisions of the Code or Treasury Regulations prescribing penalties relating to the failure to comply with information reporting requirements) in respect of a failure by Barclays (or any Affiliate thereof) to comply with the information reporting requirements under Code Sections 1461, 6041, 6042, 6045 or 6049 and the Treasury Regulations thereunder (or any successor provisions of the Code or Treasury Regulations prescribing rules relating to information reporting) with respect to transactions in or the receipt or payment of income on the Designated Positions specified in the Confirmation corresponding to such Option, which would not have been imposed or incurred but for, and directly result from, a determination by the IRS in a Tax Proceeding that for U.S. federal income tax purposes Badger is treated as the owner of the Designated Positions specified in the Confirmation corresponding to such Option, throughout any portion of the term of such Option.

"Indemnitee" and "Indemnitees" have the respective meanings set forth in Section 2.1 below.

"Indemnitor" and "Indemnitors" have the respective meanings set forth in Section 2.1 below.

"Internal Revenue Service" or "IRS" means the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires.

"International" has the meaning set forth in the preface above.

"Investment Management Agreement" has the meaning set forth in the recitals above.

"ISDA Agreement" has the meaning set forth in the recitals above.

"Judicial Authority" means any court, governmental or regulatory authority, quasi-judicial or administrative agency of any federal, state, local, or foreign jurisdiction, or arbitral body.

"MCI" has the meaning set forth in the preface above.

"Medallion" has the meaning set forth in the preface above.

"MFL" has the meaning set forth in the preface above.

"MUSA" has the meaning set forth in the preface above.

"New Confirmation" and "New Option" have the respective meanings set forth in the recitals above.

"Notice" has the meaning set forth in Section 6.3 below.

"Operative Documents" has the meaning set forth in Section 2.1 below.

"Option" means each of the Options and each New Option.

"Options" has the meaning set forth in the recitals above.

"Palomino" has the meaning set forth in the preface above.

"Prime Brokerage Agreements" has the meaning set forth in the recitals above.

"RMP" has the meaning set forth in the preface above.

"Section" references in this Agreement are to sections of this Agreement, unless otherwise indicated.

"Tax" or "Taxes" means all forms of taxation, whenever created or imposed, whether domestic or foreign, or whether imposed by a Taxing Authority, and without limiting the generality of the foregoing includes any net income, gross income, gross receipts, profits, capital stock, franchise, turnover, payroll, withholding, social security, unemployment, employment, workers compensation, disability, property, ad valorem, stamp, excise, severance, occupation, premium, service, sales, use, license, lease, transfer, recording, import, export, value added, customs, alternative or add-on minimum, estimated, or other similar tax (including any fee, assessment, or other charge in the nature of or in lieu of any tax), withholdings, assessments, levies, imposts, duties or charges, of any nature whatsoever, imposed by any Taxing Authority, together with any interest, penalties, additions to tax, or additional amounts imposed by any such Taxing Authority.

"Taxing Authority" means, with respect to any Tax, the nation, locality, municipality, government, state, federation, any governmental, quasigovernmental or international taxing authority (which expression shall include any supranational federation or other similar organization), or any political subdivision thereof that imposes such Tax, and any agency (if any) or authority thereof or therein charged with the collection of such Tax for such entity or subdivision.

"Tax Benefit" means any refund of, credit against, or other (past, current or future) reduction in otherwise required Tax payments (including any reduction in estimated tax payments) and any interest in respect of the foregoing.

"Tax Contest" has the meaning set forth in Section 2.3(a) below.

"Tax Law" means the law of any governmental entity or political subdivision, including any Taxing Authority, relating to any Tax, as amended from time to time, and any successor law.

"Tax Period" means, with respect to any Tax, the period for which the Tax is reported as provided under the Code or other applicable Tax Law.

"Tax Proceedings" means any pending or threatened audit, review, examination, investigation, hearing, dispute, assessment, charge, claim, demand, suit, action, litigation, or any other administrative or judicial proceeding by or against the IRS or any other Taxing Authority with the purpose or effect of determining or redetermining Taxes or any Indemnified Penalties or refunding any amount paid in respect of Taxes or any Indemnified Penalties.

"Tax Records" means Tax Returns, Tax Return workpapers, documentation relating to any Tax Proceedings, and any other books of account or records required to be maintained under the Code, applicable Tax Laws, or any record retention agreement with any Taxing Authority.

"Tax Return" means any report of Taxes due, any claims for refund of Taxes paid, any information return relating to Taxes, or any other similar report, statement, declaration, or document required to be filed under the Code or other Tax Law, including any attachments, exhibits, or other materials submitted with any of the foregoing, and including any amendments or supplements to any of the foregoing.

Section 1.2 Construction. Capitalized terms used in this Agreement without definition shall have the meanings ascribed to them in the Confirmations (including any document incorporated therein by reference).

ARTICLE II
INDEMNIFICATION

Section 2.1 Tax Indemnity. Except as otherwise provided in this Agreement, Badger and Medallion (each an "Indemnitor" and collectively the "Indemnitors"), jointly and severely, agree to indemnify and hold harmless Barclays and any Affiliate thereof (each an "Indemnitee" and collectively the "Indemnitees") from and against any and all (i) Indemnified Penalties, and (ii) reasonable out-of-pocket cost of the Indemnitees (including reasonable attorneys' fees for one separate law firm) incurred for purposes of conducting the defense by the Indemnitees of any Tax Proceeding which may give rise to a claim for indemnification against the Indemnitors under subsection 2.1(i) above (hereafter referred to collectively as "Indemnified Amounts"), provided, however, that the foregoing indemnity shall not extend to any Indemnified Amounts to the extent resulting from or arising out of, or which would not have occurred but for, one or more of the following: (i) any representation or warranty by any of the Indemnitees (or any Affiliate thereof) under this Agreement, any Confirmation, the ISDA Agreement, or any other agreement or document relating to any Option (together, the "Operative Documents") being incorrect in any respect, (ii) the failure by any of the Indemnitees (or any Affiliate thereof) to perform or observe in any respect its obligations under, or any covenant or condition in, any of the Operative Documents, or (iii) the willful misconduct or the gross negligence of any of the Indemnitees or any Affiliate thereof.

Section 2.2 Notice. If any of the Indemnitees (or any Affiliate thereof) receives notice or has knowledge with respect to the commencement of any Tax Proceedings or any matter which may give rise to a claim for indemnification against the Indemnitors under this Agreement, the Indemnitees shall, if a claim is to be made against any Indemnitor under this Agreement, promptly (but in no event later than the earlier of (i) the tenth (10th) Business Day immediately following the date on which a notice of such Tax Proceeding is received by any of the Indemnitees (or any Affiliate thereof), and (ii) the fifth (5th) Business Day immediately preceding the last date on which such Tax Proceeding may be protested, defended against, appealed or otherwise contested) give notice in writing to the Indemnitors of the commencement of such Tax Proceeding, the receipt of such notice or of such matter, as applicable (the "Contest Notice"). The Contest Notice shall contain factual information (to the extent known) describing any asserted Indemnified Penalties in reasonable detail (including the amount and due date of the Indemnified Penalties involved) and shall be accompanied by copies of any notice and other documents received from any Taxing Authority, courts or other Judicial Authority in respect of any such Tax Proceeding or matter.

Section 2.3 Proceedings. (a) If any Tax Proceeding which may give rise to a claim for indemnification against the Indemnitors under this Agreement ("Tax Contest") is commenced against any Indemnitee, the Indemnitors will be entitled to participate in such Tax Contest, and will have the right at any time to assume, and thereafter control and conduct, the exclusive defense of the Tax Contest (including any administrative or judicial appeals) with counsel of their choice, and to defend, compromise, or settle such Tax Contest. The Indemnitees shall cooperate in, and supply the Indemnitors with such information, documents, returns and assistance reasonably requested by the Indemnitors as necessary or advisable for the conduct of the defense of such Tax Contest (including any administrative or judicial appeals) by any of the Indemnitors. If the Indemnitors assume the defense of a Tax Contest as provided in this Section 2.3 above, the Indemnitors shall consult with Barclays, in good faith, regarding material aspects of the defense of such Tax Contest.

Unless and until any of the Indemnitors assumes the defense of a Tax Contest as provided in this Section 2.3 above, the Indemnitees shall, using their best efforts, defend against the Tax Contest.

Notwithstanding anything to the contrary herein, the Indemnitors shall not, in connection with any proceeding or related proceeding in the same jurisdiction at the same time, be liable for the reasonable fees and expenses of more than one separate firm (in addition to any local counsel) for the Indemnitees.

(b) Without limiting the other provisions of this Agreement, if requested by the Indemnitors in writing, each Indemnitee shall in good faith diligently contest through appropriate administrative and judicial proceedings (including pursuing all administrative or judicial appeals) in the name of such Indemnitee (or, if requested by the Indemnitors and permitted by applicable law, permit each of the Indemnitors to contest in its name or in the name of such Indemnitee), the validity, applicability and amount of any Indemnified Penalties asserted in a Tax Contest by (as requested by the Indemnitors) (i) resisting payment thereof, (ii) not paying the same except under protest, if protest be necessary or proper, or (iii) if payment is made, seeking a refund thereof in appropriate administrative and judicial proceedings, provided, however, that if such requested contest, as a prerequisite thereto, shall require the payment of such asserted Indemnified Penalties, the Indemnitors shall advance the amount of such asserted Indemnified Penalties to Barclays on an interest free basis (an "Advance"). Upon a final determination of a Tax Contest as to which an Advance has been made by any of the Indemnitors, such Advance shall be offset against the full Indemnified Amount then due to the Indemnitees pursuant to Section 2.1 hereto by reason of such Tax Contest, if any, and the remainder of such Advance, if any, shall be paid by Barclays to the relevant Indemnitor within 5 (five) Business Days of such final determination.

(c) In no event will any Indemnitee (or any Affiliate thereof) (i) consent to the entry of any judgment or enter into any settlement or compromise with respect to a Tax Contest, or (ii) pay any Indemnified Penalties, without the prior written consent of the Indemnitors.

(d) In any Tax Contest conducted by any of the Indemnitors, the Indemnitors shall determine (after consultation in good faith with Barclays) the forum and manner in which such contest shall be conducted.

(e) In connection with any Tax Contest the defense of which was not assumed by the Indemnitors, the Indemnitees and their legal counsels shall from time to time provide the Indemnitors promptly (or upon request by the Indemnitors) with copies of documents and other materials, and such information, as to enable the Indemnitors to be reasonably and adequately informed with respect to such proceeding, and shall consult with the Indemnitors, at their request, with respect to such proceeding.

Section 2.4 Waiver. If any Indemnitee does not contest any Indemnified Penalties that it is otherwise required to contest in accordance with this Agreement, or settles, compromises or otherwise terminates any such contest without the prior written consent of the Indemnitors, any such action or omission shall constitute a waiver by the Indemnitees of any right to any amount that might otherwise be payable by the Indemnitors pursuant to this Agreement.

Section 2.5 Payments of Indemnified Amounts. Any amount due and payable to the relevant Indemnitee pursuant to this Agreement shall be paid within fifteen (15) Business Days after receipt of a written demand therefor from the Indemnitee accompanied by a written statement describing in reasonable detail the basis for such indemnity and the computation of the amount so payable; provided, however, that such amount need not be paid by the Indemnitors prior to the 5th (fifth) Business Day immediately preceding the date on which the applicable Indemnified Penalties or expense is payable by such Indemnitee to the appropriate Taxing Authority or person.

Section 2.6 Escrow. If Badger decides to completely liquidate, Badger shall transfer in escrow on the date it commences the process of such complete liquidation (the "Escrow Date"), to an escrow agent and pursuant to an escrow agreement to be agreed upon by the parties in good faith, an amount equal to the amount of Indemnified Penalties asserted in a Tax Contest against any of the Indemnitees that are outstanding on the Escrow Date. Under such escrow agreement, upon the final non-appealable resolution of any such Tax Contest, the escrow agent will be required to (i) deliver to the relevant Indemnitee or Indemnitees an amount equal to the Indemnified Amounts relating to such resolved Tax Contest, and (ii) return to Badger (or its partners or any successor thereof) any difference between the amount deposited in escrow on account of such Tax Contest (including any interest or other income thereon) and the amount delivered to the relevant Indemnitee or Indemnitees under subparagraph (i) above.

Section 2.7 New Options. Except for the Options, any additional option transaction entered into between Barclays and Badger in respect of the Reference Accounts will be deemed a "New Option" and an "Option" and be subject to this Agreement, if, and only if, the parties hereto so agree by properly listing such additional option on Appendix A hereto, acknowledging such listing by their signature thereunder and attaching a signed copy of the confirmation relating thereto (marked "Covered Option") to such amended Appendix A.

ARTICLE III
TAX BENEFITS

Section 3.1 Refunds and Credits. If any Indemnitee (or any Affiliate thereof) shall receive or realize any Tax Benefit in respect or by reason of Indemnified Amounts (or would have received such a Tax Benefit but for a counterclaim or other claim not indemnified by the Indemnitors hereunder (a "Deemed Tax Benefit")), such Indemnitee shall pay to the Indemnitors within 5 (five) Business Days of such receipt or realization (or, in the case of a Deemed Tax Benefit, within 5 (five) Business Days of the resolution of such contest), an amount equal to the lesser of (i) the amount of such Tax Benefit or Deemed Tax Benefit, and (ii) the sum of the then present value (projected based on the Applicable Rate) of the aggregate Indemnified Amounts and Advances paid by the Indemnitors to the Indemnitees prior to the payment date of the relevant amount.

ARTICLE IV
RETURNS AND REPORTS

Section 4.1 Maintenance of Records. The Indemnitees shall preserve and keep all Tax Records relating to the Tax Periods which include the term of any Option.

Section 4.2 Inspection. The Indemnitees shall make available to the Indemnitors for inspection and copying during normal business hours upon reasonable notice all Tax Records in their possession to the extent reasonably requested by the Indemnitors in connection with the preparation of Tax Returns, audits, litigation, or the resolution of items under this Agreement concerning any Option, provided, however, that the Indemnitors shall not be required under this Agreement to make available for inspection and copying Tax Records unrelated to any Option.

Section 4.3 Further Assurance. Each Indemnitee agrees to furnish and file from time to time to, upon the Indemnitors' reasonable written request and at their expense, such duly executed and properly completed forms, statements or certificates as may be necessary or appropriate in order to claim any available reduction of any Indemnified Penalties for which the Indemnitors may be obligated under this Agreement.

ARTICLE V
REPRESENTATIONS AND WARRANTIES

Section 5.1 Reporting Position. Each of the Indemnitors and the Indemnitees hereby represents and warrants that for accounting, regulatory, Tax and all other purposes, it (and its respective Affiliates) will treat and report each Option as a derivative financial instrument, and treat and report the Designated Positions specified in the Confirmation corresponding to each such Option and all other assets and positions that may be included within the Reference Accounts as assets and positions of which Barclays or Palomino is the sole legal and beneficial owner and to which Palomino is the sole party, as the case may be, provided, however, that if any party hereto reasonably determines that due to a Change in U.S. Tax Law, the Designated Positions in respect of any Option and any other assets or positions included within the Reference Accounts are required to be treated and reported for U.S. federal income tax purposes as assets and positions of which Badger (or any Affiliate thereof) is the beneficial owner, the parties hereto shall consult with each other and agree, in good faith and with the objective of preserving, to the maximum extent possible, the objectives of each Option and the tax and economic implications that would have resulted to each party had such a Change in U.S. Tax Law not occurred, regarding the appropriate treatment and reporting of such assets and positions.

ARTICLE VI
GENERAL PROVISIONS

Section 6.1 Gross Up. Any amounts required to be paid under this Agreement by any party hereto shall be paid on an After-Tax Basis.

Section 6.2 Survival of Obligations. The obligations, representations, and warranties set forth in this Agreement are unconditional and absolute and shall remain in effect without limitation as to time.

Section 6.3 Notices. Any notice, request, demand, waiver, consent, approval or other communication (a "Notice") which is required or permitted hereunder shall be in writing. Notices may be delivered (i) by telecopier, electronic transmission or similar device and (ii) simultaneously by Federal Express, DHL Courier, or other similar delivery service and shall be deemed given or made upon receipt thereof. All notices are to be given or made to the parties at the following addresses (or to such other address as any party may designate by a Notice given in accordance with the provisions of this subsection):

If to any of the Indemnitees:

Barclays Bank PLC, New York Branch
200 Park Avenue
New York, New York 10166
Attention: John Stracquadanio
Telephone: (212) 412-2180
Telecopier: (212) 412-7463
E-Mail: john.straquadanio@barclayscapital.com

If to any of the Indemnitors:

c/o Renaissance Technologies Corp.
800 Third Avenue
New York, NY 10022

Attention: Mark Silber

Telephone: (212) 486-6780
Telecopier: (212) 758-7136
E-mail: silber@rentec.com
with copies to:
bruce@rentec.com
carla@rentec.com
mikeo@rentec.com

Section 6.4 Assignment. Neither this Agreement nor any of the rights or obligations hereunder may be assigned by any party to this Agreement without the prior written consent of all of the other parties to this Agreement. Subject to the foregoing, this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and permitted assigns and no other person shall have any right, benefit or obligation hereunder.

Section 6.5 Invalidity. In the event that any one or more of the provisions contained in this Agreement or in any other instrument referred to herein, shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this Agreement or any other such instrument; provided that if any provision of this Agreement, as applied to any party or to any circumstance, is adjudged not to be enforceable in accordance with its terms, the parties agree that the governmental body, arbitrator, or mediator making such determination will have the power to modify the provision in a manner consistent with its objectives such that it is enforceable, and/or to delete specific words or phrases, and in its reduced form, such provision will then be enforceable and will be enforced. Any provision of this Agreement which is prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof. Any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction.

Section 6.6 Amendments and Waivers. No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by all of the parties to this Agreement. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (whether or not similar), nor shall such waiver constitute a continuing waiver unless otherwise expressly provided.

Section 6.7 Choice of Law. This Agreement shall be construed and interpreted, and the rights of the parties determined, in accordance with the laws of the State of New York.

Section 6.8 Consent to Jurisdiction. For all disputes arising out of this Agreement, the parties hereto hereby consent and submit to the non-exclusive personal jurisdiction of any United States District Court in the Southern District of New York and any New York state court of competent jurisdiction located anywhere in New York County in any suit, action or proceeding arising out of or relating to this Agreement. The parties further agree that, notwithstanding any contrary provision of law, process will be sufficient and effective if served in accordance with the notice provisions set forth in Section 6.3 hereof.

Section 6.9 Authority. Each of the parties hereto represents that: (i) it has the authority to execute, deliver and perform this Agreement; (ii) the execution, delivery, and performance of this Agreement by it has been duly authorized by all necessary corporate or other actions; (iii) it has duly and validly executed and delivered this Agreement; and (iv) this Agreement is a legal, valid, and binding obligation, enforceable against it in accordance with its term subject to applicable bankruptcy, insolvency, reorganization, moratorium, or other similar laws affecting creditors' rights generally and general equity principles.

Section 6.10 Headings. The headings contained in this Agreement and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

Section 6.11 Effective Time. This Agreement shall become effective at the effective time of the Options.

Section 6.12 Counsel; Interpretation. The parties represent that each has had adequate opportunity to consult with an attorney of its own choosing before entering into this Agreement, and has been fully represented by an attorney of its own choosing throughout the negotiation and execution of this Agreement and the documents and instruments to be executed and delivered pursuant hereto. This Agreement and the documents and instruments to be executed and delivered pursuant hereto shall be interpreted fairly and impartially, without any presumption against the party primarily responsible for the preparation and drafting of this Agreement or the documents and instruments to be executed and delivered pursuant hereto.

Section 6.13 No Waiver. No failure or delay by either party in exercising any right, power, or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power, or privilege.

Section 6.14 Cumulative Rights. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

Section 6.15 Non-Confidentiality. Except as otherwise hereinafter set forth, the parties hereto agree and acknowledge that the structure and tax aspects of each Option and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of each Option and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with any Option, including, without limitation, that such party has entered into such Option with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of any Option. Notwithstanding the foregoing, either party may disclose any such Confidential Information if required by law or any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

Section 6.16 Entire Agreement. This Agreement contains the entire agreement among the parties with respect to the subject matter hereof and supercedes all previous agreements, negotiations, discussions, writings, understandings, commitments, and conversations among the parties or their representatives regarding the rights and obligations under this Agreement.

[Signature page follows]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized representatives as of the date set forth above.

BARCLAYS BANK PLC,
NEW YORK BRANCH

By: ____________________
Name:
Title:

PALOMINO LIMITED

By: ____________________
Name:
Title:

BADGER HOLDINGS L.P.,
by its general partner, Renaissance Technologies Corporation

By: ____________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION INTERNATIONAL LIMITED

By: ____________________
Name:
Title:

MEDALLION CAPITAL INVESTMENTS LTD.

By: ____________________
Name:
Title:

MEDALLION ASSOCIATES L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION FUND L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION USA L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION RMP FUND L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

APPENDIX A

COVERED OPTIONS

The following option transactions are hereby added to the coverage of this Agreement.

Covered Option #	Trade Date	Scheduled Expiration Date	Premium

NEWYORK 4363031v3

ANNEX A

NEWYORK 4363031v3

ANNEX B

NEWYORK 4363031v3

ANNEX C

NEWYORK 4363031v3

ANNEX D

NEWYORK 4363031v3

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized representatives as of the date set forth above.

BARCLAYS BANK PLC,
NEW YORK BRANCH

By: ____________________
Name: Andrew Shuster
Title: Director

PALOMINO LIMITED

By: ____________________
Name:
Title:

BADGER HOLDINGS L.P.,
by its general partner, Renaissance Technologies Corp.

By: ____________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION INTERNATIONAL LIMITED

By: ____________________
Name:
Title:

MEDALLION CAPITAL INVESTMENTS LTD.

By: ____________________
Name:
Title:

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized representatives as of the date set forth above.

BARCLAYS BANK PLC,
NEW YORK BRANCH

By:
Name: Andrew Shuster
Title: Director

PALOMINO LIMITED

By: ______________
Name:
Title:

BADGER HOLDINGS L.P.,
by its general partner, Renaissance Technologies Corp.

By: ______________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION INTERNATIONAL LIMITED

By: ______________
Name:
Title:

MEDALLION CAPITAL INVESTMENTS LTD.

By: ______________
Name:
Title:

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized representatives as of the date set forth above.

BARCLAYS BANK PLC,
NEW YORK BRANCH

By: ____________
Name:
Title:

PALOMINO LIMITED

By: ____________
Name: MARTIN J MALLEY
Title: DIRECTOR

BADGER HOLDINGS L.P.,
by its general partner, Renaissance Technologies Corp.

By: ____________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION INTERNATIONAL LIMITED

By: ____________
Name:
Title:

MEDALLION CAPITAL INVESTMENTS LTD.

By: ____________
Name:
Title:

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized representatives as of the date set forth above.

BARCLAYS BANK PLC,
NEW YORK BRANCH

By: ________________
Name:
Title:

PALOMINO LIMITED

By: ________________
Name:
Title: Director

BADGER HOLDINGS L.P.,
by its general partner, Renaissance Technologies Corp.

By: ________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION INTERNATIONAL LIMITED

By: ________________
Name:
Title:

MEDALLION CAPITAL INVESTMENTS LTD.

By: ________________
Name:
Title:

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized representatives as of the date set forth above.

BARCLAYS BANK PLC,
NEW YORK BRANCH

By: ______________________
Name:
Title:

PALOMINO LIMITED

By: ______________________
Name:
Title:

BADGER HOLDINGS L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION INTERNATIONAL LIMITED

By: ______________________
Name: MARK SILBER
Title: DIRECTOR

MEDALLION CAPITAL INVESTMENTS LTD.

By: ______________________
Name: MARK SILBER
Title: DIRECTOR

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized representatives as of the date set forth above.

BARCLAYS BANK PLC,
NEW YORK BRANCH

By: ______________________
Name:
Title:

PALOMINO LIMITED

By: ______________________
Name:
Title:

BADGER HOLDINGS L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION INTERNATIONAL LIMITED

By: ______________________
Name: MARK SILBER
Title: DIRECTOR

MEDALLION CAPITAL INVESTMENTS LTD.

By: ______________________
Name: MARK SILBER
Title: DIRECTOR

MEDALLION ASSOCIATES L.P.,
by its general partner, Renaissance Technologies Corporation

By:
Name: Mr. Mark Silber
Title: Vice President

MEDALLION FUND L.P.,
by its general partner, Renaissance Technologies Corporation

By:
Name: Mr. Mark Silber
Title: Vice President

MEDALLION USA L.P.,
by its general partner, Renaissance Technologies Corporation

By:
Name: Mr. Mark Silber
Title: Vice President

MEDALLION RMP FUND L.P.,
by its general partner, Renaissance Technologies Corporation

By:
Name: Mr. Mark Silber
Title: Vice President

MEDALLION ASSOCIATES L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION FUND L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION USA L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

MEDALLION RMP FUND L.P.,
by its general partner, Renaissance Technologies Corporation

By: ______________________
Name: Mr. Mark Silber
Title: Vice President

Barclays Bank PLC
200 Park Avenue
New York NY 10166

Tel: +1 (212) 412 4000

BARCLAYS

December 21, 2005

Badger Holdings L.P.

Palomino Limited
PO Box 908 GT
Walker House, Mary Street
George Town, Grand Cayman
Cayman Islands

Ref: Option HH

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the Transaction entered into between Palomino Limited ("Party A"), and Barclays Bank PLC acting through its New York Branch ("Party B") on the Trade Date specified below (the "Transaction").

This Confirmation constitutes a complete and binding agreement between Party A and Party B as to the terms and conditions of the Transaction to which this Confirmation relates, and it supersedes all prior or contemporaneous written or oral agreements between Party A and Party B in relation to the Transaction (except to the extent explicitly stated in any other written agreement between the parties hereto executed contemporaneously herewith). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below.

The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 1996 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc., are incorporated by reference into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern, and in the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern. For purposes of the Equity Definitions, the Transaction shall constitute an Index Option Transaction.

This Confirmation supplements, forms part of, and is subject to, the ISDA Master Agreement dated as of September 30, 2002, as amended and supplemented from time to time (the "Agreement"), between Party A and Party B. All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

1. The terms of the particular Transaction to which this Confirmation relates are as follows:

General Terms:

Trade Date:	December 21, 2005
Effective Date:	December 22, 2005
Option Style:	American.
Option Type:	Call.
Seller:	Party A.
Buyer:	Party B.
Index:	The Basket Value.
Number of Options:	One.
Multiple Exercise:	Inapplicable.
Strike Price:	USD 700 million
Premium:	USD 70,473,919 of which USD 28,000,000 constitutes and is referred to herein as "Amortizable Premium".
Premium Payment Date:	The 2nd (second) Business Day immediately following the Effective Date.
Reference Accounts:	The BCSL Account, the BCI Account and the Synthetic Account, each as defined below.
Trading Strategy:	A trading strategy to be exclusively implemented based on and in accordance with the Investment Guidelines, as defined below.
Exchange(s):	Each exchange or quotation system, which constitutes with respect to any of the Shares, the principal exchange or quotation system on which such Share is actively traded, as reasonably determined by the Calculation Agent.
Business Day:	New York.
Business Day Convention:	Following Business Day.

Shares:	The equity interests and other securities that, at any time during the Valuation Period, constitute (or underlie) Designated Positions.
Issuer:	The issuer of the relevant Shares.

Procedure for Exercise:

Latest Exercise Time:	5 p.m. (local time in New York City).
Expiration Time:	5 p.m. (local time in New York City).
Expiration Date:	The date which is the earliest of: (i) April 15, 2008 (the "Scheduled Expiration Date"), (ii) a Knock-out Event Date, or (iii) an Early Termination Date designated by either party in respect of the Transaction.
Exercise Date:	The Exchange Business Day during the Exercise Period on which the Option is or is deemed to be exercised by Party B.
Knock-out Event Date:	Any Valuation Exchange Business Day on which Party A notifies Party B (which notice may be telephonic (confirmed in writing) or by electronic message) that if Party B had exercised this Option and such Valuation Exchange Business Day were the "Valuation Date" hereunder the amount that would have been determined (at the Valuation Time on the previous Valuation Exchange Business Day) as the "Cash Settlement Amount" under this Option would have been equal to or less than 10% of the sum of (a) the Premium Settlement Amount and (b) Total Amortized Premium.
Automatic Exercise:	Applicable.

Seller's Agent's Telephone Number and Telex and/or Facsimile Number and Contact Details for Purpose of Giving Notice:	Seller's Agent's Name:	Marty Malloy
	Specified Location:	Walkers SPV Limited, Walker House, PO Box 908GT, Mary Street, George Town, Grand Cayman, Cayman Islands
	Tel:	+1 345 945 3727
	Fax:	+1 345 945 4757

Valuation:

Valuation Time:	In respect of each Designated Position, for any date, the close of trading in respect of the Share(s) constituting or underlying such Designated Position on the Exchange corresponding to such Share(s), on such date; or, if no trading occurred on such date in respect of such Share(s) on such Exchange, such other time as may be agreed upon by Party A and Party B.
Valuation Date:	The earlier of: (i) the 4th (fourth) Valuation Exchange Business Day immediately following the Exercise Date, or (ii) the ninth (9th) Business Day immediately following the Exercise Date.
Valuation Period:	The period commencing on, and including, the Effective Date and ending on, and including, the Valuation Date.
Valuation Exchange Business Day:	An Exchange Business Day during which there has not been (i) a Trading Suspension in Shares that comprise, on the commencement of such day, more than 20 percent, in value, of (A) the long Designated Positions or (B) the short Designated Positions, in each case, then credited to, included or deemed included within the Reference Accounts, or (ii) an event of force majeure beyond the control of Party A (or any Affiliate thereof) occurring after the Effective Date, preventing the execution of transactions within the Reference Accounts or making the execution of such transactions impossible or impracticable.

For purposes of this Confirmation, the term "Trading Suspension" means, with respect to any security a suspension of trading (by reason of movements in price exceeding limits permitted by the relevant Exchange or otherwise) on the relevant Exchange for a period of more than one (1) hour.

Calculation Date:	The Effective Date, the Valuation Date and each day during the Valuation Period that is either (i) the "Effective Date" of any other Transaction that is an Index Option Transaction in respect of the Reference Accounts ("RA Option"), (ii) the day immediately following the "Valuation Date" of any RA Option, or (iii) if any RA Option is otherwise terminated and no "Valuation Date" is specified, the day on which such RA Option is terminated.
Calculation Period:	Each period from, and including, one Calculation Date to, but excluding, the immediately following Calculation Date during the Valuation Period, except that (i) the initial Calculation Period will commence on, and include, the Effective Date, and (ii) the final Calculation Period will end on, and include, the Valuation Date.
Calculation Period Factor:	In respect of each Calculation Period, the quotient obtained by dividing (i) the amount that would have been payable as the "Cash Settlement Amount" under this Option if Party B had exercised this Option, calculated (x) for any Calculation Period commencing after the Effective Date, as if the last day of the immediately preceding Calculation Period were the "Valuation Date" hereunder, and, for the Calculation Period commencing on the Effective Date, as if the first day of the Calculation Period were the "Valuation Date" hereunder, (y) as if the value of the "Settlement Price" hereunder equaled the Strike Price, and (z) as if the "Total Amortized Premium" hereunder had equaled zero, by (ii) the sum of (A) the sum of the amounts that would have been payable as "Cash Settlement Amounts" under all RA Options Outstanding, if Party B had exercised all such options and the last day of the immediately preceding Calculation Period were treated as the

"Valuation Date" for purposes of all such options, and (B) the sum of the amounts that would have been payable as "Cash Settlement Amounts" under all RA Options that have an "Effective Date" on the first day of the Calculation Period, if Party B had exercised all such options, calculated as if (x) the first day of the Calculation Period were treated as the "Valuation Date" for purposes of all such options, (y) the value of the "Settlement Price" of each such option equaled its "Strike Price", and (z) the "Total Amortized Premium" of each such option equaled zero. For purposes hereof, in respect of each Calculation Period, "RA Options Outstanding" means all RA Options, whether or not exercised, whose "Valuation Date" has not occurred prior to the first day of the Calculation Period and that has not otherwise been terminated on or prior to such day.

Calculation Period Amount:	In respect of each Calculation Period, the product obtained by multiplying (i) the Calculation Period Return for such Calculation Period, by (ii) the Calculation Period Factor for such Calculation Period.

Settlement Terms:

Cash Settlement:	Applicable.
Cash Settlement Amount:	Other than in respect of a Knock-out Event Date, an amount equal to the greater of (i) zero, and (ii) the sum of (A) the Settlement Price, minus (B) the Strike Price, plus (C) the Premium Settlement Amount. In respect of a Knock-out Event Date, zero.
Settlement Price:	The level of the Index at the close of the Valuation Date.
Basket Value:	The sum of (i) the Strike Price, plus (ii) the sum of the Calculation Period Amounts for all Calculation Periods included within the Valuation Period.

Federal Funds Rate:	For any day, the rate set forth in H.15(519) for the first Business Day immediately preceding such day, opposite the caption "Federal funds (effective)", as such rate is displayed on the Telerate Page 120 (or any successor page). If by 5:00 p.m., New York City time, on the first day that is one Business Day following such day, the rate for such day does not appear on the Telerate Page 120 (or any successor page) or is not yet published in H.15(519), the rate for such day will be the arithmetic mean of the rates for the last transaction in overnight U.S. Dollar Federal funds arranged by each of three leading brokers of U.S. Dollar Federal funds transactions in New York City selected by the Calculation Agent, prior to 9:00 a.m., New York City time, on that Business Day.
Settlement Currency:	USD.
Cash Settlement Payment Date:	The 3rd (third) Business Day immediately following the Valuation Date.

Adjustments:

Method of Adjustment:	Calculation Agent Adjustment.

Extraordinary Events:

Consequences of Potential Adjustment Events, Merger Events, Nationalization or Insolvency:	The Calculation Agent shall use reasonable best efforts to determine, in good faith, based on its commercially reasonable judgment and upon consultation with Party B, the consequences of Potential Adjustment Events, Merger Events, Nationalization or Insolvency in respect of Shares, and the adjustments to the Basket Gains, Basket Losses, Basket Value and any other variable relevant to this Transaction.

2. Calculation Agent: Party A shall be the Calculation Agent.

a. The Calculation Agent will notify Party B promptly after the close of each Calculation Period of the determined Calculation Period Amount for such period and of the

Calculation Period Factor for the immediately following Calculation Period, and promptly after the Valuation Date of the determined Cash Settlement Amount, and of the determination of each variable and component used to calculate, or affecting, directly or indirectly, the relevant Calculation Period Amount, Calculation Period Factor and the Cash Settlement Amount, as applicable.

b. The Calculation Agent shall prepare and deliver to Party B within three (3) Business Days after the last Business Day in each calendar month (the "Report Date") a report (the "Monthly Report") containing its calculation of the amount that would have been payable as the "Cash Settlement Amount" under this Option if Party B had exercised this Option and the Report Date were the "Valuation Date" hereunder, and each variable and component used to calculate, or affecting, directly or indirectly, such calculated "Cash Settlement Amount". If Party B disagrees with any statement or other item in any Monthly Report, it shall notify the Calculation Agent within 30 (thirty) Business Days of receiving the Monthly Report and the Calculation Agent and Party B will cooperate to resolve their differences with respect to such disagreement. The Monthly Report and the statements and items included therein shall not be conclusive or binding, except that a Monthly Report (as adjusted and modified by Party A and Party B) shall be conclusive and binding with respect to Party A and Party B if agreed to in writing by Party A and Party B.

3. Account Details:

Account for payments to Party A:
To be, and as, provided by Party A.

Account for payments to Party B:

Bank:	Federal Reserve Bank of New York, New York
ABA No:	[redacted]
A/C:	Barclays Bank PLC, New York
Favor:	Barclays Swaps & Options Group, New York
A/C No:	[redacted]
Swift:	BARCUS33

4. Additional Terms and Definitions:

For purposes of this Confirmation, the following terms shall have the meaning specified or referred to in this Section 4:

a. "BCSL Account" means the prime brokerage account established by and in the name of Palomino Limited ("Palomino") with Barclays Capital Securities Limited ("BCSL"), account no. [redacted], pursuant to the Prime Brokerage Agreement, dated September 26, 2002, as may be amended by the parties thereto from time to time (the "BCSL Agreement").

b. "BCI Account" means the prime brokerage account established by and in the name of Palomino with Barclays Capital Inc. ("BCI"), account no. [redacted], pursuant to the Prime Broker Margin Account Agreement, dated September 26, 2002 (as may be amended by the parties thereto from time to time, the "BCI Agreement").

c. "Synthetic Account" means a record prepared by the Calculation Agent and titled "Reference Synthetic Positions", identifying, at all times, (A) the outstanding Synthetic Positions and (B) all other outstanding Permitted Securities, including derivative financial instruments, entered into in accordance with the Investment Guidelines and designated by Renaissance Technologies Corporation (the "Advisor") to be included in the Synthetic Account. For purposes of this Confirmation, the term "Permitted Securities" shall have the meaning ascribed to it in the Investment Guidelines.

d. "Investment Guidelines" means the Investment Guidelines, as amended from time to time in accordance with the Investment Management Agreement, set forth in Annex A to the Investment Management Agreement entered into between Palomino and the Advisor, dated October 1, 2004 as amended and restated on December 21, 2005, a copy of which is attached hereto as Annex A, as amended from time to time by the parties thereto, (the "Investment Management Agreement").

e. "Designated Positions" means, in respect of each Calculation Period, equity securities, Synthetic Positions and other financial positions (whether long or short), credited to, included or deemed included in the Reference Accounts at any time during such Calculation Period, excluding cash.

f. "Calculation Period Return" means, in respect of each Calculation Period, the sum of the corresponding (i) Basket Gains, minus (ii) Basket Losses, minus (iii) Basket Cost.

g. "Basket Gains" means, in respect of each Calculation Period, the sum of all (i) gains realized in respect of Designated Positions at any time during the Calculation Period, (ii) unrealized gains in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the close of the Calculation Period (where the unrealized gain in respect of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on the last day of the Calculation Period), (iii) dividends accrued (based on ex-dividend dates) at any time during the Calculation Period in respect of long Designated Positions, adjusted as set forth in Section 5 below, and (iv) interest and other income received or accrued on or in respect of Designated Positions at any time during the Calculation Period.

h. "Basket Losses" means, in respect of each Calculation Period, the sum of all (i) losses realized in respect of Designated Positions at any time during the Calculation Period, (ii) unrealized losses in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the close of the Calculation Period (where the unrealized loss in respect of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on the last day of the Calculation Period), and (iii) dividend and interest equivalent amounts paid or accrued (based on ex-dividend and ex-interest dates, as applicable) at any time during the Calculation Period in respect of short Designated Positions, adjusted as set forth in Section 5 below.

i. "Basket Cost" means, in respect of each Calculation Period, the (positive or negative) sum of (i) all commissions and fees in connection with the execution of transactions to acquire, create, dispose of or otherwise terminate Designated Positions, to the extent authorized under the Investment Management Agreement (excluding any fees paid to the Advisor and any interest and other financing charges), paid or accrued in connection with the trading of

Designated Positions in accordance with the Investment Management Agreement during the Calculation Period and any expenses reimbursed by Client to the Advisor in accordance with the Investment Management Agreement, plus (ii) the Debit Amount, minus (iii) the product obtained by multiplying (A) the Amortized Daily Premium, by (B) the number of calendar days in the Calculation Period, minus (iv) any realized and unrealized gains (determined at the close of the Calculation Period), interest and other income received or accrued in respect of cash, property or other financial positions credited to, included or deemed included in the Reference Accounts or otherwise credited to the Reference Accounts (excluding gain and income items included in Basket Gains) at any time during the Calculation Period.

j. "Debit Amount" means, in respect of each Calculation Period, the number, denoted by DA, calculated in accordance with the following formula:

$$DA = \sum_{n=1}^{N} DA_n * (\tfrac{FFR_n}{365}), \text{ where:}$$

"N" is, in respect of each Calculation Period, the number of days in the Calculation Period;

"n" is, in respect of each Calculation Period, a series of whole numbers from one to N, each representing the corresponding day in the Calculation Period, where the days in such period are arranged in chronological order from, and including, the first day in such Calculation Period to, and including, the last day in such Calculation Period;

"DA_n" means, in respect of each day included in the Calculation Period, the (negative or positive) sum of (i) the absolute value of the long Designated Positions included (or deemed included) in the Reference Accounts at the close of the nth day of the Calculation Period (where the value of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on such day), plus (ii) the amount of cash included in the Reference Accounts at the close of the nth day of the Calculation Period (excluding cash held in connection with, or as a collateral for, short Designated Positions), minus (iii) the sum of the amounts that would have been payable as "Cash Settlement Amounts" under all RA Options on the nth day of the Calculation Period whose "Valuation Date" has not occurred on or prior to the immediately preceding day, if Party B had exercised all such options, such nth day were treated as the "Valuation Date" for purposes of all such options, and the corresponding "DA_n" for such day for each such option (which may have a different subscript index number under each such option) were zero; and

"FFR_n", for any day in the Calculation Period, is equal to the Federal Funds Rate for the nth day of the Calculation Period plus 25 basis points.

k. "Premium Settlement Amount" means USD 70 million minus the Total Amortized Premium.

l. "Total Amortized Premium" means the product obtained by multiplying (i) the Amortized Daily Premium, by (ii) the number of calendar days in the period commencing on, and including, the Effective Date and ending on, but excluding, the Valuation Date.

m. "Amortized Daily Premium" means the quotient obtained by dividing (i) the Amortizable Premium, by (ii) the number of calendar days in the period commencing on, and including, the Effective Date, and ending on, but excluding, the Scheduled Expiration Date.

5. For purposes of determining Basket Gains, Basket Losses and Basket Cost, (i) gain, loss and any other income or expense items will be computed and taken into account without giving effect to any Tax that might be imposed in respect or by reason thereof, (ii) in respect of each Calculation Period, for purposes of determining gain or loss in such period, the basis of each Designated Position outstanding at the close of the day immediately preceding the first day of such Calculation Period shall be the value used to determine the unrealized gain or loss on such Designated Position in respect of the immediately preceding Calculation Period (or if no such Calculation Period exists, the value of such Designated Position at the Valuation Time applicable to such Designated Position on such immediately preceding day), (iii) any portion of a dividend paid or accrued in respect of shares of stock of a corporation incorporated in any of the countries listed in Annex B hereto (as amended from time to time by the parties hereto), which will be subject to withholding tax by the country in which such corporation is incorporated (or, when the distributing corporation is incorporated in the United States, will be subject to U.S. federal income tax as a taxable dividend), shall be adjusted by multiplying the original amount of such portion by the percentage set forth next to the name of the applicable country in the column "Percentage of Dividends Received on Long Positions", and (iv) any dividend equivalent amount paid or accrued in respect of a short position in stock of a corporation incorporated in any of the countries listed in Annex B hereto (as amended from time to time by the parties hereto), which will be subject to withholding tax by the country in which such corporation is incorporated (or, when the distributing corporation is incorporated in the United States, will be subject to U.S. federal income tax as a taxable dividend), shall be adjusted by multiplying the original amount of such dividend equivalent amount by the percentage set forth next to the name of the applicable country in the column "Percentage of Dividends Paid on Short Liabilities".

6. This Option and the rights and obligations thereunder are not transferable (whether by way of security or otherwise) by either party without the prior written consent of the other party and any purported transfer without such consent shall be void and of no effect.

7. Additional Representations:

Party A and Party B each makes (and as indicated, only Party A or only Party B makes) the following additional representations:

a. It is entering into the Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise, and no other person has any interest herein.

b. Its execution and delivery of this Confirmation and its entering into the Transaction to which this Confirmation relates have been authorized by all required internal actions and do not violate any laws of its jurisdiction of organization or residence, or the terms of any agreement to which it is a party.

c. Upon due execution and delivery of this Confirmation, this Confirmation will constitute its legal, valid and binding obligations, enforceable against it in accordance with its terms, subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally, and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or in law).

d. It is acting for its own account, and has made its own independent decision to enter into this Confirmation and to participate in the Transaction to which this Confirmation relates and as to whether this Confirmation and the Transaction are appropriate or proper for it based upon its own judgment and upon advice of such advisors as it deems necessary.

e. It acknowledges, agrees and confirms that (i) it has not received any advice or counsel from, and is not relying, and has not relied, upon any communication (written or oral) of, the other party or any Affiliate thereof with respect to the legal, accounting, tax or other implications of this Confirmation or the Transaction (including the expiration, sale, assignment or other termination thereof), and that it has conducted its own due diligence review and analyses of the legal, accounting, tax, regulatory and other implications of this Confirmation and the Transaction, including, without limitation, registration or disclosure requirements in respect of the Transaction under any applicable securities, tax or other laws, (ii) information and explanations related to the terms and conditions of this Confirmation and the Transaction shall not be considered investment advice or a recommendation to enter into this Confirmation or to participate in the Transaction, (iii) it has received independent tax advice with respect to this Confirmation and the Transaction, (iv) it is entering into this Confirmation and is participating in the Transaction with a full understanding of all of the terms and risks hereof (economic and otherwise), is capable of evaluating and understanding (on its own behalf or through independent professional advice), and understands and accepts, such terms and risks, and is capable of assuming (financially and otherwise), and assumes, those risks, (v) neither the other party nor any Affiliate thereof is acting as a fiduciary for or an advisor to it in respect of this Confirmation or the Transaction, (vi) it has a valid business purpose for entering into this Confirmation and participating in the Transaction, and the transactions contemplated herein are consistent with its overall business and investment strategy, and (vii) it participated with the other party in the structuring of the Transaction, and in the negotiation and drafting of the Confirmation and the other agreements, documents and instruments to be entered into in connection with the Transaction.

f. Party A represents and agrees that (i) Palomino is an existing corporation, incorporated under the laws of the Cayman Islands, and will remain in existence and in good standing throughout the term of the Transaction, (ii) BBPLC directly or indirectly owns, and will directly or indirectly own at all times during the term of the Transaction, all of the outstanding stock of Palomino, (iii) Palomino has elected to be "disregarded as an entity separate from its owner" for U.S. federal income tax purposes and will retain this status throughout the entire term of the Transaction,

8. The parties agree, that if the Advisor designates the execution of any transaction in accordance with the Investment Guidelines and such transaction is not timely executed, or is not executed, for any reason or for no reason whatsoever, such transaction will be treated, for purposes of this Confirmation, as if it were actually timely executed in accordance with such designation of the Advisor and, therefore, (i) any stock, securities and other financial positions (whether long or short) that would have been credited to or included in the Reference Accounts if such transaction were actually timely executed in accordance with such designation of the Advisor, will be treated as included in the Synthetic Account as of the date (and time) designated by the Advisor for the execution of the relevant transaction (a "Synthetic Position") and will be treated as disposed of or otherwise terminated on the day (and time) so designated by the

Advisor, as applicable; (ii) any stock, securities and other financial positions (whether long or short) that would have been disposed of or otherwise terminated if such transaction were actually timely executed in accordance with such designation of the Advisor, shall be treated as if actually disposed of or otherwise terminated, and excluded from the relevant Reference Account, on the day (and time) so designated by the Advisor; and (iii) any dividend, interest or any other income that would have been received or accrued on or in respect of Synthetic Positions if such transaction were actually timely executed in accordance with such designation of the Advisor, will be credited to the relevant Reference Account in which such transaction would have been executed.

9. In the event that Palomino has replaced the Advisor with respect to any of the Reference Accounts, Palomino has otherwise assumed management of any of the Reference Accounts or the Advisor is prevented, for any reason from effectively managing the Reference Accounts, unless otherwise agreed to in writing by the Advisor, Party A shall cause the commencement of an orderly liquidation and reduction to USD cash of the assets and financial positions (whether long or short) then credited to, included or deemed included within the Reference Accounts over the period commencing on the Exercise Date to and including the Valuation Date, with the objective of minimizing risk and preserving the equity value of the Designated Positions (the "Liquidation" and the "Liquidation Period", respectively), and shall effect such Liquidation in an "equal dollar weighted" manner in approximately equal proportions over the Liquidation Period, such that approximately 25% of the Designated Positions credited to, included or deemed included within the Reference Accounts at the beginning of the Liquidation Period are liquidated on each Valuation Exchange Business Day during such period, and with due regard to effecting proportionate reductions of "long" positions and corresponding "short" positions, provided, however, that the Liquidation may be effected in a different commercially reasonable manner that would minimize risk and preserve the equity value of the Designated Positions, if and to the extent so consented to by the Advisor (which for the avoidance of any doubt does not include any replacement advisor); and provided further that no such consent of the Advisor will be required if the estimated Cash Settlement Amount, calculated by valuing all of the Designated Positions as set forth in Section 10 below on the Exercise Date, payable to Party B is equal to or less than USD 7,000,000.

10. Party A and Party B agree that for purposes of this Confirmation and the Transaction, including, without limiting the foregoing, for purposes of determining the Basket Gains and Basket Losses, Designated Positions and any other relevant stock, securities or other financial positions (whether long or short) will be valued according to the following valuation methods: (i) stock, securities and other financial positions which are traded on an Exchange shall be valued at any time at the last sales price quoted for the securities on (A) the consolidated tape on the date and at the time for which value is being determined, or (B) if no sale occurred on such date, at the mean between the "bid" and the "asked" prices on such date as reported in a recognized interdealer quotation system, (ii) stock, securities and other financial positions which are not traded on an Exchange, but are traded over the counter, shall be valued at the mean between the "bid" and the "asked" prices quoted for such securities, and (iii) stock, securities and other financial positions that are not described in subsections (i) and (ii) above, shall be valued based on a method of valuation to be agreed upon by Party A and Party B.

11. Party B shall pay any and all documentary, stamp, registration or similar taxes and charges that may be payable in respect of (i) the execution of this Confirmation, (ii) the exercise of the Option, and (iii) the payment of the Premium.

12. This Confirmation shall be governed by and construed in accordance with the laws of the State of New York.

13. Each of Party A and Party B shall use its reasonable best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper and advisable to consummate and make effective as promptly as practicable the transactions contemplated by this Confirmation and the Transaction to which it relates in accordance with the terms and conditions hereof and thereof, including (a) using reasonable best efforts to remove any legal impediment to the consummation of such transactions, and (b) the execution and delivery of all such deeds, agreements, assignments and further instruments of transfer and conveyance, necessary, proper or advisable to consummate and make effective the transactions contemplated by this Confirmation and the Transaction in accordance with the terms and conditions hereof and thereof, provided that any such action or thing would not materially prejudice the legal or commercial position of the relevant party.

14. Notwithstanding anything to the contrary in this Confirmation, Party A may, in its sole discretion, terminate this Transaction upon ten (10) Business Days prior written notice to Party B, in the event that (i) any change in applicable law (including, without limitation, any laws, treaties, ordinances, rules, regulations, rulings, interpretations and authorizations of the United States or the United Kingdom or of any political subdivision, regulatory body having authority over Party A or taxing authority thereof or therein) materially and adversely affects Party A's capital charges directly resulting from the Transaction, or (ii) due to the enactment, promulgation, execution or ratification of, or any change in or amendment to, the Code or the Treasury Regulations promulgated thereunder (or in the application or official interpretation thereof by the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires) that occurs on or after the date on which the Transaction is entered into (a "Change in U.S. Tax Law"), Party A is required to treat and report the Designated Positions and any other assets or positions included within the Reference Accounts as assets and positions of which Party B (or an Affiliate thereof) is the beneficial owner for U.S. federal income tax purposes.

15. Except as otherwise hereinafter set forth, the parties hereto agree and acknowledge that the structure and tax aspects of the Transaction and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Transaction and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with the Transaction, including, without limitation, that such party has entered into

the Transaction with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of the Transaction hereunder. Notwithstanding the foregoing, either party may disclose any such Confidential Information (i) to its lawyers or accountants (or similar professional, but not a financial or investment advisor), on a "need-to-know" basis, in connection with advice directly related to the entry, operation or enforcement of any Transaction provided that such person agrees, in writing, not to disclose Confidential Information or (ii) if required by law or any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

16. All amounts required to be paid hereunder to Party B shall be made to a U.S. dollar account maintained in a bank, trust company, broker/dealer or similar financial institution maintained in the United States.

[Signature page follows]

Please confirm that the foregoing correctly sets forth the terms of our agreement by executing the copy of this Confirmation enclosed for that purpose and returning it to us to the attention of John Stracquadanio, c/o Barclays Bank PLC, New York Branch, 200 Park Avenue, New York, NY 10166, Facsimile no.: (212) 412-7463.

Yours sincerely,

BARCLAYS BANK PLC,
acting through its New York Branch

By:
Name: Andrew Shuster
Title: Director

Confirmed as of the date
first above written:

PALOMINO LIMITED

By:
Name: Martin Mulloy
Title: Director

ANNEX A
INVESTMENT MANAGEMENT AGREEMENT

ANNEX B

DIVIDENDS AND DIVIDEND EQUIVALENT AMOUNTS ADJUSTMENT SCHEDULE

Country of Company Paying a Dividend	Percentage of Dividends Received on Long Positions	Percentage of Dividends Paid on Short Liabilities	
ARGENTINA	TBD	TBD	
AUSTRALIA	100	100	
AUSTRIA	85	100	
BELGIUM	85	100	
BRAZIL	TBD	TBD	
CANADA	85	85	
DENMARK	85	85	
FINLAND	100	100	
FRANCE	85	85	
GERMANY	85	85	
HONG KONG	100	100	
INDONESIA	TBD	TBD	
IRELAND	100	100	
ITALY	85	85	Risp 87.5 (long and short)
JAPAN	93	93	
MEXICO	TBD	TBD	
NETHERLANDS	85	85	
NEW ZEALAND	85	85	
NORWAY	85	85	
PHILIPPINES	TBD	TBD	
PORTUGAL	TBD	TBD	
SINGAPORE	100	100	
SOUTH AFRICA	TBD	TBD	
SOUTH KOREA	TBD	TBD	
SPAIN	85	85	
SWEDEN	95	95	
SWITZERLAND	85	100	
UNITED STATES	100	100	

AMENDED AND RESTATED
INVESTMENT MANAGEMENT AGREEMENT

BETWEEN

PALOMINO LIMITED

AND

RENAISSANCE TECHNOLOGIES CORPORATION

Effective as of
October 1, 2004
as amended and
restated with effect
on May [ ], 2008

OHS East:160182098.4
3950-21 SAI/SAI

Palomino Limited
c/o Barclays Bank PLC, New York Branch
200 Park Avenue
New York NY 10166

Tel: +1 (212) 412 4000

BARCLAYS

October 1, 2004 as amended and restated
March [ ], 2008

Renaissance Technologies Corporation
800 Third Avenue
New York, New York 10022

Attention: Mark Silber

Gentlemen:

This letter together with the accompanying Fee Schedule and Investment Guidelines (this "Agreement") sets forth our agreement regarding the engagement of Renaissance Technologies Corporation (the "Manager") to manage a securities trading portfolio for the account of Palomino Limited, an exempted company incorporated in the Cayman Islands (the "Client"), effective as of the date hereof (the "Effective Date"). This Agreement further amends and restates, in its entirety, that certain Investment Management Agreement dated October 1, 2004 between the Manager and the Client as such agreement was amended and restated with effect on December 21, 2005, on December 6, 2006, on February 19, 2007 and again on March 13, 2007 (the "Original Agreement"). On [ ] May 2008, the Original Agreement shall be replaced and superceded in its entirety by this Agreement.

1. Appointment.

The Client hereby appoints the Manager on the terms reflected in this Agreement as discretionary account manager with respect to the Accounts (as defined below) on the terms and conditions contained herein, and the Manager hereby accepts such appointment.

2. The Accounts.

(a) For purposes of this Agreement, the term "Accounts" means (i) the prime brokerage account established by and in the name of the Client with Barclays Capital Securities Limited ("BCSL"), account no. 400262, pursuant to the Prime Brokerage Agreement, dated September 26, 2002, as it may be amended by the parties thereto from time to time (the "BCSL Agreement"), (ii) the prime brokerage account established by and in the name of the Client with Barclays Capital Inc. ("BCI"), account no. 21000200, pursuant to the Prime Broker Margin Account Agreement, dated September 26, 2002, as it may be amended by the parties thereto from time to time (the "BCI Agreement", and together with the BCSL Agreement, the "Prime Brokerage Agreements"), and (iii) a record (the "Reference Positions Account") prepared by Barclays Bank PLC, on behalf of the Client, and titled "Reference Synthetic Positions", identifying, at all times, (A) the outstanding Synthetic Positions, as defined in the investment guidelines attached hereto as <u>Annex A</u> (as they may be amended by the parties hereto from time to

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time, the "Investment Guidelines") and (B) all other outstanding Permitted Securities, including derivative financial instruments, entered into in accordance with the Investment Guidelines and designated by the Manager to be included within the Reference Positions Account. (For purposes of this Agreement, the term "Account" shall mean any of the Accounts).

(b) The Accounts shall initially consist of cash of the Client in the amount of USD 5,000 million that has been placed under the Manager's supervision in the Accounts pursuant to this Agreement (the "Initial Accounts Assets"). The term "Accounts Assets" means (i) the Initial Accounts Assets, (ii) any assets, property, securities and other financial positions (whether long or short, actual or synthetic) that will become part of the Accounts as a result of transactions therein, (iii) any dividends, interest, distributions or other income earned or deemed earned in respect of, and any proceeds received in respect of dispositions or other terminations of, assets, property, securities and other financial positions (whether long or short, actual or synthetic) credited to, included or deemed included within the Accounts and (iv) all other assets included in any of the Accounts from time to time.

(c) The Accounts will focus on (actual or synthetic) short and long positions in exchange-traded and over-the-counter-traded equity securities in Permitted Equity Markets, as defined in the Investment Guidelines. The Manager will carry out the Accounts' trading strategy in accordance with the Investment Guidelines, as may be amended in writing from time to time (the "Trading Strategy").

(d) Until the termination of this Agreement the Client shall ensure, whether by obtaining credit or making capital calls, that Accounts Assets (including cash but excluding Synthetic Positions) shall at all times be sufficient to permit the Manager to trade on behalf of the Client up to the limits contemplated by the Investment Guidelines.

3. Custody and Brokerage.

(a) The Accounts Assets are owned by Client and shall be held in the Accounts with BCSL and BCI, wholly owned broker dealer subsidiaries of Barclays Bank PLC, as the prime broker (the "Custodians"). Neither party shall cause or permit Accounts Assets to be held by any person other than a Custodian, or to be commingled with assets of any person other than the Client or with any other assets of the Client.

(b) The Manager shall not use any brokers through whom any transaction in respect of the Accounts shall be executed (each an "Executing Broker") unless such Executing Broker has been pre-approved by the Client and the Custodians. Each Executing Broker shall be required to enter into an agreement with the Manager and the Custodians (the "Executing Broker's Agreements") detailing such Executing Broker's responsibilities and restrictions with respect to executing trades for the Accounts which agreement or the material terms thereof, as determined by Client, shall be approved by Client.

(c) The Client shall notify the Manager in writing promptly upon receipt of actual knowledge of any noncompliance of the Accounts with the Investment Guidelines or with any law (including U.S. and U.K. securities and banking laws) applicable to the Client ("Notice of Noncompliance"). The Client may, in its reasonable discretion, specify in such Notice of Noncompliance specific trades effected by the Manager during the day on which the noncompliance occurs that are to be assumed by the Manager to the extent, and only to the extent, necessary to bring the Accounts back into compliance with the Investment Guidelines or such applicable laws, as the case may be, and that such specified trades are chosen by the Client based on commercially reasonable judgment and in good faith ("Noncompliant Trades"). The Client may move all Noncompliant Trades immediately to a separate account of the Manager (the "DK Account"). The Manager will have the right to review and object, not later than the close of business on the first Business Day following the day on which it receives the relevant Notice of Noncompliance, to such determinations and to the transfer of any trade to the DK Account. In the event of such an objection by the Manager, the parties will agree in good faith on the specific Noncompliant Trades, if any, to be assumed by the Manager and those, if any, to be moved back to the Accounts. No Noncompliant Trades shall be moved back to the Accounts unless and until such an agreement has been reached by the Client and the Manager.

Without limiting the foregoing, as soon as reasonably practicable after receipt of a Notice of Noncompliance, the Manager shall take such action, after taking into account the effect of its potential assumption of specific Noncompliant Trades pursuant to the immediately preceding paragraph, to the extent it reasonably determines necessary to bring the Accounts back into compliance with the Investment Guidelines or applicable laws, as the case may be.

(d) In the course of selecting brokers, dealers, banks and intermediaries to effect transactions in respect of the Accounts, the Manager may negotiate such commissions, fees and other charges on behalf of the Client as the Manager shall deem to be commercially reasonable in the circumstances taking into account all such factors as it deems relevant, including the quality of research and other services made available to it (even if such services are not for the exclusive benefit of the Client) provided that such commissions, fees and other charges shall be subject to the approval of Client. It is understood that the costs of such services will not necessarily represent the lowest costs available and that the Manager is under no obligation to combine or arrange orders so as to obtain reduced charges.

(e) Except as contemplated by Section 9 of this Agreement, the Manager shall not be responsible for any acts, omissions or errors of the Custodians or Executing Brokers in executing its trading instructions or otherwise.

4. Authority of the Manager.

(a) Subject to the provisions of Sections 3(a), 3(b), 3(c), 3(d), 4(b), 4(e), 4(g) and 7 of this Agreement, the Investment Guidelines and any other investment restrictions or guidelines that may from time to time be communicated in writing by the Client (such provisions, the Investment Guidelines and such restrictions and guidelines, being the "Manager Restrictions"), the Manager shall have full discretion and authority, without obtaining the Client's prior approval, to manage the investment and trading of the Accounts, and shall use its best efforts to increase the value of the Accounts. In furtherance of the foregoing, the Client hereby designates and appoints the Manager as its agent and attorney-in-fact, with full power and authority, subject to the Manager Restrictions, and without further approval of the Client (except as expressly provided herein or as may be required by law), to carry out the following with respect to the Accounts, in the name and on behalf of the Client: (i) to designate for execution and to execute any and all transactions related to securities (as that term is defined in the Securities Act of 1933, as amended) and other Permitted Securities; to make short-sales and to purchase and write options; and to obtain credit from the Custodians (or affiliates thereof) pursuant to the Prime Brokerage Agreements; (ii) to make all decisions relating to the manner, method and timing of investment transactions, and to select brokers, subject to the terms of this Agreement, for the execution, clearance and settlement of any transactions; (iii) to provide any clearing broker with such information regarding the Client as is necessary to enable such clearing broker to open and maintain an account for the benefit of the Client; (iv) to direct the Custodians to deliver Accounts Assets for the purpose of effecting transactions on a delivery versus payment basis; (v) to exercise or abstain from exercising any privilege or right (other than voting and consent rights, which are subject to the provisions of Section 4(g)) attaching to Accounts Assets, or to direct the Custodians with respect to any such privilege or right; (vi) to hold temporary cash balances in the Accounts, with interest thereon credited to the Accounts; (vii) to transfer any part of cash balances and securities or other property or financial positions (whether long or short) in one of the Accounts to the other Account, and (viii) to make and execute all such additional documents and to take all such other actions which the Manager reasonably considers necessary or advisable to carry out its duties hereunder, provided, however, that the Manager may not, except as otherwise provided herein, including subsection (iii) above, open securities accounts in the name of the Client. This power-of-attorney is a continuing power and shall remain in full force and effect until revoked by the Client in writing or subject to Section 13 hereof until this Agreement is terminated, but any such revocation shall not affect any transaction initiated prior to receipt of such notice of revocation. Notwithstanding the foregoing, (i) subject to paragraph A(iii) of the Investment Guidelines, the Client may, prior to execution, reject the purchase or sale of securities designated for execution by the Manager and (ii) the Manager shall not have the authority to retain any sub-advisors for the Client or the Accounts or invest Accounts Assets in any collective investment vehicle without the prior written consent of the Client. The Manager shall be permitted to effect transactions between any of the Accounts and any other account for which the Manager acts as investment adviser. In connection with such transactions, the Manager may act as broker for, receive commercially reasonable commissions from, and have a potentially conflicting division of loyalties and responsibilities regarding both parties to such transactions.

(b) Without the prior written consent of the Client (which may be given with respect to specific transactions or generic classes of transactions), the Manager shall not cause the Client or the Accounts to:

(i) borrow or use other forms of leverage in excess of that permitted by or pursuant to the Investment Guidelines;

(ii) make or give any indemnity, guarantee, warranty or other contractual commitment with respect to the Accounts or the Accounts Assets (other than customary undertakings and commitments regarding settlement of trades and customary warranties as to ownership of Accounts Assets); or

(iii) enter into any new agreement (or make any material change to any existing agreement) with any third party service provider, including brokers, dealers, banks and intermediaries to effect transactions in respect of the Accounts.

(c) For the avoidance of doubt, it is agreed that any cash balances in the Accounts will accrue interest at the rate and pursuant to the terms provided under the Prime Brokerage Agreements.

(d) The Manager further acknowledges its certain other duties and responsibilities set forth in Section 3.3 of the Prime Brokerage Agreements.

(e) In the event that the Custodians determine that the limitation under Section C.3 to the Investment Guidelines is not complied with, the Manager shall sell, transfer, realize or otherwise deal with the Accounts Assets or the Collateral (as defined in the Prime Brokerage Agreements) standing to the credit of the Accounts, to the extent necessary for such limitation to be complied with as soon as reasonably practicable.

(f) The Client represents that BCI and BSCL (or affiliates thereof) will provide within the Accounts, at all times, all of the credit (or, at the Client's discretion, cash) that will be required to effect within the Accounts all of the transactions that are in compliance with the Investment Guidelines, and agrees to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary to cause BCI and BSCL (or affiliates thereof) to provide within the Accounts such level of credit (or, at the Client's discretion, cash) at all times.

(g) At the direction (and only at the direction) of Client, the Manager shall exercise voting or consent rights attaching to Accounts Assets and shall direct the Custodians with respect to any such rights.

5. Fees and Expenses.

(a) For all of the Manager's services hereunder, the Client agrees to pay to the Manager, in advance, $153,846.00 for each three month period, payable on the third Business Day after the Effective Date and on the same date of each third month to occur thereafter (or, if such day is not a Business Day, on the first succeeding Business Day).

(b) All customary expenses incurred directly in connection with the transactions effected for positions held in the Accounts on behalf of the Client pursuant to this Agreement (including, without limitation, trading losses, custodial fees, brokerage commissions and income, withholding or transfer taxes) shall be debited or paid directly from the Accounts. The Manager shall not be obligated to advance any such expense provided that if Manager should choose to advance any such expense it shall be reimbursed out of funds in the Accounts and, to the extent there are insufficient funds in the Accounts, by the Client. Any such customary expenses attributable to the Client and one or more other accounts managed or advised by the Manager or any of its affiliates shall be allocated on an equitable basis among all such accounts.

(c) Any expenses arising in connection with the Manager's services to the Client, other than those specified above and the fees payable to the Manager, shall be reimbursed by Client.

(d) It is understood that the fees and commissions that will be imposed pursuant to the Prime Brokerage Agreements in connection with transactions effected within the Accounts on behalf of the Client pursuant to this Agreement shall be as set forth in Annex B to this Agreement.

6. Investments for the Accounts of Others.

The Client understands and agrees that nothing herein shall restrict the ability of the Manager to engage in any transactions for its own account and for the account of other clients except as provided in Section 7. The Manager shall be under no obligation to account to the Client in respect of (or share with the Client or inform the Client of) any such transaction or any benefit received by the Manager from any such transaction (including, for the avoidance of doubt, management and/or incentive fees).

7. Allocation of Opportunities.

The Manager shall act in a fair and reasonable manner in allocating investment and trading opportunities between the Accounts and any other account over which the Manager or an affiliate exercises investment discretion (collectively with the Accounts, the "Renaissance Accounts"). In furtherance of the foregoing, the Manager may consider participation by the Accounts in all appropriate opportunities within the purpose and scope of the Accounts' objectives, and the Manager may evaluate such factors as it considers relevant in determining whether a particular situation or strategy is suitable and feasible for the Accounts (which factors may, but need not, include the capital available for investment at any particular time, the nature of the opportunity in the context of the Accounts' other positions at the time, the liquidity of the investment relative to the needs of the Accounts, the transaction and borrowing costs involved and the tax consequences of the investment). When the Manager determines that it would be appropriate for the Renaissance Accounts to participate in an investment opportunity, the Manager shall, to the extent practicable, execute orders on a basis which is equitable.

8. Access to Information.

(a) The Manager will arrange for the Client to be furnished with confirmations for all transactions for the Accounts.

(b) Daily trades sheets with a summary of the day's trades must be sent to the Client each day (in electronic or other written form) regardless of the activity in the Accounts.

(c) Within three (3) Business Days after the end of each calendar month, the Manager shall transmit to the Client at its principal office a monthly valuation report stating as of the close of business on the last Business Day of such calendar month the value of Accounts Assets and any associated liabilities in the Accounts.

(d) The Manager shall give immediate written notice to the Client in the event that none of Jim Simons, Henry Laufer, Peter Brown and Bob Mercer (the "Key Men") remains actively involved in the daily supervision of transactions and positions in the Accounts.

(e) The Manager shall furnish such information as the Client may reasonably request to monitor compliance with the Investment Guidelines, subject to the Manager's fiduciary and legal obligations (including obligations having the force of law).

(f) The Manager shall furnish the additional information required pursuant to this Agreement, subject to the Manager's fiduciary and legal obligations (including obligations having the force of law).

(g) The Manager shall retain, for a period of at least two years, copies of any documents generated or received by the Manager in the ordinary course of business pertaining to the financial condition of the Accounts or to the compensation payable to the Manager under this Agreement. At the request of the Client, the Manager shall afford to the Client's independent auditors reasonable access to such documents during customary business hours and shall permit the Client's auditors to make copies thereof or extracts therefrom at the expense of the Client.

(h) Promptly following termination of the Agreement, the Manager shall furnish to the Client a copy of all relevant documentation in the Manager's possession concerning rights, privileges and obligations relating to any open Accounts positions at the time of such notice of termination.

9. Scope of Liabilities.

Notwithstanding anything to the contrary herein, the Manager shall not be liable to the Client for any act or omission in connection with the performance of the Manager's services hereunder, other than as a result of its (i) gross negligence, (ii) bad faith, (iii) material violation of applicable law or (iv) material breach of any of the terms of this Agreement (including the Investment Guidelines) unless such material breach occurred as a result of market events or market conditions beyond the control of the Manager notwithstanding the Manager's good faith attempt to comply with the terms of this Agreement (including the Investment Guidelines). Nothing herein shall be construed to limit the provisions of Section 3(c) above.

10. Agent.

For all purposes of this Agreement, the Manager shall be an agent and not an employee of the Client and nothing in this Agreement shall be construed as making the Client a partner or co-venturer with the Manager or any of its affiliates or other clients. Except as provided in this Agreement, the Manager shall not have any authority to bind, obligate or represent the Client.

11. Confidentiality.

Subject to the Manager's, the Client's, the Custodian's and Barclays Bank PLC's respective duties to comply with any demand of any self-regulatory, regulatory, judicial or taxing authority having jurisdiction over it, or as necessary in dealing with trading counterparties for the Accounts, neither the Manager nor the Client shall disclose or use for any purpose unrelated to this Agreement, and each shall preserve the confidentiality of, all information pertaining to the Accounts, the terms of this Agreement, the Manager's advice with respect to the Accounts and other non-public information furnished by the Manager to the Client or by the Client to the Manager, in either case, hereunder, and the Manager's other actions in respect thereof; provided, however, that (i) the Manager's composite performance record may include the results of the Accounts' trading and (ii) Client and Manager may disclose such information to their respective lawyers, accountants or replacement investment manager under subsection 13(f) or 13(i) (or similar professional, but not a financial or investment advisor), on a "need-to-know" basis, in connection with advice directly related to the entry, operation or enforcement of this Agreement provided that such person agrees, in writing, not to disclose such information. Notwithstanding anything to the contrary herein, any party to this Agreement (and any employee, representative, or other agent of any party to this Agreement) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of the transactions contemplated herein and all materials of any kind (including opinions or other tax analyses) that are provided to it relating to such tax treatment and tax structure (but no other details regarding matters covered by this Agreement, including, without limitation, the identities of the parties).

12. Representations and Warranties.

(a) Each of the parties to this Agreement hereby represents that it is duly authorized and empowered to execute, deliver and perform this Agreement and that such action does not conflict with or violate any provision of law, rule or regulation, contract, deed of trust, or other instrument to which it is a party or to which any of its property is subject, and that this Agreement is a valid and binding obligation of such party, enforceable against it in accordance with its terms.

(b) The Manager represents and covenants that it has and will maintain all necessary governmental and regulatory licenses, approvals and/or exemptions to provide the services contemplated herein and such memberships in self-regulatory organizations as may be required by law.

(c) Client is not, and at all times during the term hereof shall not be, (i) an employee benefit plan (an "ERISA Plan"), as defined in Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), subject to Title I of ERISA or Section 4975 of the Internal Revenue Code of 1986, as amended or (ii) a person acting on behalf of an ERISA Plan, and where the Client accepts ERISA Plan assets, the aggregate of the interests in the Client's assets held by the employee benefit plans will always be less than the threshold at which the Client will be deemed to hold assets of an ERISA Plan.

(d) Client represents and covenants that it is and will remain for the term of this Agreement a "qualified eligible person," as such term is defined in Rule 4.7 under the Commodity Exchange Act. Client hereby consents to the Accounts being treated as "exempt accounts" pursuant to the provisions of Rule 4.7.

13. Termination.

(a) This Agreement shall commence as of the Effective Date and shall continue in effect until the date on which the Agreement is terminated.

(b) This Agreement shall be subject to termination by the Manager for any reason upon ten (10) Business Days prior written termination notice to the Client, and by the Client for any reason upon the later of (i) the sixtieth (60^{th}) calendar day, and (ii) the twentieth (20^{th}) Exchange Business Day immediately following the date on which the Client delivers a prior written termination notice to the Manager.

(c) The Client will have the right to terminate this agreement upon written notice to the Manager specifying the applicable grounds thereof: (i) for Cause (as defined below), or (ii) for Material Cause (as defined below), or (iii) upon a Change in Tax Law (as such term is defined in the ISDA Master Agreement – (Multicurrency – Cross Border)) effected by a U.S. federal taxing authority, materially and adversely affecting the Client's interest in the Accounts managed under this Agreement, in each case at any time. This Agreement shall terminate immediately after a written notice pursuant to subsection 13(c) above is delivered to the Manager.

(d) "Cause" means with respect to the Manager: (i) a material violation of law, rule or regulation the violation of which would reasonably be related to an investment manager's performance of or ability to perform its obligations under an investment management agreement ("Applicable Law"), (ii) a material breach of this Agreement (other than the Investment Guidelines), (iii) the loss of any material license or revocation or involuntary removal of any regulatory authority of the Manager for any reason, (iv) a violation by the Manager of the Investment Guidelines, to the extent that such violation has not been cured within 5 Business Days, (v) a Termination Event or an Event of Default as defined under the Prime Brokerage Agreements between the Client and the Custodians which causes liquidation of the Accounts' positions, provided, however, that such Termination Event or Event of Default shall not be permitted to have occurred unreasonably or in absence of the Client's good faith, or (vi) any adversary proceeding is instituted against the Manager without its consent, seeking to adjudicate it bankrupt or insolvent, or seeking dissolution, liquidation, winding up, reorganization, arrangement, adjustment, protection, relief of debtors, or seeking the entry of any order or decree approving or ordering any such relief or the appointment of a receiver, trustee, custodian or other similar official for the Manager, or for any substantial part of its property, under any applicable bankruptcy or insolvency laws, and both (x) such proceeding has not been dismissed within 15 calendar days and (y) no such order or decree approving or ordering any such relief in such proceeding has been entered by the relevant court.

(e) Upon termination of this Agreement, whether pursuant to subsection 13(b) or 13(c), the Manager, at the written request of the Client, shall conduct an orderly disposition of all Accounts positions (other than any positions that have been withdrawn from the Accounts following termination), with the objective of minimizing market impact in preserving the remaining equity value of the Accounts using reasonable best efforts, given the market conditions existing at the time. Solely for the purpose of complying with such a request (but not for the purpose of making new purchases or commitments which are not intended to reduce risk with respect to Accounts Assets), the authority granted to the Manager hereunder shall remain in effect for the duration of any period during which the Manager is winding up the Accounts. Termination of this Agreement shall be without prejudice to the completion of transactions already initiated. The Manager shall make any individual identified in Section 8(d) hereof, who is employed by the Manager at that time, reasonably available to consult periodically with the Client regarding the disposition of remaining Accounts positions. Upon completion of such winding up of the Accounts, Client will promptly terminate the Prime Brokerage Agreements and the Accounts will be inactivated.

(f) The Manager hereby acknowledges that in the event of Material Cause, the Client may elect in its sole discretion to (i) replace the Manager with another investment manager with respect to the Accounts, which investment manager shall have all the rights and obligations of the Manager under this Agreement, or (ii) assume management of any of the Accounts.

(g) Notwithstanding termination of this Agreement, (i) except as otherwise expressly provided herein, the provisions of this Agreement shall remain in effect for as long as any positions remain in the Accounts for disposition by the Manager or by Client pursuant to subsection 13(f) above and 13(h) below, and (ii) the provisions of Sections 9, 11, 18 and 19 hereof shall survive such termination and disposition of all Accounts positions.

(h) "Material Cause" means with respect to the Manager (i) a material violation of Applicable Law which directly relates to and/or has a material effect on any of the Accounts, (ii) intentional misconduct or gross negligence, (iii) none of the Key Men is employed by the Manager, (iv) the Manager is prevented, for any reason, from effectively managing any of the Accounts, (v) the absolute value of L – S, as defined in the Investment Guidelines, is greater than $5,000 million, (vi) the value of L + S, as defined in the Investment Guidelines, is greater than $40,000 million, (vii) the Accounts Equity, as defined in the Investment Guidelines, is less than 4.556% of L + S, (viii) the Net Sector Position, as defined in the Investment Guidelines, for Financials, Health and Technology is greater than 150% of Accounts Equity and for any other sector is greater than 125% of Accounts Equity, or the aggregate value of the three largest Net Sector Positions is greater than 300% of Accounts Equity, provided, however, that if such increase in the Net Sector Positions and/or aggregate value of the three largest Net Sector Positions is solely as a result of a change in the definitions in the US portion of the Global Barra model BIME2.1 then such increase shall not constitute Material Cause, (ix) the Accounts Equity is less than or equal to Seventy-Eight Million Five Hundred Thousand Dollars (USD 78,500,000), (x) any proceeding is instituted against the Manager, either by the Manager or any other party, with its consent, seeking to adjudicate it bankrupt or insolvent, or seeking dissolution, liquidation, winding up, reorganization, arrangement, adjustment, protection, relief of debtors, or seeking the entry of any order or decree approving or ordering any such relief or the appointment of a receiver, trustee, custodian or other similar official for the Manager, or for any substantial part of its property, under any applicable bankruptcy or insolvency laws, or (xi) any proceeding is instituted against the Manager without its consent, seeking to adjudicate it bankrupt or insolvent, or seeking dissolution, liquidation, winding up, reorganization, arrangement, adjustment, protection, relief of debtors, or seeking the entry of any order or decree approving or ordering any such relief or the appointment of a receiver, trustee, custodian or other similar official for the Manager, or for any substantial part of its property, and any such order or decree approving or ordering any such relief has been entered by the relevant court. Notwithstanding any other provision of this Agreement, the Client shall have the rights set forth in section 13(f) on the occurrence of any event that constitutes Material Cause.

(i) If (i) the Client replaces the Manager with another investment manager with respect to any of the Accounts, or (ii) the Client otherwise assumes management of any of the Accounts and, in each case, unless otherwise agreed to in writing by the Manager (which for the avoidance of any doubt does not refer to any replacement manager appointed by the Client), the Client shall cause the commencement of a sale or an orderly liquidation and reduction to USD cash of the assets and financial positions (whether long or short and including Synthetic Positions) then credited to, included or deemed included within the Accounts Upon completion of such winding up of the Accounts, Client will promptly terminate the Prime Brokerage Agreements and the Accounts will be inactivated.

14. Certain Definitions.

(a) "Business Day" means any day on which banks are open for business in New York City.

(b) "Exchange" means each exchange or quotation system, if any, which constitutes with respect to any of the Designated Positions, the principal exchange or quotation system on which such Designated Position is actively traded, as reasonably determined by the Client.

(c) "Exchange Business Day" means any day that is (or, but for the occurrence of a Trading Suspension would have been) a trading day on each Exchange other than a day on which trading on any such Exchange is scheduled to close prior to its regular weekday closing time.

(d) "Trading Suspension" means, with respect to any security, a suspension of trading (by reason of movements in price exceeding limits permitted by the relevant Exchange or otherwise) on the relevant Exchange for a period of more than one (1) hour.

15. Notices.

Any communications or notices provided for in this Agreement shall be sent to the Manager and to the Client in writing to the following addresses, or to such other addresses as the parties may direct by written notice hereunder:

If to the Manager:

Renaissance Technologies Corporation
800 Third Avenue
New York, NY 10022

Attention: Mark Silber

Telephone: (212) 486-6780
Telecopier: (212) 758-7136
E-mail: silber@rentec.com

with copies to:
jrowen@rentec.com
carla@rentec.com
mercer@rentec.com
mikeo@rentec.com
tkerns@rentec.com

with a copy to:

Renaissance Technologies Corporation
600 Route 25A
East Setauket, NY 11733

Attention:	Peter Brown
Telephone	(631) 444-7010
Telecopier:	(631) 689-4495
E-mail:	peter@rentec.com

If to the Client:

Palomino Limited
c/o Barclays Bank PLC, New York Branch
200 Park Avenue
New York, New York 10166

Attention:	John Stracquadanio
Telephone:	(212) 412-2180
Telecopier:	(212) 412-7463
E-mail:	john.stracquadanio@barclayscapital.com with copies to: marty.malloy@barclayscapital.com lauren.malafronte@ barclayscapital.com

All communications or notices sent to the addresses or telecommunication numbers provided above (or as otherwise directed by the parties by notice hereunder) shall be deemed to have been duly given on the applicable date referred to below unless such date is not a Business Day, in which case, it shall be deemed to have been duly given on the next Business Day: (i) the date of receipt if delivered by hand; (ii) the date five (5) Business Days after posting if transmitted by first class mail, postage prepaid; (iii) the date of receipt if transmitted by telecopier or electronic mail; or (iv) the date one (1) Business Day after delivery to an internationally recognized courier service, whichever shall first occur.

16. Assignment.

This Agreement may not be assigned, nor may any obligations hereunder be transferred or delegated, by either party without the prior written consent of the other party.

17. Modification; Waiver.

Except as otherwise expressly provided herein, this Agreement shall not be supplemented or amended, nor shall any provision of this Agreement be considered modified or waived, unless evidenced by a writing signed by both parties.

18. Governing Law.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(b) All transactions for the Accounts shall be subject to all applicable rules, regulations and customs of any exchange or market and its clearinghouse on which transactions are executed and to all applicable government acts or statutes and to the rules and regulations thereunder. Except as expressly provided herein to the contrary, the Manager shall not be liable to the Client as a result of any actions taken to comply with such rules, regulations or customs.

19. Consent to Jurisdiction; Arbitration.

The parties hereto agree that any action or proceeding arising directly or indirectly in connection with, out of, related to or from this Agreement, any breach hereof or any transaction covered hereby, shall be resolved, whether by arbitration or otherwise, within the County of New York, City of New York and State of New York. Accordingly, the parties consent and submit to the jurisdiction of the federal and state courts and any applicable arbitral body located within the County of New York, City of New York and State of New York. The parties further agree that any such action or proceeding brought by either party to enforce any right, assert any claim or obtain any relief whatsoever in connection with this Agreement shall be brought by such party exclusively in federal or state courts, or, if appropriate, before any applicable arbitral body, located within the County of New York, City of New York and State of New York.

The Client hereby irrevocably appoints Barclays Bank PLC, New York Branch, at 200 Park Avenue, New York, NY 10166, to receive, for it and on its behalf, service of process in any proceedings.

20. Client Receipt of Manager's Brochure.

The Client hereby acknowledges receipt of the Manager's current Form ADV Part II or brochure statement in lieu thereof.

PURSUANT TO AN EXEMPTION FROM THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH ACCOUNTS OF QUALIFIED ELIGIBLE PERSONS, THIS ACCOUNT DOCUMENT IS NOT REQUIRED TO BE, AND HAS NOT BEEN, FILED WITH THE COMMISSION. THE COMMODITY FUTURES TRADING COMMISSION DOES NOT PASS UPON THE MERITS OF PARTICIPATING IN A TRADING PROGRAM OR UPON THE ADEQUACY OR ACCURACY OF COMMODITY TRADING ADVISOR DISCLOSURE. CONSEQUENTLY, THE COMMODITY FUTURES TRADING COMMISSION HAS NOT REVIEWED OR APPROVED THIS TRADING PROGRAM OR THIS ACCOUNT DOCUMENT.

[Signature page follows]

Kindly confirm that this Agreement accurately reflects our entire understanding by signing and returning a counterpart of this letter.

Very truly yours,

PALOMINO LIMITED

By: ______________________________
Name:
Title:

Confirmed as of the Effective Date:

RENAISSANCE TECHNOLOGIES CORPORATION

By: ______________________________
Name:
Title:

ANNEX A

INVESTMENT GUIDELINES

A. Permitted Investments:

The Accounts shall consist solely of:

(i) Cash;

(ii) Long and short positions in shares of stock, equity securities, American depository receipts, global depository receipts and similar equity-related financial instruments, and other derivative and financial positions as may be agreed upon by the Client and the Manager from time to time, actively traded in the countries listed below or in any other countries as may be permitted by the Client and the Custodians from time to time upon the recommendation of the Manager (collectively, and together with derivatives and other financial positions authorized pursuant to Section A(iv) hereof, "Permitted Securities" and "Permitted Equity Markets", respectively):

Argentina
Australia
Austria
Belgium
Brazil
Canada
Denmark
Finland
France
Germany
Hong Kong
Indonesia
Ireland
Italy
Japan
Malaysia
Mexico
Netherlands
New Zealand
Norway
Philippines
Portugal
Russia
Singapore
South Africa
South Korea
Spain
Sweden
Switzerland
Taiwan
Thailand
Turkey
United Kingdom
United States;

(iii) Any transaction that the Manager designates for execution in accordance with these Investment Guidelines and that is not timely executed, or is not executed, for any reason or for no reason whatsoever, will be treated, for purposes of this Agreement, as if it were actually timely executed in accordance with such designation of the Manager and, therefore, (i) any stock, securities and other financial positions (whether long or short) that would have been credited to or included in the Accounts if such transaction were actually timely executed in accordance with such designation of the Manager will be treated as included in the Reference Positions Account as of the date (and time) designated by the Manager for the execution of the relevant transaction (a "Synthetic Position") and will be treated as disposed of or otherwise terminated on the day (and time) so designated by the Manager, as applicable; (ii) any stock, securities and other financial positions (whether long or short) that would have been disposed of or otherwise terminated if such transaction were actually timely executed in accordance with such designation of the Manager shall be treated as if actually disposed of or otherwise terminated, and excluded from the relevant Account, on the day (and time) so designated by the Manager; and (iii) any dividend, interest or any other income that would have been received or accrued on or in respect of Synthetic Positions if such transaction were actually timely executed in accordance with such designation of the Manager will be credited to the relevant Account in which such transaction would have been executed.

(iv) Other derivatives and financial positions substantially relating or referring, directly or indirectly, to Permitted Securities, as may be agreed upon by the Manager and the Client in writing from time to time, which Permitted Securities so designated shall be deemed included in the Reference Positions Accounts for all purposes.

B. Position Limits:

The limitations set forth below shall apply to the aggregate position or positions, as applicable, credited to, included or deemed included in the Accounts.

1. The value of the aggregate position in any security, on any day that is a trading day on the principal exchange on which such relevant security is traded (a "Trading Day"), determined at the close of trading on such Trading Day, will not exceed the lesser of:

(i) The greater of (A) 3 (three) times the arithmetic mean of the Daily Trading Volumes (as defined below) during the first 10 Trading Days immediately preceding such day in the relevant security and in other related securities of the same issuer, and (B) 5% of the Accounts Equity, as defined below;

(ii) 1.5% (or such greater percentage as notified by the Client to the Manager from time to time) of the value of the total outstanding shares of stock and other related securities of the issuer of the relevant security; and

(iii) 55% of Accounts Equity.

For purposes of this Section B.1, the term Daily Trading Volume shall mean, with respect to any security and any Trading Day, the product of (A) the number of such securities traded on such Trading Day, multiplied by (B) the corresponding closing price for such security on such Trading Day.

2. The total value of the long positions in any security of an issuer with a ticker symbol listed on Schedule 1 attached hereto (as it may be amended from time to time by mutual agreement of the parties) shall not exceed on any day 1.5% of the value of the outstanding units of such security. The total value of the long positions in all securities of all issuers with sedol codes listed on Schedule 1 attached hereto (as it may be amended from time to time by mutual agreement of the parties) shall not exceed on any day GBP 350 million.

3. No positions (whether long or short) in securities issued by Barclays Bank PLC or its affiliates, as listed in Annex A, Schedule 2 attached hereto, will be included in the Accounts. Client will be responsible for advising the Manager of any changes to the list of securities issued by Barclays Bank PLC or its affiliates which can not be traded.

4. Client will be responsible for advising the Manager, on a daily basis, in an electronic format that is accessible by the Manager, of any securities that are restricted to (i) liquidation only or (ii) no change in the current position, as listed by security and one of ISIN, SEDOL or CUSIP.

5. No positions that consist of equity in pass-through entities (for U.S. tax purposes), including passive foreign investment companies (as defined in Section 1297 of the Internal Revenue Code of 1986, as amended), listed (by security and ticker symbol) in Annex A, Schedule 3, will be included in the Accounts. Client will be responsible for advising the Manager, on a daily basis, of any changes to Annex A, Schedule 3, in an electronic format that is accessible by the Manager. Any additions to the list will cause the Manager to liquidate any positions in a reasonable period of time, as determined by the Manager in its sole discretion.

C. <u>Trading Limits</u>:

1. All borrowing, financing, or other leveraging transaction will be effected within the Accounts only with the Custodians (or any Affiliate thereof) pursuant to the Prime Brokerage Agreements (or any successor thereto).

2. The value of L plus S, each as defined below, shall not at any time exceed USD 35,000 million.

3. The Accounts Equity, as defined below, shall at no time be less than, the greater of (i) 5% of the sum of L plus S or (ii) the sum of (A) 2.7778% of the sum of L plus S plus (B) the product of 0.1111% of the sum of L plus S multiplied by the sum of L plus S divided by USD 1,000 million, or (iii) the sum of (A) 1.8521% of the sum of L plus S plus (B) the product of 0.1157% of the sum of L plus S multiplied by the sum of L plus S divided by USD 1,000 million plus (C) 23.1479% of the absolute value of the difference of L minus S, less (D) the product of 0.1157% of the sum of L plus S multiplied by the absolute value of the difference of L minus S divided by USD 1,000 million.

4. The absolute value of the difference of L minus S, each as defined below, shall not at any time exceed USD 4,000 million.

For the purposes of this Annex A,

"L" means, at any time, the sum of the absolute values of all long positions credited to, included or deemed included within the Accounts.

"S" means, at any time, the sum of the absolute values of all short positions credited to, included or deemed included within the Accounts.

"Accounts Equity" means the sum of (i) USD 785 million, plus (ii) the cumulative profits, whether realized or unrealized, in respect of Permitted Securities, Synthetic Positions and other financial positions (whether long or short), credited to, included or deemed included within the Accounts at any time ("Accounts Positions"), minus (iii) the cumulative losses, whether realized or unrealized, in respect of Accounts Positions included in the Accounts at such time, minus (iv) the amount of any net profits withdrawn from the Accounts by the Client with the consent of the Manager .

D. Sector Limits:

1. For each sector, the sum of (a) the absolute value of all long positions plus (b) the absolute value of all short positions, in each case credited to, included or deemed included within the Accounts which relate to one particular sector (a "Gross Sector Position") shall not exceed 27% of the sum of L plus S.

2. Subject to Section D.1. above, if any individual Gross Sector Position exceeds 23% of the sum of L plus S, then no other Gross Sector Position shall exceed 17% of the sum of L plus S. If the largest Gross Sector Position is less than or equal to 23% of the sum of L plus S, then each other Gross Sector Position shall not exceed 23% of the sum of L plus S.

3. For each sector, the absolute value of the difference of (a) the absolute value of any long positions credited to, included or deemed included within the Accounts that relate to such sector minus (b) the absolute value of any short positions credited to, included or deemed included within the Accounts that relate to such sector (a "Net Sector Position") shall not exceed 100% of the Accounts Equity.

4. Subject to D.3. above, the aggregate value of the three largest Net Sector Positions shall not exceed 200% of Accounts Equity, and the aggregate value of the five largest Net Sector Positions shall not exceed 250% of Accounts Equity.

For purposes of this section, the definitions in the US portion of the Global Barra model BIME2.1 shall be used to identify which positions belong to which "sector". Each position shall first be assigned to the single "industry" within its local market to which it has the highest exposure according to the Barra risk matrix and, in the case of non-U.S. securities, further mapped to one industry in the Barra USE3L Model. If a position is equally exposed to 2 or more industries and the amount of such exposures is higher than any other exposure for such position, then the position shall belong to the industry that ranks first alphabetically. Once identified with an industry, the position shall belong to the sector associated with that industry in the US portion of the Global Barra model BIME2.1.

E. Legal Limits:

All transactions will comply with applicable laws and regulations. The Manager shall not be in breach of these Investment Guidelines in respect of any law or regulation if Manager could not reasonably foresee, and Client has not notified Manager in writing, that such law or regulation would be applicable to Client.

F. General Strategy: Long/Short Statistical Arbitrage

SCHEDULE 1

The parties agree that the ticker symbols listed below comprise Annex A, Schedule 1 to the Amended and Restated Investment Management Agreement between Palomino Limited and Renaissance Technologies Corporation dated March 13, 2007 and replace any prior agreement related to the same subject matter.

OHS East:160182098.4
3950-21 SAI/SAI

From: Kittell, Robert W: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=kittellr>
Sent: Tue Apr 21 2009 13:14:31 EDT
To: Nicholson, John C: Markets (NYK) </o=bzw/ou=usa/cn=recipients/cn=nichojoh>
CC: Feraca, John: Markets (NYK) </o=bzw/ou=usa/cn=recipients/cn=feracajo>;Coghlan, John: Markets (NYK) </o=bzw/ou=usa/cn=recipients/cn=coghlanj>;Malloy, Marty: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=markets/cn=malloym>
Subject: RE: June Balance sheet targets
Attachments:

Importance: Normal
Priority: Normal
Sensitivity: None

John,
Spoke with Marty. He is expecting to hear back from Rentec any day on this. Accounting has given approval of the treatment, but has asked for a sign-off from the client (accounting is trying to protect against us changing our mind and reconsolidating at a later date). Rentec wasn't comfortable with directly signing off on the deconsolidation, as they didn't view this to be their problem. They are now considering a proposal to include some new language in their investment management document which would require them to sign off should we seek to reconsolidate at a later date. We hope that this will satisfy both sides and that we can get this done by month-end.

Will keep you posted on any developments.
-Rob

From: Nicholson, John C: Markets (NYK)
Sent: Tuesday, April 21, 2009 6:32 AM
To: Kittell, Robert W: CFG Mgmt (NYK)
Subject: Re: June Balance sheet targets

Did palomino get deconsolidated?

From: Kittell, Robert W: CFG Mgmt (NYK)
To: Nicholson, John C: Markets (NYK)
Sent: Tue Apr 21 06:07:18 2009
Subject: Re: June Balance sheet targets

I will take a shot at laying something out for you to look at on Thursday.

From: Nicholson, John C: Markets (NYK)
To: Kittell, Robert W: CFG Mgmt (NYK)

Sent: Tue Apr 21 03:55:56 2009
Subject: FW: June Balance sheet targets

Rob,
We will need to prioritize how to get there.
John

From: Nagpal, Ajay: Markets (NYK)
Sent: 20 April 2009 20:19
To: Coghlan, John: Markets (NYK); Dauhajre, Munir: Sales (NYK); Malloy, Marty: CFG Mgmt (NYK); McBryan, John N: CFG Mgmt (NYK); Nagpal, Ajay: Markets (NYK); Stack, Tim: Futures (LDN); Tuckman, Bruce: Markets (NYK); Lohuis, David W: Markets (NYK); Webb, Michael A: Markets (NYK); Luglio, Thomas: Sales (NYK); Hodge, Alasdair: CFG Mgmt (LDN); Nicholson, John C: Markets (NYK); Maloney, Walter G: Markets (NYK); Hurley, Janet T: Markets (NYK); Logozzo, Joseph: Markets (NYK); Mannan, Sadat: Equity Finance (LDN); Yang, Angus: Markets (TKY); Rozen, Brian: Markets (LDN); Kittell, Robert W: CFG Mgmt (NYK)

Subject: June Balance sheet targets

June balance sheet targets are

FID repo: 40.3
Eq Fin: 30.6
Futures: 8.5

Ajay

From: Shah, Abhinav: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=shahab>
Sent: Thu Apr 23 2009 20:41:51 EDT
To: McSweeney, Louise: Finance (LDN) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=mcsweenl>
CC: Wade, Graham: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=wadeg>;Constant, Simon: Barclays Capital (NYK) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=constans>
Subject: Colt
Attachments: Palomino Memo for PwC_Draft 23 April 2009.doc;Palomino Memo for PwC_Draft 23 April 2009 [Clean].doc

Importance: Normal
Priority: Normal
Sensitivity: None

Louise

Marty Malloy spoke with RenTec today and they have indicated that they are fine with the proposal in principle, although they apparently mentioned that their tax counsel would also be putting together a letter agreement of some kind for us to review in the next couple of days. Not clear at this stage what it will contain.

However, given the movement in the right direction, please find attached a draft of the paper for PwC (clean and blackline against that last seen by you, although I would read the clean since blackline looks like everything has been changed as a result of moving sections around). We are still waiting on information from Prime Services to complete the analysis, but we will chase them tomorrow (Simon, please can you follow up with them?).

I am away for a couple of weeks from Monday, but Simon will be around, so please follow up with him in my absence. Obviously happy to discuss tomorrow if you get time to look at the paper.

Regards.

Ab

Abhinav Shah | BARCLAYS CAPITAL
745 Seventh Avenue | 6th Floor | New York, NY 10019
P: +1 212 526 0060 | F: +1 212 412 5681 | [redacted]
E-mail: abhinav.shah@barcap.com

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: Malloy, Marty: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=markets/cn=malloym>
Sent: Thu Apr 30 2009 22:35:13 EDT
To: Constant, Simon: Barclays Capital (NYK) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=constans>;Wade, Graham: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=wadeg>
CC:
Subject: FW: Palomino letter
Attachments: NY-#1237596-v2-RenaissanceBarclaysJRowenversion.lt-2.DOC

Importance: Normal
Priority: Normal
Sensitivity: None

copy of the letter

thanks

Marty

-----Original Message-----
From: Jim Rowen [mailto:jrowen@rentec.com]
Sent: 01 May, 2009 5:49 AM
To: Malloy, Marty: CFG Mgmt (NYK)
Subject: Palomino letter

Marty

Please find attached a letter highlighting our concerns and representations that Renaissance would like Barclays to make in connection with the changes you are contemplating for Palomino.

Please let me know your thoughts.
Regards
Jim

--
James S. Rowen
Chief Operating Officer
Renaissance Technologies LLC
800 Third Avenue
New York, New York 10022-7604
212-829-4492

April 29, 2009

Mr. Martin Malloy
Managing Director
Barclays Bank PLC, New York Branch
745 7th Avenue, 6th Floor
New York, NY 10019

Re: Palomino Limited

Dear Marty:

This letter refers to our recent discussions regarding Palomino Limited ("Palomino") and the Investment Management Agreement between Renaissance Technologies LLC ("Renaissance"), as Manager, and Palomino, as Client, effective as of 13 June 2008, as restated, amended or modified by the parties thereto from time to time (the "Investment Management Agreement").[1]

You have advised us that certain amendments to Palomino's Amended and Restated Memorandum of Association and Amended and Restated Articles of Association (the "Memorandum and Articles of Association") are under consideration. We note that the rights of Palomino's owners to amend its Memorandum and Articles of Association are subject to full compliance with, and the due performance of, the obligations of Palomino under the Investment Management Agreement and the obligations of Barclays under any agreements with Renaissance or with any entities for which Renaissance is the investment manager or investment advisor.[2]

We would ask that you confirm that nothing in any amendment or modification to the Memorandum and Articles of Association of Palomino that may be adopted will:

---

1 Capitalized terms not defined herein have the meanings ascribed to them in the Investment Management Agreement or the ISDA Master Agreement (as hereinafter defined) or the Confirmations (as hereinafter defined).

2 Barclays has entered into the ISDA Master Agreement dated as of October 1, 2004 between Barclays, as Party A, and Badger Holdings L.P., as Party B, as amended and supplemented from time to time (the "ISDA Master Agreement"), and into various letter agreements (each, a "Confirmation") between Party A and Party B, each of which Confirmations supplements, forms part of and is subject to the ISDA Master Agreement.

(i) affect adversely the ability of Palomino or Barclays to fully comply with and duly perform any of its covenants or obligations under the Investment Management Agreement (in the case of Palomino) or under the ISDA Master Agreement or any Confirmation (in the case of Barclays) ,

(ii) cause any representation or warranty by Palomino under the Investment Management Agreement or by Barclays under the ISDA Master Agreement or any Confirmation to fail to be true and accurate in all material respects,

(iii) restrict the rights or powers of Palomino pursuant to the Investment Management Agreement (x) to reject any purchase or sale of securities designated for execution by the Manager, (y) in the case of a rejected sale, to continue to own such securities, or (z) to sell any securities it may own without a direction from the Manager, or

(iv) cause the exercise by Palomino of any such rights or powers to conflict with or violate any provision of law, rule or regulation, contract, deed or trust or other instrument to which it is a party or to which any of its property is subject.

If you acknowledge the foregoing, please sign and return one copy of this letter, which will constitute your confirmation with respect to the subject matter hereof.

Very truly yours,

RENAISSANCE TECHNOLOGIES LLC

By: ____________________
Name: Mark Silber
Title: Vice President

Acknowledged and Confirmed
this __ day of May 2009:

BARCLAYS BANK PLC, NEW YORK BRANCH

By: ____________________
Name:
Title:

From: Shah, Abhinav: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=shahab>
Sent: Tue May 12 2009 12:01:32 EDT
To: Constant, Simon: Barclays Capital (NYK) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=constans>
CC: Malloy, Marty: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=markets/cn=malloym>;Siddiq, Nizam: Barclays Capital (NYK) </o=bzw/ou=usa/cn=nyk ad users/cn=users/cn=siddiqn>;Wade, Graham: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=wadeg>
Subject: RE:
Attachments:

Importance: Normal
Priority: Normal
Sensitivity: None

Simon

Please can you set up a call with Ed Cohen and Sharad for tomorrow if possible. If you need Ed's email, let me know.

Regards.

Ab

—— = Redacted by the Permanent Subcommittee on Investigations

Abhinav Shah | BARCLAYS CAPITAL
745 Seventh Avenue | 6th Floor | New York, NY 10019
P: +1 212 526 0060 | F: +1 212 412 5681 | [redacted]
E-mail: abhinav.shah@barcap.com

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-----Original Message-----
From: Malloy, Marty: CFG Mgmt (NYK)
Sent: 12 May 2009 11:59
To: Shah, Abhinav: Barclays Capital (NYK); Constant, Simon: Barclays Capital (NYK); Siddiq, Nizam: Barclays Capital (NYK)
Subject: FW:

Jim is OK for you guys to contact Ed directly .. Please let m know how you get on

Thanks

Marty

-----Original Message-----
From: Jim Rowen [mailto:jrowen@rentec.com]
Sent: Tuesday, May 12, 2009 11:54 AM
To: Malloy, Marty: CFG Mgmt (NYK)
Subject: Re:

Please give Ed a call, he is aware that you will call. Hope you are well

----- Original Message -----
From: Marty.Malloy@barclayscapital.com <Marty.Malloy@barclayscapital.com>
To: jrowen@rentec.com <jrowen@rentec.com>
Sent: Tue May 12 11:34:44 2009
Subject:

Hi Jim

My guys have some comments on the letter and would like to discuss with our lawyers and Ed. Happy to set up a call with Ed and company but wanted to see how you thought it best to get this done ..
Via you or have them speak directly. Please let me know your thoughts

Thanks

Marty

[redacted]

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From: Shah, Abhinav: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=shahab>
Sent: Fri May 29 2009 11:27:06 EDT
To: Malloy, Marty: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=markets/cn=malloym>
CC: Wade, Graham: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=wadeg>
Subject: FW: Palamino to PwC 20/5/09
Attachments: ecblank.gif;graycol.gif

Importance: Normal
Priority: Normal
Sensitivity: None

PwC have signed off, but we should discuss the point I raised with you yesterday when Graham has returned.

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Abhinav Shah | BARCLAYS CAPITAL
745 Seventh Avenue | 6th Floor | New York, NY 10019
P: +1 212 526 0060 | F: +1 212 412 5681 | C: [redacted]
E-mail: abhinav.shah@barcap.com

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From: robert.konowalchuk@uk.pwc.com [mailto:robert.konowalchuk@uk.pwc.com]
Sent: 29 May 2009 11:23
To: McSweeney, Louise: Finance (LDN)
Cc: Shah, Abhinav: Barclays Capital (NYK); Wade, Graham: Barclays Capital (NYK); scott.s.berryman@uk.pwc.com; Constant, Simon: Barclays Capital (NYK)
Subject: RE: Palamino to PwC 20/5/09

Louise,

Scott and I have discussed, and based on your paper and follow up conversations we have had (with you and Ab), we agree with your analysis. In particular, the restriction of the activities via the articles amendment, and the IMA make Palomino a SPE, set up for the benefit of Renaissance, who are exposed to the majority of risks and rewards. In forming this conclusion, we focused on the contractual payments and sharing of risks and rewards in various gain and loss scenarios, the most extreme of which is the manifestation of 'gap risk' to Barclays which appears to be remote (as quantitatively demonstrated in your paper). The remoteness of the risk of loss to Barclays is supported by critical features of the agreement including the trading parameters, the trigger points at which Barclays can control a wind-down, the ability to adjust the call premium such that if losses are incurred, more funds are injected, and the involvement of market risk in setting these parameters.

Regards,

Redacted by the Permanent Subcommittee on Investigations

Rob Konowalchuk
Senior Manager, Banking and Capital Markets
pwc Hay's Galleria, 1 Hay's Lane, London, SE1 2RD, United Kingdom
Tel: +44(0)20 7212 2410
Mob: [redacted]
Fax: +44(0)20 7804 1001
Email: <mailto:robert.konowalchuk@uk.pwc.com> robert.konowalchuk@uk.pwc.com

PA: Sharon Robinson, +44(0)20 7213 3726, sharon.m.robinson@uk.pwc.com

<Louise.McSweeney@barclayscapital.com>

<Louise.McSweeney@barclayscapital.com>

29/05/2009 15:19

Action (To)

Scott S Berryman/UK/ABAS/PwC@EMEA-UK, Robert Konowalchuk/UK/ABAS/PwC@EMEA-UK

Information (cc)

<Graham.Wade@barclayscapital.com>, <Abhinav.Shah@barclayscapital.com>,
<Simon.Constant@barclayscapital.com>

Subject

RE: Palamino to PwC 20/5/09

Rob - do you have Scott and your conclusions for us please?
Thanks
krl

> ______________________________
> From: McSweeney, Louise: Finance (LDN)
> Sent: 20 May 2009 09:24
> To: 'scott.s.berryman@uk.pwc.com'; 'robert.konowalchuk@uk.pwc.com'
> Cc: Wade, Graham: Barclays Capital (NYK); Shah, Abhinav: Barclays
> Capital (NYK); Constant, Simon: Barclays Capital (NYK)
> Subject: RE: Palamino to PwC 20/5/09
>
>
> Scott & Rob
>
> Please find attached the Palamino paper.
>
> It is as we discussed originally and includes the changes to the
> articles and IMA that have been discussed with the counterparty so the
> original de-consolidation due to loss of control conclusion still
> holds.
>
> Could you give us your conclusions by COB Wed 27 May at the latest
> please?
>
> If you have any further questions please do not hesitate to contact
> Graham, Ab or I.
>
>
> Thanks
>
> Kind regards
>
> Louise
> ______________________________
> From: McSweeney, Louise: Finance (LDN)
> Sent: 09 April 2009 14:01
> To: scott.s.berryman@uk.pwc.com; robert.konowalchuk@uk.pwc.com
> Cc: Shah, Abhinav: Barclays Capital (NYK); Beldner, Brett: Finance
> (NYK)
> Subject: Palamino
>
> Scott/Rob
>
> Quick update on Palamino:
>
> SCM have started discussions with the counterparty and hope to get
> feedback from them next week. We hope to incorporate the near final
> commercial arrangements in the a/c paper so that we have an efficient
> process so will hold off on sending the a/c analysis to you (we dont
> expect it to change at the moment from our initial discussions though)
> until we get the counterparty feedback.
>
> The time pressures we had in March have somewhat subsided so we should
> be able to give you a reasonable turn around time when we send you the
> paper.
>
> Have a good Easter

>
> Kind regards
>
> Louise

-------------------- End of message text --------------------

In seven months there will be a new global climate change treaty - we are ready - are you? Visit www.pwc.co.uk/climateready

From: Constant, Simon: Barclays Capital (NYK) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=constans>
Sent: Fri Jun 19 2009 09:33:22 EDT
To: Mammola, Paolo: GFRM (LDN) </o=bzw/ou=europe/cn=recipients/cn=mammolap>
CC: Shah, Abhinav: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=shahab>;Edwards, Ross: GFRM (LDN) </o=bzw/ou=europe/cn=recipients/cn=edwaross>
Subject: Project COLT - articles amendment
Attachments:

Importance: Normal
Priority: Normal
Sensitivity: None

Paolo

>As part of Project COLT, SCM is proposing to amend the terms of Palomino Limited's ("Palomio") memorandum and articles of association (the "Articles") to restrict the activities of Palomino to those it is currently engaged in under the COLT transaction. Further, BBPLC and Palomino will enter into a side letter agreement ("Side Letter") with Rennaissance Technologies LLC ("Renaissance") pursuant to which BBPLC will covenant not to further change Palomino's Articles without the prior written consent of Renaissance.
>
>The impact of the steps above will be that, for IFRS accounting purposes, Palomino will be considered a special purpose entity following the amendments and BBPLC will not consolidate the entity in its consolidated group accounts. The result will be a reduction in Barclays consolidated balance sheet by c$5bn as the previously consolidated long securities positions in Palomino will be replaced by a long position in the call option written by Palomino to BBPLC. This treatment has been discussed and agreed with Finance and PricewaterhouseCoopers.
>
>We do not think this should impact the market risk analysis for the transaction, however please let us know if you see any issues from a market risk perspective or if you would like to have a call to go through the steps in more detail.
>
>We are proposing to circulate an approvals notification on the above to the SCM Approvals Committee.
>
>Kind regards
>
>Simon
>
>Simon Constant
>Barclays Capital
>745 Seventh Ave | New York | NY 10019
>Tel: +1 212 526 9512 | Mobile: [redacted]
>Email: simon.constant@barcap.com
>
>IRS Circular 230 email disclaimer: Barclays Capital and its affiliates do not provide tax advice. Please note that (i) any discussion of US tax matters contained in this communication (including any attachments) cannot be used by you for the purpose of avoiding tax penalties, (ii) this communication was written to support the promotion or marketing of the matters addressed herein, (iii) you should seek advice based on your particular circumstances from an independent tax advisor.
>
>

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To: Jonathan Mayers[jmayers@rentec.com]
Cc: Jim Rowen[jrowen@rentec.com]
From: Tom Kerns
Sent: Mon 6/22/2009 12:38:44 PM
Importance: Normal
Subject: Re: [Fwd: FW: Palomino Limited - side letter]

[redacted]

Jonathan Mayers wrote:
> Tom, Jim,
>
[redacted]
> Thanks,
>
>
> Jonathan
>
> -------- Original Message --------
> Subject: FW: Palomino Limited - side letter
> Date: Mon, 22 Jun 2009 12:22:45 -0400
> From: <Abhinav.Shah@barclayscapital.com>
> To: <jmayers@rentec.com>
> CC: <Simon.Constant@barclayscapital.com>
>
>
>
> Jonathan
>
> As discussed.
>
> I am just finding out John Strac's new fax number and will send the
> email you requested shortly.
>
> Regards.
>
> Ab
>
>
> *Abhinav Shah* |* BARCLAYS CAPITAL*
> 745 Seventh Avenue | 6th Floor | New York, NY 10019
> *P*: +1 212 526 0060 |* F*: +1 212 412 5681 |* C*: [redacted]
> *E-mail*: abhinav.shah@barcap.com
>
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> matters contained in this communication (including any attachments)
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> your particular circumstances from an independent tax advisor.

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Permanent Subcommittee on Investigations
EXHIBIT #52

>
>
>
> --
> *From:* Shah, Abhinav: Barclays Capital (NYK)
> *Sent:* 11 June 2009 22:07
> *To:* ECohen@winston.com
> *Cc:* Samy, Sharad; Constant, Simon: Barclays Capital (NYK); Chinyin
> Johnston; Rose, Matthew
> *Subject:* RE: Palomino Limited - side letter
>
> Ed
>
> Just following up on this. I have also attached a draft of an
> Interagency Letter that we would like to enter into upon entering into
> the letter agreement (similar to that which both parties enter into
> whenever new options are entered into), although please note that this
> may be subject to additional comments from the firm's CFO who has yet
> to review it.
>
> Would it be possible to speak early next week on the documents so that
> we can move this forward?
>
> Regards.
>
> Ab
>
> ** *Abhinav Shah* |* BARCLAYS CAPITAL*
> 745 Seventh Avenue | 6th Floor | New York, NY 10019
> *P*: +1 212 526 0060 |* F*: +1 212 412 5681 |* C*: +[redacted]
> *E-mail*: abhinav.shah@barcap.com
>
> IRS Circular 230 Disclaimer: Barclays Capital and its affiliates do
> not provide tax advice. Please note that (i) any discussion of US tax
> matters contained in this communication (including any attachments)
> cannot be used by you for the purpose of avoiding tax penalties, (ii)
> this communication was written to support the promotion or marketing
> of the matters addressed herein, (iii) you should seek advice based on
> your particular circumstances from an independent tax advisor.
>
>
>
> --
> *From:* Louise Johns [mailto:Louise.Johns@walkersglobal.com]
> *Sent:* 03 June 2009 10:14
> *To:* Rose, Matthew; ECohen@winston.com
> *Cc:* Samy, Sharad; Constant, Simon: Barclays Capital (NYK); Shah,
> Abhinav: Barclays Capital (NYK); Chinyin Johnston
> *Subject:* RE: Palomino Limited - side letter
>
> Dear Ed,
>
> Further to Matthew's email below, I attach a draft of the amended
> Memorandum and Articles of Association of Palomino Limited. I also
> attach a redline against the Memorandum and Articles of Association of
> Palomino Limited currently in force.

▬ = Redacted by the Permanent Subcommittee on Investigations

>
> Kind regards,
>
> Louise
>
> *Louise Johns*
>
> *WALKERS*
>
> 6 Gracechurch Street, London EC3V 0AT
> Tel: +44 (0)20 7220 4972 (direct) / 4999 (main)
> Fax: +44 (0)20 7220 4998
> email: louise.johns
> <mailto:louise.johns@walkersglobal.com>@walkersglobal.com
> <mailto:louise.johns@walkersglobal.com>
> website: www.walkersglobal.com
>
> *Secretary:*
>
>
>
> *J'hanna Pilkington*
> Tel: +44 (0) 20 7398 4921 (direct)
> email: j'hanna.pilkington@walkersglobal.com
> <mailto:j%27hanna.pilkington@walkersglobal.com>
>
>
>
> --
> *From:* Rose, Matthew [mailto:mgrose@orrick.com]
> *Sent:* 03 June 2009 10:16 AM
> *To:* ECohen@winston.com
> *Cc:* Samy, Sharad; Simon.Constant@barclayscapital.com;
> Abhinav.Shah@barclayscapital.com; Louise Johns; Chinyin Johnston
> *Subject:* Palomino Limited - side letter
>
> Dear Ed
>
> I attach the draft side letter in respect of the Investment Management
> Agreement between Palomino and Renaissance. A draft of the amended
> articles of association will be sent shortly. If possible, please
> could you provide your comments by the end of this week.
>
> Many thanks and kindest regards
>
> Matthew
>
>
> <http://www.orrick.com/>
> *Matthew G. Rose*
> /trainee solicitor/
> *ORRICK, HERRINGTON & SUTCLIFFE*
> LONDON
> mgrose@orrick.com <mailto:mgrose@orrick.com>
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[•], 2009

Mr. Martin Malloy
Managing Director
Barclays Bank PLC, New York Branch
745 7th Avenue, 6th Floor
New York, NY 10019

Re: Palomino Limited

Dear Martin

We refer to our recent discussions regarding (i) the Investment Management Agreement (the "Investment Management Agreement"), effective as of October 1, 2004, as amended and restated with effect on June 13, 2008, between Palomino Limited ("Palomino") and Renaissance Technologies, LLC ("Renaissance"), as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "IMA Transactions"); (ii) the ISDA Master Agreement (the "Badger Master Agreement"), dated as of October 1, 2004, between Barclays Bank PLC ("Barclays") and Badger Holdings L.P. ("Badger"), the confirmations executed by Barclays and Badger in connection therewith, each as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "Badger Transactions"); and (iii) the ISDA Master Agreement (the "Palomino Master Agreement"), dated as of September 30, 2002, between Barclays and Palomino, the confirmations executed by Barclays and Palomino in connection therewith, each as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "Palomino Transactions", and together with the IMA Transactions and the Badger Transactions, the "Transactions"). Capitalized terms used herein but not defined herein shall have the meanings ascribed to such terms in the Investment Management Agreement, and, if not defined therein, in the Badger Master Agreement, and, if not defined therein, in the Palomino Master Agreement.

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You have advised us that certain amendments (the "Amendments") to the Amended and Restated Memorandum and Articles of Association (the "Memorandum and Articles of Association") of Palomino have been executed as of the date hereof, a copy of which is attached hereto as Exhibit A.

In connection with the execution of such Amendments, Barclays hereby (i) represents and warrants as of the date hereof to each of Badger and Palomino, respectively, that each representation and warranty made by Barclays to Badger and Palomino, as the case may be,

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in respect of the Transactions under the Badger Master Agreement and the Palomino Master Agreement, respectively, are true and correct as of the date hereof and (ii) covenants as of the date hereof to each of Badger and Palomino, respectively, that it shall continue to perform each covenant owed by it, as the case may be, under the Badger Master Agreement and the Palomino Master Agreement, respectively.

In connection with the execution of such Amendments, Palomino hereby (i) represents and warrants as of the date hereof to each of Renaissance and Barclays, respectively, that each representation and warranty made by Palomino to Renaissance and Barclays, as the case may be, in respect of the Transactions under the Investment Management Agreement and the Palomino Master Agreement, respectively, are true and correct as of the date hereof and (ii) covenants as of the date hereof to each of Renaissance and Barclays, respectively, that it shall continue to perform each covenant owed by it, as the case may be, under the Investment Management Agreement and the Palomino Master Agreement, respectively.

Barclays hereby confirms to Renaissance that the Amendments are not intended to and shall not be used by Barclays to restrict the rights or powers of Palomino in respect of any Transaction under the Investment Management Agreement to (i) reject any purchase or sale of securities designated for execution by Renaissance under the Investment Management Agreement; (ii) in the case of a sale rejected by Palomino, continue to own such securities; or (iii) sell any securities that it may own under the Investment Management Agreement without direction from Renaissance.

Barclays hereby further covenants to Renaissance that it shall not make any amendments or modifications to the Memorandum and Articles of Association of Palomino after the date hereof without first obtaining the prior written consent thereto of Renaissance.

If you acknowledge the foregoing, please sign and return one copy of this letter, which will constitute your confirmation with respect to the subject matter hereof.

Very truly yours,

RENAISSANCE TECHNOLOGIES LLC

By: ____________________
Name: Mark Silber
Title: Vice President

Page { PAGE }

Acknowledged and Confirmed
this [•] day of [•] 2009:

BARCLAYS BANK PLC, NEW YORK BRANCH

By: ______________________
Name:
Title:

Acknowledged and Confirmed
this [•] day of [•] 2009:

PALOMINO LIMITED

By: ______________________
Name:
Title:

Acknowledged and Confirmed
this [•] day of [•] 2009:

BADGER HOLDINGS L.P.

By: ______________________
Name:
Title:

OHS LONDON:360183695.3

Badger Holdings L.P.
c/o Renaissance Technologies LLC
800 Third Avenue, 33rd Floor
New York, New York 10022

Renaissance Technologies LLC
800 Third Avenue, 33rd Floor
New York, New York 10022

Attention: Mr. Mark Silber

[•] June 2009

Dear Sirs,

We refer to the letter agreement dated on or around the date of this letter between ourselves, yourselves and Palomino Limited ("**Palomino**") in connection with the proposed amendments to the Memorandum and Articles of Association of Palomino (the "**Agreement**").

We represent to you that:

a) we and our affiliates are not entering into the Agreement and the transactions referred to therein for the purpose of achieving a financial statement objective that could be construed as materially misrepresenting the financial condition of us or that of any affiliate;
b) the transactions referred to in the Agreement will be accounted for in our group consolidated financial statements in conformity with International Financial Reporting Standards ("**IFRS**");
c) the transactions referred to in the Agreement will be disclosed in our group consolidated financial statements and otherwise as and to the extent necessary to comply with IFRS and all applicable laws; and
d) the transactions referred to in the Agreement have been reviewed and approved by appropriate personnel in accordance with our internal review and approval procedure.

You represent to us that:

a) you and your affiliates are not entering into the Agreement for the purpose of achieving a financial statement objective that could be construed as materially misrepresenting the financial condition of you or that of any affiliate;
b) your financial statements are prepared in conformity with accounting principles generally accepted in the United States of America ("**US GAAP**");
c) you have considered the impact of the transactions referred to in the Agreement and concluded that they do not impact your current accounting treatment of and disclosures in relation to existing transactions between ourselves, yourselves and Palomino under US GAAP in your financial statements;
d) [as each of you is deemed to be an "investment company", as that term is defined in the AICPA Audit and Accounting Guide for Investment Companies , you do not believe that FASB Interpretation No. 46 (revised December 2003), "Consolidation of Variable Interest Entities", as amended by FASB Staff Position No. FIN 46(R)-7, "Application of FASB Interpretation No. 46(R) to Investment Companies" is applicable to you;] and
e) the transactions referred to in the Agreement have been reviewed and approved by appropriate personnel in accordance with your internal review and approval procedure.

This letter shall be governed by, and shall be construed in accordance with, the laws of the State of New York.

Yours sincerely,

....

For and on behalf of Barclays Bank PLC, NY Branch

We hereby acknowledge receipt of and agree to the terms of this letter.

....

For and behalf of Badger Holdings L.P.

....

For and behalf of Renaissance Technologies LLC

BARCLAYS CAPITAL

To	PwC
From	SCM
Date	24 June 2009
Subject	Palomino Limited ("**Palomino**")

Memo

1.1

I. **Introduction**

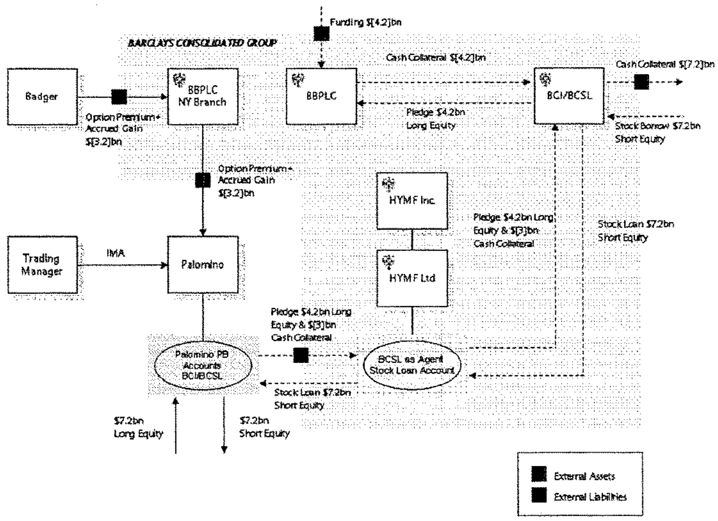
The purpose of this memo is to set out the proposed accounting treatment relating to Palomino.

II. **Background**

Palomino is a Cayman Islands incorporated, UK tax resident wholly owned subsidiary of Barclays Bank PLC ("**BBPLC**"). The only activity Palomino currently engages in is its involvement in the Project Colt transaction. Project Colt involves Palomino holding prime brokerage accounts (the "**PB Accounts**") with Barclays Capital Inc. ("**BCI**") and Barclays Capital Securities Limited ("**BCSL**"). Palomino has appointed Renaissance Technologies LLC ("**RenTec**") as manager (the "**Trading Manager**") of the PB Accounts pursuant to an Investment Management Agreement (the "**IMA**"). In its capacity as the Trading Manager, RenTec implements a long-short statistical arbitrage strategy. In addition, Palomino has written a number of cash settled call options to BBPLC New York Branch ("**BBPLC NY**") referencing the PB Accounts. In turn, BBPLC NY has written an equivalent number of cash settled call options to Badger Holdings L.P. ("**Badger**"), a subsidiary of RenTec, also referencing the PB Accounts.

The funding of the PB Accounts is undertaken by the Barclays Capital Prime Services Group ("**Prime Services**") through the Revised Stock Loan Arranged Transfer ("**RSLAT**") facility. Short positions in the PB Accounts are covered via a stock loan from BCSL or HYMF (Cayman) Limited ("**HYMF**") and such stock loans are secured by a pledge of the long positions in the PB Accounts (along with some excess cash in the PB Accounts). HYMF in turn borrows the stock from BCI. BCI and BCSL either borrow the stock from the market versus cash collateral, general collateral or from current inventory. The RSLAT facility implemented in Project Colt is identical to RSLAT facilities implemented for other standard client prime brokerage accounts operated by Prime Services for other clients.

III. **Transaction Diagram**



IV. **Palomino Ownership Structure**

a. Palomino has 1,000 shares issued and outstanding with a par value of USD $1 each. BBPLC currently owns 100% of the share capital in Palomino and has 100% of the votes in Palomino.

b. The current directors of Palomino are David Simpson, James Sixsmith, Lauren Malafronte (US tax resident) and Sadat Mannan (alternate to David Simpson). All of the directors are employees of Barclays Capital (BBPLC) and only BBPLC has the power to appoint or remove the directors.

V. **Prime Brokerage Agreements and PB Accounts**

Pursuant to the prime brokerage agreements, Palomino has currently established four prime brokerage accounts, three with BCI and one with BCSL who, in turn, provide settlement, financing and securities lending services to Palomino. The Trading Manager (and, for purposes of clarity, not BCI or BCSL in their capacities as prime brokers) is solely responsible for determining, *inter alia*, which transactions Palomino should enter into and whether the transaction is consistent with the IMA and the investment guidelines contained therein. Where the Trading Manager places an order to be executed by a broker on behalf of Palomino, BCI and/or BCSL settle the transaction in their respective capacities as Palomino's prime brokers. Palomino is the beneficial owner of the securities in the PB Accounts; although the securities are held by BCI and BCSL, their custodians, agents or nominees, they must be clearly identified as belonging to Palomino. Each PB Account held with either BCI or BCSL is a separate account, but these are not legally "ring fenced" from each other because both BCI and BCSL would have a separate claim on all of the assets of Palomino, subject to the limitation of recourse provisions set forth therein, in the event of an insolvency of Palomino, whether the assets are held in the PB Accounts with BCI or in the PB Account with BCSL.

To the extent that Palomino purchases securities on margin, the securities are held by BCI or BCSL as collateral for a margin loan that may be extended by BCI or BCSL, as the case may be, pursuant to the respective prime brokerage agreements. Palomino grants a first priority perfected security interest in the collateral to BCI and BCSL as continuing security for the payment of outstanding margin loans. BCI and BCSL only have recourse to the collateral pledged to them by Palomino in support of any obligations of Palomino owed to either of them under either of the prime brokerage agreements. To the extent that the value of the pledged collateral would be insufficient to cover the amount owed by Palomino under any margin loan from either BCI or BCSL, BCI and BCSL would become general creditors of Palomino. These arrangements are identical to other standard client prime brokerage accounts operated by Prime Services for other clients.

VI. **Options**

a. The options entered into between Palomino and BBPLC NY Branch (the "**Barclays' Options**") reference all of the PB Accounts (i.e. it is not the case that an option references an individual PB Account). The value of each of the Barclays' Options is determined by reference to a relevant portion of the gains or losses on all of the PB Accounts according to the outstanding term and size of the upfront premium on each individual option. It should be noted that the Barclays' Options only reference the PB Accounts in the name of Palomino and do not reference assets and liabilities of Palomino existing outside such accounts. Thus, upon exercise of any of the Barclays' Options, Palomino effectively pays BBPLC NY Branch the greater of (i) zero and (ii) the sum of the upfront premium plus or minus a relevant portion of the gains and losses on the position in all of the PB Accounts.

The Barclays' Options can only be cash settled (i.e. the underlying securities cannot be delivered in settlement of the Barclays' Options even if there is no market liquidity) and they are freely exercisable by BBPLC NY Branch at any time. Upon exercise of any of the Barclays' Options by BBPLC NY Branch, there is no requirement that the Trading Manager liquidate the positions in the PB Accounts.

The aggregate of the upfront premiums paid on the outstanding Barclays' Options is $750m and the current gain on the positions in the PB Accounts is approximately $750m. The upfront premiums are non-refundable except that they are taken into account in determining the cash settlement amount payable on exercise of any of the Barclays' Options.

The amount payable under the Barclays' Options includes an amount equal to all of the gains generated on the positions in all of the PB Accounts and all of the losses (if any) generated on the positions in all of the PB Accounts, although the latter is capped at the amount of the upfront premiums paid. The trading strategy implemented by the Trading Manager has generated profits on each of the PB Accounts since inception, all of which have been "allocated" to the Barclays' Options. As such, it is considered that BBPLC is directly (RenTec indirectly – see Section X(c) below) exposed to substantially all of the rewards from the PB Accounts through the Barclays' Options. Although details of the trading strategy pursued are closely guarded by the Trading Manager (for obvious reasons), it is expected to continue to generate profits and, as such, it is considered that BBPLC is directly (RenTec indirectly – see Section X(c) below) exposed to substantially all of the risks from the PB Accounts through the exercise of the Barclays' Options as well since any potential future losses are more than adequately covered by the upfront premiums paid and any accrued gains to date on the positions in the PB Accounts. The investment guidelines incorporated into the IMA contain leverage, concentration and diversification limitations which reduce the gap risk to a level where Barclays Global Financial Risk Management group ("**GFRM**") are comfortable that, on a forced liquidation of the positions in the PB Accounts (e.g. in circumstances where BBPLC assumes control of the PB Accounts by virtue of the PB Accounts exceeding agreed leverage ratios), BBPLC would not suffer economic loss because the upfront premiums paid are sufficient to absorb any decline in value of the positions in the PB Accounts in the time that it would take to unwind all the positions.

b. The options entered into between BBPLC NY Branch and Badger (the "**Badger Options**") work in the same way (i.e. their value is determined by reference to a relevant portion of the gains or losses on all of the PB Accounts according to the outstanding term and size of the upfront premium on each individual option). The Barclays' Options and the Badger Options are essentially "back-to-back" arrangements in that when a new Badger Option is entered into, a new Barclays' Option will be entered into on mirror terms (i.e. the premiums under each such option will be the same and each option will create the same economic exposure to the PB Accounts). Thus, upon exercise of any of the Badger Options, BBPLC NY Branch effectively pays Badger the greater of (i) zero and (ii) the sum of the upfront premium plus or minus a relevant portion of the gains and losses on the positions in all of the PB Accounts.

The Badger Options can only be cash settled and they are freely exercisable by Badger at any time. It should be noted that there is no legal requirement for the Barclays' Options to be exercised in the event a Badger Option is exercised or for the Trading Manager to liquidate the positions in the PB Accounts.

As with the outstanding Barclays' Options, the aggregate of the upfront premiums paid on the outstanding Badger Options is $750m and the current gain on the positions in the PB Accounts is approximately $750m. The upfront premiums are non-refundable except that they are taken into account in determining the cash settlement amount payable on exercise of any of the Badger Options.

The confirmations in relation to the Badger Options include the following language, which demonstrates that the Badger Options are an indirect interest in the PB Accounts:

"Reference Accounts:	The BCSL Account, the BCI Account......, each as defined below, and any additional prime brokerage or futures trading account that Party A [BBPLC NY Branch] and Party B [Badger] shall designate by mutual agreement as a "Reference Account", provided that such additional prime brokerage or futures trading account has been established with Barclays Bank PLC, Barclays Capital Inc. or Barclays Capital Securities Limited by and in the name of Palomino Limited."
"BCSL Account	means the prime brokerage accounts established by and in the name of Palomino Limited ("Palomino") with Barclays Capital Securities Limited ("BCSL"), account no. 400262, pursuant to the Amended and Restated Prime Brokerage Agreement, effective as of June 13, 2008, as may be restated, amended, or modified by the parties thereto from time to time (the "BCSL Agreement")."
"BCI Account	means the prime brokerage accounts established by and in the name of Palomino with Barclays Capital Inc. ("BCI"), account no. 21000200, 25300200, and 25310200, pursuant to the Amended and Restated Prime Broker Margin Account Agreement, effective as of June 13, 2008, as may be restated, amended, or modified by the parties thereto from time to time (the "BCI Agreement")."

VII. **Investment Management Agreement**

a. The IMA appoints RenTec as the investment manager of all of the PB Accounts therein. RenTec's obligations and rights under the IMA are limited to the PB Accounts and the IMA does not relate to any other activities of Palomino.

b. Palomino can terminate the IMA for any reason upon the later of (i) the 60th calendar day and (ii) the 20th exchange business day immediately following the date on which Palomino delivers a prior written termination notice to RenTec.

c. Palomino has the right to terminate the IMA upon written notice to RenTec specifying the applicable grounds: (i) for Cause (as defined below) or (ii) for Material Cause (as defined below), in each case at any time. The IMA terminates immediately after a written notice is delivered to RenTec.

d. "**Cause**", generally, means

   i. with respect to Palomino: a change in tax law; and

   ii. with respect to RenTec: (i) a material violation of law, (ii) a material breach of the IMA (other than the investment guidelines in the IMA), (iii) the loss of any material license, (iv) a violation by RenTec of the investment guidelines, to the extent that such violation has not been cured within 5 business days, (v) a Termination Event or an Event of Default as defined under the prime brokerage agreements, or (vi) a bankruptcy or insolvency of RenTec.

e. "**Material Cause**" means

   i. with respect to RenTec (i) a material violation of law which directly relates to any of the PB Accounts, (ii) intentional misconduct or gross negligence, (iii) none of the Key Men is employed by RenTec, (iv) RenTec is prevented, for any reason, from effectively managing any of the PB Accounts, (v) a violation in respect of certain investment guidelines, (vi) the PB Accounts "equity" is less than or equal to USD 78,500,000, or (vii) a bankruptcy or insolvency of RenTec.

f. In the event of a termination of the IMA, RenTec, at the written request of Palomino, shall be required to conduct an orderly disposition of all positions in the PB Accounts after which the PB Accounts will be wound up and the prime brokerage agreements terminated. If Palomino or a third party investment manager assumes control of the PB Accounts on a termination of the IMA (e.g. following a termination pursuant to a Material Cause event), then Palomino or the third party investment manager would also be required to conduct an orderly disposition of all positions in the PB Accounts after which the PB Accounts will be wound up and the prime brokerage agreements terminated.

g. Therefore, in most circumstances, RenTec would continue to control the PB Accounts in an unwind scenario. Although Palomino may also be able to control the PB Accounts on a termination of the IMA on the grounds of a Material Cause event, it would only be for the unwind period (i.e. on termination of the IMA, the PB Accounts must in all circumstances be wound up irrespective of who controls the unwind process).

h. There is no requirement for the call options to be exercised upon a termination of the IMA. However, it is anticipated that Badger would exercise the Badger Options and BBPLC NY Branch would exercise the Barclays' Options. Although there is no requirement to exercise the Barclays' Options if the Badger Options are exercised (and visa versa), if Badger exercised the Badger Options, it is anticipated that BBPLC NY Branch would exercise the Barclays' Options to hedge its position and that Palomino would deliver a termination notice to RenTec in relation to the IMA, which would require RenTec to conduct an orderly disposition of all positions in the PB Accounts.

VIII. **Accounting Summary**

a. There is currently no restriction on the decision making powers of the directors of Palomino and Palomino has been involved in various transactions relating to Project Colt, including migration from the US to the UK for tax purposes. The directors have always had the right to commit Palomino to new business (e.g. opening prime brokerage accounts on behalf of other clients). Palomino has historically been viewed as an IAS 27 operating entity under IFRS given the wide activities that could be conducted through Palomino at the discretion of BBPLC and for its benefit and has therefore been consolidated by BBPLC.

b. Going forward, it is proposed that the activities of Palomino will be restricted to those associated with the pre-defined activities of Project Colt only. In order to achieve this, it is proposed that the Articles of Association of Palomino (the "**Articles**") will be amended accordingly (as described further in Section IX below) and that BBPLC, RenTec, Badger and Palomino will enter into a side letter agreement (the "**Side Letter**") under which BBPLC, as sole shareholder of Palomino, will covenant not to amend the Articles further without the prior written consent of RenTec.

c. Following the proposed amendments to the Articles and the entry into the Side Letter, BBPLC will de-consolidate Palomino because it no longer controls the entity under IAS 27 or SIC 12. RenTec will control Palomino as it will effectively determine the activities of Palomino, namely the trading activity in the PB Accounts, and, taking into account the totality of the transaction, absorbs significantly all of the benefits and the majority of the risks of Palomino through the Badger Options and the Barclays' Options.

d. From a BBPLC consolidation perspective, not consolidating Palomino and the positions in the PB Accounts will be consistent with the balance sheet treatment of other standard (yet economically similar) prime brokerage accounts where BBPLC does not consolidate the positions held in the accounts. An analysis of Project Colt compared to other standard prime brokerage arrangements is set out below.

IX. **Amendments to the Articles and the Side Letter**

As mentioned above, BBPLC, as sole shareholder of Palomino, will amend the Articles to ensure that the only activities that Palomino is permitted to carry out relate solely to the Project Colt transaction. In summary, the restrictions to be incorporated into the Articles are expected to be as follows:

a. Palomino will only be permitted to hold prime brokerage accounts with BCI, BCSL or other members of the Barclays group;

b. RenTec is the only trading manager that can be appointed to manage positions in any prime brokerage accounts pursuant to any investment management agreement other than in relation to the existing IMA;

c. Palomino will only be permitted to issue cash settled derivatives over prime brokerage accounts in respect of which RenTec is the trading manager; and

d. Palomino will be required to invest any surplus cash with BBPLC or in AAA-rated government securities.

Therefore, Palomino will not be permitted to carry out any other activities other than those listed in a-d above.

As BBPLC is and will remain the sole shareholder of Palomino, BBPLC will continue to have the right to amend the Articles. It is not possible to legally prevent this since this is a right that any shareholder with the appropriate amount of voting control would be able to exercise. However, it is proposed that BBPLC will enter into the Side Letter, covenanting to RenTec that BBPLC, as sole shareholder of Palomino, will not amend the Articles further without the prior written consent of RenTec. As such, if BBPLC sought to amend the Articles without the prior written consent of RenTec, BBPLC would be in breach of contract.

X. **Consolidation Analysis**

Palomino is considered to be one entity rather than a number of ring-fenced silos because no assets and liabilities are legally ring-fenced from each other as explained in Section V. above. The consolidation analysis below therefore considers the consolidation of Palomino in its entirety as a single entity.

IAS 27 requires the entity that controls Palomino to consolidate it. Control is the power to govern the operating and financial policies of Palomino so as to obtain benefit from its activities. Although BBPLC owns 100% of the ordinary shares of Palomino. RenTec has the power to govern the financial and operating decisions for its benefit due to the decisions it makes over Palomino's activities under the IMA (IAS 27.13) and under the SIC 12 analysis below.

SIC 12 indicates that a special purpose entity (an "**SPE**") is an entity created to accomplish a narrow and well defined objective whose activities are usually substantially pre-determined. Following the proposed amendment to the Articles and the entry into the Side Letter, Palomino will be an SPE because it will only conduct the prime brokerage activities specified and managed by RenTec, which are narrowly defined. An analysis of the circumstances set out in paragraph 10 of SIC 12 which should be taken into account in determining whether an entity controls an SPE and should consolidate the SPE has been set out below.

a. *Activities*: Palomino was created solely to enable RenTec (sponsor) to benefit (through the Badger Options and the Barclays' Options) from its long-short statistical arbitrage strategy in an efficient manner (we understand that RenTec also obtains an additional tax benefit under the transactions as its profits on the Badger Options will generally be subject to tax at the long term capital gains tax rate of 15% rather than the ordinary income tax rate of 35%). As such, RenTec has transferred assets from Badger, in the form of option premiums, to Palomino (via BBPLC) and has obtained the right to use those assets as Trading Manager. BBPLC (the capital provider), on the other hand, provides funding to the PB Accounts through the RSLAT facility in the form of stock loans collateralised by long positions within the PB Accounts and benefits from arms length prime brokerage fees only. Accordingly, it is clear that the activities of Palomino are being conducted on behalf of RenTec according to its specific business needs so that RenTec obtains the benefits from Palomino's operation.

b. *Decision Making*: The trading activities of Palomino in relation to the PB Accounts are managed solely by RenTec as the Trading Manager such that RenTec can obtain the majority of the benefits from Palomino's activities (through the Badger Options and the Barclays' Options), all within investment guidelines agreed with BBPLC designed to protect Barclays funding.

   As described in Section VII in relation to the IMA, the PB Accounts are controlled by RenTec. In the event of a termination of the IMA, RenTec would be expected, in most circumstances, to control the unwind of the positions (by written request of Palomino). It is possible that Palomino could appoint BBPLC or another third party to take control for the unwind; however, this control can only be exercised in the close out period after which all PB Accounts and prime brokerage agreements are already required to be terminated. As a result, it can be concluded that BBPLC has very limited decision-making powers in relation to Palomino.

   Through the proposed amendments to the Articles, the activities of Palomino will be restricted to holding and overseeing the PB Accounts managed by RenTec, as set out in Section IX. above.

c. *Benefits*: RenTec is effectively entitled (through the Badger Options and the Barclays' Options) to 100% of the benefits from Palomino's trading activities less any prime brokerage fees paid to BCI and BCSL in respect of the PB Accounts. Such prime brokerage fees are based on standard market rates and are not based on the performance of the trading strategy. Accordingly, BBPLC does not benefit or suffer if the trading strategy implemented by RenTec over or under performs.

   The Badger Options are considered to be indirect interests in Palomino due to the clear linkage and purpose of the back-to-back option arrangements as set out in Section VI. above.

The prime brokerage fees received by the Barclays Group in relation to Project Colt are approximately $[45]m per annum compared to the historical returns of the RenTec long-short statistical arbitrage strategy in excess of $[1]bn per annum. The return on each of the historical options compared to the initial option premium is provided in Appendix 1hereto.

We understand that RenTec also obtains an additional tax benefit under the transactions as its profits on the Badger Options will generally be subject to tax at the long term capital gains tax rate of 15% rather than the ordinary income tax rate of 35%.

d. *Risks*: RenTec is exposed to 100% of the risks from Palomino's trading activities up to a maximum of the call option premiums (currently $750m). BBPLC is exposed to the gap risk on the securities (i.e. the risk that the value of the positions in the PB Accounts falls by an amount greater than the aggregate of the call option premiums prior to the time when Palomino is able to cause an unwind of the positions in the PB Accounts). The investment guidelines in the IMA agreed with BBPLC impose limits on liquidity, sector exposure, size and leverage in order to substantially reduce the risk that any gap risk loss is greater than the call option premiums. The limits are such that Barclays Credit and Market Risk departments are comfortable the gap risk is managed within acceptable limits. As an example, in August 2008, the PB Accounts suffered the worst trading period since the start of the transaction and the limits imposed under the IMA to allow Palomino to unwind the transaction when gap risk reaches an unacceptable level were not breached:

Aggregate loss over period:	23%, compared to 90% before BBPLC controls unwind and 100% before BBPLC is exposed to losses;
Maximum leverage:	14.2:1, compared to 20:1 before the deal is unwound with RenTec continuing as Trading Manager, and 22:1 before BBPLC controls unwind;
Maximum gross positions:	$25.5bn, compared to $40bn before BBPLC controls unwind;
Net Long/Short position:	$2bn, compared to $4bn before BBPLC controls unwind;
Sector positions:	The sector position covenants in the investment guidelines were not breached during this period.

As a result, RenTec is exposed to the substantial majority of the risks from Palomino's trading activities. Only in extreme circumstances that have yet to be experienced would BBPLC bear any losses from the positions in the PB Accounts. In addition, RenTec has indemnified Barclays for any tax risks arising as a result of Project Colt.

The Badger Options are considered to be indirect interests in Palomino due to the clear linkage and purpose of the back-to-back option arrangements as set out in Section VI above.

e. *Conclusion:* Following the proposed amendments to the Articles and the entry into the Side Letter, RenTec controls the major activities of Palomino and is exposed to substantially all significant risks and rewards arising from the activities carried out through the PB Accounts, being the only permitted activities of Palomino. Consequently, under IAS 27.13 and SIC 12, BBPLC should de-consolidate Palomino from the date these proposed amendments are effective because they give rise to a loss of control (IAS 27.32).

XI. Disclosure Requirements

The disclosure requirements under IAS 27.41(b) will be covered under the generic disclosure provided as a note to the accounts in the Barclays Consolidated Financial Statements.

The de-consolidation of Palomino is not expected to give rise to a material gain or loss and therefore no specific disclosure is proposed in relation to IAS 27.41(f).

Pursuant to s231(5) CA 1985, Barclays is required to disclose in its financial statements certain details in relation to entities in which the Barclays group's voting rights exceed 50% but which are not consolidated for accounting purposes, e.g. name of entity, country of registration or incorporation of entity, percentage of ordinary share capital held. Since Barclays will continue to hold 100% of the ordinary share capital and, therefore, 100% of the voting rights in Palomino, Palomino should be disclosed in the relevant note in the audited consolidated financial statements of Barclays for the year ended 31 December 2009.

XII. **Comparison to standard Prime Brokerage Arrangements**

Under a standard prime brokerage arrangement, the prime broker generally does not consolidate the long and short positions held in the prime brokerage account but recognises balance sheet for the net financing provided. This treatment is adopted by Barclays in respect of all of its standard prime brokerage arrangements with other clients.

Project Colt provides RenTec with a number of enhancements compared to a standard prime brokerage agreement:

a. the long-short statistical arbitrage strategy is able to operate at a higher leverage ratio than would otherwise be available; and

b. Badger recognises long term capital gains for tax purposes on exercise of the Badger Options outstanding for more than 12 months.

Notwithstanding the additional benefits to RenTec through Project Colt, the allocation of the risk and rewards generated by the trading activities in the PB Accounts are substantially passed through to RenTec under the call options consistent with a standard prime brokerage arrangement. Hence, it is appropriate to treat the long and short positions held in the PB Accounts under both Project Colt and other prime brokerage arrangements as off balance sheet in respect of BBPLC.

XIII. **BBPLC Consolidated Balance Sheet**

Non-consolidation of Palomino

If BBPLC does not consolidate Palomino, the BBPLC consolidated balance sheet, based on the balances as at 17 June 2009, would be as follows (as such, it should be noted that the long and short equity positions held by Palomino through its PB Accounts would be off balance sheet):

$7.2bn – cash collateral posted by BCI/BCSL on stock borrows to cover PB shorts	$4.2bn – funding for cash collateral (excess cash in Palomino also funds the cash collateral)
$3.2bn – investment in call options sold by Palomino to BBPLC	$3.2bn – liabilities in respect of call options sold by BBPLC to Badger
	$3bn – cash collateral received from PB Accounts on stock loan
$10.4bn Total Assets	**$10.4bn Total Liabilities**

Consolidation of Palomino

Under the current consolidated accounting treatment, the PB accounts are included on balance sheet and the consolidated balance sheet would be as follows:

$7.4bn long positions in PB Accounts	$7.2bn short positions in PB Accounts
$7.2bn – cash collateral posted by BCI/BCSL on stock borrows to cover PB shorts	$4.2bn – funding for cash collateral (excess cash in Palomino also funds the cash collateral)
	$3.2bn – liabilities in respect of call options sold by BBPLC to Badger
$14.6bn Total Assets	**$14.6bn Total Liabilities**

From: Shah, Abhinav: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=shahab>
Sent: Wed Jun 24 2009 17:11:06 EDT
To: McSweeney, Louise: Finance (LDN) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=mcsweenl>
CC: Malloy, Marty: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=markets/cn=malloym>;Wade, Graham: Barclays Capital (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=wadeg>;Constant, Simon: Barclays Capital (NYK) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=constans>
Subject: Project COLT - Orphan Note
Attachments: Memo to SCM Finance re Orphan Policy_Final 24 June 09.doc

Importance: Normal
Priority: Normal
Sensitivity: None

Louise

Please find attached the final Orphan Note.

I had provided a draft of the Interagency Letter to Martin. RenTec have now agreed the form of this, so I will send the final version on to him for signing.

I have finalised the Memo for PwC and will circulate it shortly.

Execution of documents etc is scheduled for Friday.

Regards.

Ab

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Abhinav Shah | BARCLAYS CAPITAL
745 Seventh Avenue | 6th Floor | New York, NY 10019
P: +1 212 526 0060 | F: +1 212 412 5681 | C: [redacted]
E-mail: abhinav.shah@barcap.com

Memo

BARCLAYS

To	SCM Finance
From	Abhinav Shah
cc	Graham Wade / Marty Malloy
Date	24 June 2009
Subject	**Project Colt – Orphan Policy**

1. Summary

1.1 SCM and Prime Brokerage have recently undertaken a review of the Project Colt IFRS consolidated accounting treatment of Palomino Limited ("**Palomino**"), a wholly owned subsidiary of Barclays Bank PLC ("**Barclays**"). It has been agreed with BarCap Finance and PricewaterhouseCoopers ("**PwC**") that, following proposed amendments to Palomino's memorandum and articles of association (the "**Articles**") and the giving of a covenant by Barclays, as sole shareholder of Palomino, that it will not seek to amend the Articles in the future without the consent of Renaissance Technologies LLC ("**RenTec**"), Barclays will cease to consolidate Palomino under IFRS.

1.2 By way of background, Project Colt was approved by the SCM Approvals Committee on 2 September 2002 and by the NPC (both Global and U.S.) on 30 July 2002. In each transaction, Badger Holdings L.P. ("**Badger**"), a fund managed by RenTec, buys one or more call options (the "**Badger Options**") from Barclays Bank PLC, NY Branch ("**Barclays NY**"). In turn, Barclays NY buys call options (the "**Barclays Options**") with identical terms from Palomino. The Badger Options and the Barclays Options reference a set of prime brokerage accounts (the "**PB Accounts**") held by Palomino with Barclays Capital Inc. ("**BCI**") and Barclays Capital Securities Limited ("**BCSL**"). Palomino has appointed RenTec as trading manager for the PB Accounts under an investment management agreement ("**IMA**"). RenTec is subject to investment guidelines, which permit the PB Accounts to consist solely of (i) cash, (ii) long or short positions in equities, depository receipts, or similar equity-related instruments, or (iii) contracts for difference.

2. Barclays Orphan Policy

2.1 As a result of deconsolidating Palomino, it is our expectation that Palomino will become an "Orphan Entity" since it will not be consolidated by either Barclays or any other party, including RenTec and Badger.

2.2 The Barclays Group's "Orphan Policy" requires that the accounting status and proposed accounting treatment have been confirmed by Barclays Finance and PwC unless the cluster FD determines that the risk presented by the creation of an "Orphan Entity" does not warrant this. As stated above in Section 1.1, BarCap Finance and PwC have agreed the Barclays accounting analysis in this case.

2.3 The Barclays Group's "Orphan Policy" also requires that reasonable efforts are made to confirm with the external auditors of other parties to the transaction (who are also not consolidating the entity) that they are comfortable with the proposed accounting treatment. To the extent that this confirmation is not obtained, this should be a factor that is taken into account in determining whether the risk associated with the creation of a new orphan entity, in this case Palomino, is acceptable.

2.4 In this particular case, the above confirmation has not been sought from RenTec's auditors since the relevant businesses within Barclays Capital have been able to get comfortable with the risk presented by the creation of Palomino as an orphan for the following reasons:

- In the context of previous call options entered into between Badger and Barclays NY including two new options entered into as recently as 5 June 2009 and as part of the proposed amendments summarised above, Badger (the general partner of which is RenTec) has represented to Barclays in each applicable "Interagency Letter" that, as an investment company, it does not believe that FIN 46-R is applicable to it. Accordingly, it is not necessary for them to consider whether they are required to consolidate Palomino or not under FIN 46-R of US GAAP.

- Palomino was previously consolidated by Barclays and the proposed amendments have been initiated by Barclays rather than the client and should not therefore give rise to concerns that the client is seeking to create an orphan. In the Interagency Letter to be delivered as part of the proposed amendments summarised above, Badger and RenTec have also represented to Barclays that they have considered the impact of the proposed transactions and determined that their current accounting treatment and disclosure in their financial statements in relation to existing transactions between Badger, Barclays, Palomino and RenTec remains the same.

- RenTec have verbally confirmed that whilst audited accounts are prepared for RenTec and Badger, these are not publicly available. Hence, there is no material risk that a reader of their financial statements, especially given that RenTec is a privately held company, will be seeking to rely on such financial statements for any purpose.

- Finally, SCM and Prime Brokerage have verbally informed RenTec and Badger that Barclays do not intend to consolidate Palamino under IFRS.

2.5 Taking into account the above reasons, SCM and Prime Brokerage consider that it is not necessary to seek additional confirmation from Badger or RenTec's auditors that neither entity will be consolidating Palomino further to the proposed amendments summarised above.

June 26, 2009

Mr. Martin Malloy
Managing Director
Barclays Bank PLC, New York Branch
745 7th Avenue, 6th Floor
New York, NY 10019

Re: **Palomino Limited**

Dear Martin

We refer to our recent discussions regarding (i) the Investment Management Agreement (the "Investment Management Agreement"), effective as of October 1, 2004, as amended and restated with effect on June 13, 2008, between Palomino Limited ("Palomino") and Renaissance Technologies LLC ("Renaissance"), as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "IMA Transactions"); (ii) the ISDA Master Agreement (the "Badger Master Agreement"), dated as of October 1, 2004, between Barclays Bank PLC ("Barclays") and Badger Holdings L.P. ("Badger"), the confirmations executed by Barclays and Badger in connection therewith, each as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "Badger Transactions"); and (iii) the ISDA Master Agreement (the "Palomino Master Agreement"), dated as of September 30, 2002, between Barclays and Palomino, the confirmations executed by Barclays and Palomino in connection therewith, each as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "Palomino Transactions", and together with the IMA Transactions and the Badger Transactions, the "Transactions"). Capitalized terms used herein but not defined herein shall have the meanings ascribed to such terms in the Investment Management Agreement, and, if not defined therein, in the Badger Master Agreement, and, if not defined therein, in the Palomino Master Agreement.

You have advised us that certain amendments (the "Amendments") to the Amended and Restated Memorandum and Articles of Association (the "Memorandum and Articles of Association") of Palomino have been executed as of the date hereof, a copy of which is attached hereto as Exhibit A.

In connection with the execution of such Amendments, Barclays hereby (i) represents and warrants as of the date hereof to each of Badger and Palomino, respectively, that each representation and warranty made by Barclays to Badger and Palomino, as the case may be,

Permanent Subcommittee on Investigations
EXHIBIT #55

in respect of the Transactions under the Badger Master Agreement and the Palomino Master Agreement, respectively, are true and correct as of the date hereof and (ii) covenants as of the date hereof to each of Badger and Palomino, respectively, that it shall continue to perform each covenant owed by it, as the case may be, under the Badger Master Agreement and the Palomino Master Agreement, respectively.

In connection with the execution of such Amendments, Palomino hereby (i) represents and warrants as of the date hereof to each of Renaissance and Barclays, respectively, that each representation and warranty made by Palomino to Renaissance and Barclays, as the case may be, in respect of the Transactions under the Investment Management Agreement and the Palomino Master Agreement, respectively, are true and correct as of the date hereof and (ii) covenants as of the date hereof to each of Renaissance and Barclays, respectively, that it shall continue to perform each covenant owed by it, as the case may be, under the Investment Management Agreement and the Palomino Master Agreement, respectively.

Barclays hereby confirms to Renaissance that the Amendments are not intended to and shall not be used by Barclays or its affiliates to restrict the rights or powers of Palomino in respect of any Transaction under the Investment Management Agreement to (i) reject any purchase or sale of securities designated for execution by Renaissance under the Investment Management Agreement; (ii) in the case of a sale rejected by Palomino, continue to own such securities; or (iii) sell any securities that it may own under the Investment Management Agreement without direction from Renaissance.

Barclays hereby further covenants to Renaissance that it shall not make any amendments or modifications to the Memorandum and Articles of Association of Palomino after the date hereof without first obtaining the prior written consent thereto of Renaissance; provided that the Investment Management Agreement has not been terminated by either Palomino or Renaissance.

If you acknowledge the foregoing, please sign and return one copy of this letter, which will constitute your confirmation with respect to the subject matter hereof.

Very truly yours,

RENAISSANCE TECHNOLOGIES LLC

By: ____________________

Name: MARK SILBER

Title: EXECUTIVE VICE PRESIDENT

Acknowledged and Confirmed
this 26th day of June 2009:

BARCLAYS BANK PLC, NEW YORK BRANCH

By: ______________________
Name:
Title:

Acknowledged and Confirmed
this 26th day of June 2009:

PALOMINO LIMITED

By: ______________________
Name:
Title:

Acknowledged and Confirmed
this 26th day of June 2009:

BADGER HOLDINGS L.P.
BY: RENAISSANCE TECHNOLOGIES LLC
its sole General Partner

By: ______________________
Name: MARK SILBER
Title: EXECUTIVE VICE PRESIDENT

June 26, 2009

Mr. Martin Malloy
Managing Director
Barclays Bank PLC, New York Branch
745 7th Avenue, 6th Floor
New York, NY 10019

Re: Palomino Limited

Dear Martin

We refer to our recent discussions regarding (i) the Investment Management Agreement (the "Investment Management Agreement"), effective as of October 1, 2004, as amended and restated with effect on June 13, 2008, between Palomino Limited ("Palomino") and Renaissance Technologies LLC ("Renaissance"), as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "IMA Transactions"); (ii) the ISDA Master Agreement (the "Badger Master Agreement"), dated as of October 1, 2004, between Barclays Bank PLC ("Barclays") and Badger Holdings L.P. ("Badger"), the confirmations executed by Barclays and Badger in connection therewith, each as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "Badger Transactions"); and (iii) the ISDA Master Agreement (the "Palomino Master Agreement"), dated as of September 30, 2002, between Barclays and Palomino, the confirmations executed by Barclays and Palomino in connection therewith, each as amended, restated or supplemented from time to time, and the transactions contemplated therein (the "Palomino Transactions", and together with the IMA Transactions and the Badger Transactions, the "Transactions"). Capitalized terms used herein but not defined herein shall have the meanings ascribed to such terms in the Investment Management Agreement, and, if not defined therein, in the Badger Master Agreement, and, if not defined therein, in the Palomino Master Agreement.

You have advised us that certain amendments (the "Amendments") to the Amended and Restated Memorandum and Articles of Association (the "Memorandum and Articles of Association") of Palomino have been executed as of the date hereof, a copy of which is attached hereto as Exhibit A.

In connection with the execution of such Amendments, Barclays hereby (i) represents and warrants as of the date hereof to each of Badger and Palomino, respectively, that each representation and warranty made by Barclays to Badger and Palomino, as the case may be,

in respect of the Transactions under the Badger Master Agreement and the Palomino Master Agreement, respectively, are true and correct as of the date hereof and (ii) covenants as of the date hereof to each of Badger and Palomino, respectively, that it shall continue to perform each covenant owed by it, as the case may be, under the Badger Master Agreement and the Palomino Master Agreement, respectively.

In connection with the execution of such Amendments, Palomino hereby (i) represents and warrants as of the date hereof to each of Renaissance and Barclays, respectively, that each representation and warranty made by Palomino to Renaissance and Barclays, as the case may be, in respect of the Transactions under the Investment Management Agreement and the Palomino Master Agreement, respectively, are true and correct as of the date hereof and (ii) covenants as of the date hereof to each of Renaissance and Barclays, respectively, that it shall continue to perform each covenant owed by it, as the case may be, under the Investment Management Agreement and the Palomino Master Agreement, respectively.

Barclays hereby confirms to Renaissence that the Amendments are not intended to and shall not be used by Barclays or its affiliates to restrict the rights or powers of Palomino in respect of any Transaction under the Investment Management Agreement to (i) reject any purchase or sale of securities designated for execution by Renaissance under the Investment Management Agreement; (ii) in the case of a sale rejected by Palomino, continue to own such securities; or (iii) sell any securities that it may own under the Investment Management Agreement without direction from Renaissance.

Barclays hereby further covenants to Renaissance that it shall not make any amendments or modifications to the Memorandum and Articles of Association of Palomino after the date hereof without first obtaining the prior written consent thereto of Renaissance; provided that the Investment Management Agreement has not been terminated by either Palomino or Renaissance.

If you acknowledge the foregoing, please sign and return one copy of this letter, which will constitute your confirmation with respect to the subject matter hereof.

Very truly yours,

RENAISSANCE TECHNOLOGIES LLC

By: ________________________

Name: Mark Silber
Title: Vice President

Acknowledged and Confirmed
this 26th day of June 2009:

BARCLAYS BANK PLC, NEW YORK BRANCH

By: ______________________
Name: Nizam Siddiqui
Title: Director

Acknowledged and Confirmed
this 26th day of June 2009:

PALOMINO LIMITED

By: ______________________
Name: DA SIMPSON
Title: DIRECTOR

Page 5

Acknowledged and Confirmed
this 26th day of June 2009:

BADGER HOLDINGS L.P.

By: ______________________
Name:
Title:

Badger Holdings L.P.
c/o Renaissance Technologies LLC
800 Third Avenue, 33rd Floor
New York, New York 10022

Renaissance Technologies LLC
800 Third Avenue, 33rd Floor
New York, New York 10022

Attention: Mr. Mark Silber

26 June 2009

Dear Sirs,

We refer to the letter agreement dated on or around the date of this letter between ourselves, yourselves and Palomino Limited ("**Palomino**") in connection with the proposed amendments to the Memorandum and Articles of Association of Palomino (the "**Agreement**").

We represent to you that:

a) we and our affiliates are not entering into the Agreement and the transactions referred to therein for the purpose of achieving a financial statement objective that could be construed as materially misrepresenting the financial condition of us or that of any affiliate;
b) the transactions referred to in the Agreement will be accounted for in our group consolidated financial statements in conformity with International Financial Reporting Standards ("**IFRS**");
c) the transactions referred to in the Agreement will be disclosed in our group consolidated financial statements and otherwise as and to the extent necessary to comply with IFRS and all applicable laws; and
d) the transactions referred to in the Agreement have been reviewed and approved by appropriate personnel in accordance with our internal review and approval procedure.

You represent to us that:

a) you and your affiliates are not entering into the Agreement for the purpose of achieving a financial statement objective that could be construed as materially misrepresenting the financial condition of you or that of any affiliate;
b) your financial statements are prepared in conformity with accounting principles generally accepted in the United States of America ("**US GAAP**");
c) you have considered the impact of the transactions referred to in the Agreement and concluded that they do not impact your current accounting treatment of and disclosures in relation to existing transactions between ourselves, yourselves and Palomino under US GAAP in your financial statements;
d) as each of you is deemed to be an "investment company", as that term is defined in the AICPA Audit and Accounting Guide for Investment Companies , you do not believe that FASB Interpretation No. 46 (revised December 2003), "Consolidation of Variable Interest Entities", as amended by FASB Staff Position No. FIN 46(R)-7, "Application of FASB Interpretation No. 46(R) to Investment Companies" is applicable to you; and
e) the transactions referred to in the Agreement have been reviewed and approved by appropriate personnel in accordance with your internal review and approval procedure.

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This letter shall be governed by, and shall be construed in accordance with, the laws of the State of New York.

Yours sincerely,

....
For and on behalf of Barclays Bank PLC, NY Branch

We hereby acknowledge receipt of and agree to the terms of this letter.

....
For and behalf of Badger Holdings L.P.

....
For and behalf of Renaissance Technologies LLC

THE COMPANIES LAW (AS AMENDED)

COMPANY LIMITED BY SHARES

AMENDED AND RESTATED MEMORANDUM AND ARTICLES

OF ASSOCIATION

OF

PALOMINO LIMITED

(ADOPTED PURSUANT TO SPECIAL RESOLUTION DATED 26 JUNE 2009)

WALKERS

Walker House, 87 Mary Street, George Town
Grand Cayman KY1-9001, Cayman Islands
T 345 949 0100 F 345 949 7886 www.walkersglobal.com

REF:LMJ/jjp/L01855

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Permanent Subcommittee on Investigations
EXHIBIT #57

THE COMPANIES LAW (AS AMENDED)

COMPANY LIMITED BY SHARES

AMENDED AND RESTATED MEMORANDUM OF ASSOCIATION

OF

PALOMINO LIMITED
(ADOPTED PURSUANT TO SPECIAL RESOLUTION DATED 26 JUNE 2009)

1. The name of the Company is Palomino Limited.

2. The Registered Office of the Company will be situated at the offices of **Walkers Corporate Services Limited, Walker House, 87 Mary Street, George Town, Grand Cayman, KY1-9002 Cayman Islands** or at such other location as the Directors may from time to time determine.

3. The objects for which the Company is established are, subject to the provisions of the Company's Articles of Association, unrestricted and the Company shall have full power and authority to carry out any object not prohibited by any law as provided by Section 7(4) of The Companies Law.

4. The Company shall have and be capable of exercising all the functions of a natural person of full capacity irrespective of any question of corporate benefit as provided by Section 27(2) of the Companies Law.

5. Nothing in the preceding sections shall be deemed to permit the Company to carry on the business of a Bank or Trust Company without being licensed in that behalf under the provisions of the Banks and Trust Companies Law (2001 Revision), or to carry on Insurance Business from within the Cayman Islands or the business of an Insurance Manager, Agent, Sub-agent or Broker without being licensed in that behalf under the provisions of the Insurance Law (2001 Revision), or to carry on the business of Company Management without being licensed in that behalf under the provisions of the Companies Management Law (2001 Revision).

6. The Company will not trade in the Cayman Islands with any person, firm or corporation except in furtherance of the business of the Company carried on outside the Cayman Islands; provided that nothing in this section shall be construed as to prevent the Company effecting and concluding contracts in the Cayman Islands, and exercising in the Cayman Islands all of its powers necessary for the carrying on of its business outside the Cayman Islands.

7. The liability of the Members is limited to the amount, if any, unpaid on the shares respectively held by them.

8. The capital of the Company is **US$10,000,000,000.00** divided into **10,000,000,000** shares of a nominal or par value of **US$1.00** each provided always that, subject to the Companies Law and the Company's Articles of Association, the Company shall have the power to redeem or purchase any of its shares and to sub-divide or consolidate the said shares or any of them and to issue all or any part of its capital whether original, redeemed, increased or reduced with or without any preference, priority, special privilege or other rights or subject to any postponement of rights or to any conditions or restrictions whatsoever and so that unless the conditions of issue shall otherwise expressly provide every issue of shares whether stated to be ordinary, preference or otherwise shall be subject to the powers on the part of the Company hereinbefore provided.

9. The Company may exercise the power contained in the Companies Law to deregister in the Cayman Islands and be registered by way of continuation in some other jurisdiction.

REGISTRAR OF COMPANIES
EXEMPTED
CAYMAN ISLANDS

CERTIFIED TO BE A TRUE AND CORRECT COPY

SIG. ____

D. EVADNE EBANKS
Assistant Registrar

Date. 30 June 2009

TABLE OF CONTENTS

THE COMPANIES LAW (AS AMENDED)

COMPANY LIMITED BY SHARES

ARTICLES OF ASSOCIATION

OF

PALOMINO LIMITED

TABLE A

The Regulations contained or incorporated in Table 'A' in the First Schedule of the Companies Law shall not apply to Palomino Limited (the "**Company**") and the following Articles shall comprise the Articles of Association of the Company.

INTERPRETATION

1. In these Articles, the following defined terms will have the meanings ascribed to them, if not inconsistent with the subject or context:

"**Barclays Bank PLC**" means Barclays Bank PLC, a public limited company incorporated in England and Wales (with registered number 01026167) whose registered address is 1 Churchill Place, London E14 5HP, United Kingdom;

"**Barclays Deposits**" means cash deposits made with Barclays Bank PLC;

"**Barclays Group**" means Barclays Bank PLC and any entity which is wholly owned by Barclays Bank PLC, whether directly or indirectly;

"**Companies Law**" means the Companies Law (as amended) of the Cayman Islands;

"**Directors**" and "Board of Directors" means the Directors of the Company for the time being, or as the case may be, the directors assembled as a Board or as a committee thereof;

"**Eligible Assets**" means Barclays Deposits and/or debt issued by a sovereign body carrying a senior unsecured long term rating equal to the highest rating available from a recognised rating agency;

"**Investment Management Agreement**" means an agreement to which the Company is a party under which a third party provides investment management services for the benefit of the Company;

"**ISDA Agreement**" means an agreement in the form prescribed by the International Swaps and Derivatives Association Inc. as an ISDA Master Agreement, including any schedules and confirmations thereto;

"**Member**" means a person whose name is entered in the Register of Members and includes each subscriber to the Memorandum of Association pending the issue to him of the subscriber share or shares;

"**Memorandum of Association**" means the memorandum of association of the Company, as amended and re-stated from time to time;

"**Office**" means the registered office of the Company as required by the Companies Law;

"**Ordinary Resolution**" means a resolution:

(a) passed by a simple majority of such Members as, being entitled to do so, vote in person or, where proxies are allowed, by proxy at a general meeting of the Company and where a poll is taken regard shall be had in computing a majority to the number of votes to which each Member is entitled; or

(b) approved in writing by all of the Members entitled to vote at a general meeting of the Company in one or more instruments each signed by one or more of the Members and the effective date of the resolution so adopted shall be the date on which the instrument, or the last of such instruments, if more than one, is executed;

"**paid up**" means paid up as to the par value in respect of the issue of any shares and includes credited as paid up;

"**PB Accounts**" means prime brokerage accounts in the name of the Company held with any member of the Barclays Group and opened pursuant to PB Agreements entered into between the Company and any member of the Barclays Group;

"**PB Agreement**" means a prime brokerage agreement between any member of the Barclays Group and the Company pursuant to which such member of the Barclays Group provides prime brokerage services for the benefit of the Company;

"**Register of Members**" means the register to be kept by the Company in accordance with the Companies Law;

"**Renaissance Technologies, LLC**" means Renaissance Technologies, LLC, a limited liability company formed under the laws of the State of Delaware, United States of America;

"**Seal**" means the Common Seal of the Company (if adopted) including any facsimile thereof;

"**share**" means any share in the capital of the Company, including a fraction of any share;

"**signed**" includes a signature or representation of a signature affixed by mechanical means; and

"**Special Resolution**" means a resolution passed in accordance with Section 60 of the Companies Law, being a resolution:

(a) passed by a majority of not less than two-thirds of such Members as, being entitled to do so, at a general meeting of the Company of which notice specifying the intention to propose the resolution as a Special Resolution has been duly given and where a poll is taken regard shall be had in computing a majority to the number of votes to which each Member is entitled; or

(b) approved in writing by all of the Members entitled to vote at a general meeting of the Company in one or more instruments each signed by one or more of the Members and the effective date of the Special Resolution so adopted shall be the date on which the instrument or the last of such instruments if more than one, is executed.

2. In these Articles, save where the context requires otherwise:

(a) words importing the singular number shall include the plural number and vice versa;

(b) words importing the masculine gender only shall include the feminine gender;

(c) words importing persons only shall include companies or associations or bodies of persons, whether corporate or not;

(d) **"may"** shall be construed as permissive and **"shall"** shall be construed as imperative;

(e) references to a **"dollar"** or **"dollars"** or $ is a reference to dollars of the United States;

(f) references to a statutory enactment shall include reference to any amendment or re-enactment thereof for the time being in force;

(g) reference to any determination by the Directors shall be construed as a determination by the Directors in their sole and absolute discretion and shall be applicable either generally or in any particular case; and

(h) reference to "in writing" shall be construed as written or represented by any means reproducible in writing, including any form of print, lithograph, email, facsimile, photograph or telex or represented by any other substitute or format for storage or transmission for writing or partly one and partly another.

3. Subject to the last two preceding Articles, any words defined in the Companies Law shall, if not inconsistent with the subject or context, bear the same meaning in these Articles.

PRELIMINARY

4. The business of the Company may be commenced at any time after incorporation.

5. The Office shall be at such address in the Cayman Islands as the Directors may from time to time determine. The Company may in addition establish and maintain such other offices and places of business and agencies in such places in the United Kingdom as the Directors may from time to time determine.

PERMITTED ACTIVITIES

6. The Company may not enter into any transactions other than the following:

(a) entering into an Investment Management Agreement with Renaissance Technologies, LLC, or any affiliate thereof, and any transactions permitted under the terms of any such Investment Management Agreement;

(b) entering into PB Agreements and any transactions permitted under the terms of any such PB Agreements;

(c) opening PB Accounts pursuant to PB Agreements and entering into transactions directly related to the activities conducted with respect to the PB Accounts;

(d) entering into one or more ISDA Agreements with Barclays Bank PLC;

(e) entering into option transactions pursuant to ISDA Agreements with Barclays Bank PLC; and

(f) investing in Eligible Assets other than pursuant to the terms of any Investment Management Agreement.

SHARES

7. Subject as otherwise provided in these Articles, all shares for the time being and from time to time unissued shall be under the control of the Directors, and may be re-designated, allotted or disposed of in such manner, to such persons and on such terms as the Directors in their absolute discretion may think fit.

8. The Company may, insofar as may be permitted by law, pay a commission to any person in consideration of his subscribing or agreeing to subscribe whether absolutely or conditionally for any shares. Such commissions may be satisfied by the payment of cash or the lodgement of fully or partly paid-up shares or partly in one way and partly in the other. The Company may also on any issue of shares pay such brokerage as may be lawful.

VARIATION OF RIGHTS ATTACHING TO SHARES

9. If at any time the share capital is divided into different classes of shares, the rights attaching to any class (unless otherwise provided by the terms of issue of the shares of that class) may be varied or abrogated with the consent in writing of the holders of two-thirds of the issued shares of that class, or with the sanction of a resolution passed by at least a two-thirds majority of the holders of shares of the class at a separate general meeting of the holders of the shares of the class. To every such separate general meeting the provisions of these Articles relating to general meetings of the Company shall mutatis mutandis apply, but so that the necessary quorum shall be at least an entity holding or representing at least one-third of the issued shares of the class and that any holder of shares of the class may demand a poll.

10. The rights conferred upon the holders of the shares of any class issued with preferred or other rights shall not, unless otherwise expressly provided by the terms of issue of the shares of that class, be deemed to be varied or abrogated by the creation or issue of further shares ranking pari passu therewith or the redemption or purchase of shares of any class by the Company.

CERTIFICATES

11. Every person whose name is entered as a member in the Register of Members shall, without payment, be entitled to a certificate in the form determined by the Directors. Such certificate may be under the Seal. All certificates shall specify the share or shares held by that person and the amount paid up thereon, provided that in respect of a share or shares held jointly by several persons the Company shall not be bound to issue more than one certificate, and delivery of a certificate for a share to one of several joint holders shall be sufficient delivery to all. All certificates surrendered to the Company for transfer shall be cancelled and no new certificates shall be issued until the former certificate for a like number of shares shall have been surrendered or cancelled.

12. If a share certificate is defaced, lost or destroyed it may be renewed on such terms, if any, as to evidence and indemnity as the Directors think fit.

FRACTIONAL SHARES

13. The Directors may issue fractions of a share of any class of shares, and, if so issued, a fraction of a share (calculated to three decimal points) shall be subject to and carry the corresponding fraction of liabilities (whether with respect to any unpaid amount thereon, contribution, calls or otherwise), limitations, preferences, privileges, qualifications, restrictions, rights (including,

without limitation, voting and participation rights) and other attributes of a whole share of the same class of shares.

LIEN

14. The Company shall have a first priority lien and charge on every partly paid share for all moneys (whether presently payable or not) called or payable at a fixed time in respect of that share, and the Company shall also have a first priority lien and charge on all partly paid shares standing registered in the name of a Member (whether held solely or jointly with another person) for all moneys presently payable by him or his estate to the Company, but the Directors may at any time declare any share to be wholly or in part exempt from the provisions of this Article. The Company's lien, if any, on a share shall extend to all distributions payable thereon.

15. The Company may sell, in such manner as the Directors may determine, any shares on which the Company has a lien, but no sale shall be made unless an amount in respect of which the lien exists is presently payable nor until the expiration of fourteen days after a notice in writing, stating and demanding payment of such part of the amount in respect of which the lien exists as is presently payable, has been given to the registered holder for the time being of the share, or the persons entitled thereto by reason of his death or bankruptcy.

16. For giving effect to any such sale the Directors may authorise some person to transfer the shares sold to the purchaser thereof. The purchaser shall be registered as the holder of the shares comprised in any such transfer and he shall not be bound to see to the application of the purchase money, nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the sale.

17. The proceeds of the sale after deduction of expenses, fees and commission incurred by the Company shall be received by the Company and applied in payment of such part of the amount in respect of which the lien exists as is presently payable, and the residue shall (subject to a like lien for sums not presently payable as existed upon the shares prior to the sale) be paid to the person entitled to the shares at the date of the sale.

CALLS ON SHARES

18. The Directors may from time to time make calls upon the Members in respect of any moneys unpaid on their partly paid shares, and each Member shall (subject to receiving at least fourteen days' notice specifying the time or times of payment) pay to the Company at the time or times so specified the amount called on such shares.

19. The joint holders of a share shall be jointly and severally liable to pay calls in respect thereof.

20. If a sum called in respect of a share is not paid before or on the day appointed for payment thereof, the person from whom the sum is due shall pay interest upon the sum at the rate of eight percentum per annum from the day appointed for the payment thereof to the time of the actual payment, but the Directors shall be at liberty to waive payment of that interest wholly or in part.

21. The provisions of these Articles as to the liability of joint holders and as to payment of interest shall apply in the case of non-payment of any sum which, by the terms of issue of a share, becomes payable at a fixed time, whether on account of the amount of the share, or by way of premium, as if the same had become payable by virtue of a call duly made and notified.

22. The Directors may make arrangements on the issue of partly paid shares for a difference between the Members, or the particular shares, in the amount of calls to be paid and in the times of payment.

23. The Directors may, if they think fit, receive from any Member willing to advance the same all or any part of the moneys uncalled and unpaid upon any partly paid shares held by him, and upon all or any of the moneys so advanced may (until the same would, but for such advance, become presently payable) pay interest at such rate (not exceeding without the sanction of an Ordinary Resolution, eight percent. per annum) as may be agreed upon between the Member paying the sum in advance and the Directors.

FORFEITURE OF SHARES

24. If a Member fails to pay any call or instalment of a call in respect of partly paid shares on the day appointed for payment, the Directors may, at any time thereafter during such time as any part of such call or instalment remains unpaid, serve a notice on him requiring payment of so much of the call or instalment as is unpaid, together with any interest which may have accrued.

25. The notice shall name a further day (not earlier than the expiration of 14 days from the date of the notice) on or before which the payment required by the notice is to be made, and shall state that in the event of non-payment at or before the time appointed the shares in respect of which the call was made will be liable to be forfeited.

26. If the requirements of any such notice as aforesaid are not complied with, any share in respect of which the notice has been given may at any time thereafter, before the payment required by notice has been made, be forfeited by a resolution of the Directors to that effect.

27. A forfeited share may be sold or otherwise disposed of on such terms and in such manner as the Directors think fit, and at any time before a sale or disposition the forfeiture may be cancelled on such terms as the Directors think fit.

28. A person whose shares have been forfeited shall cease to be a Member in respect of the forfeited shares, but shall, notwithstanding, remain liable to pay to the Company all moneys which at the date of forfeiture were payable by him to the Company in respect of the shares forfeited, but his liability shall cease if and when the Company receives payment in full of the amount unpaid on the shares forfeited.

29. A statutory declaration in writing that the declarant is a Director, and that a share has been duly forfeited on a date stated in the declaration, shall be conclusive evidence of the facts in the declaration as against all persons claiming to be entitled to the share.

30. The Company may receive the consideration, if any, given for a share on any sale or disposition thereof pursuant to the provisions of these Articles as to forfeiture and may execute a transfer of the share in favour of the person to whom the share is sold or disposed of and that person shall be registered as the holder of the share, and shall not be bound to see to the application of the purchase money, if any, nor shall his title to the shares be affected by any irregularity or invalidity in the proceedings in reference to the disposition or sale.

31. The provisions of these Articles as to forfeiture shall apply in the case of non-payment of any sum which by the terms of issue of a share becomes due and payable, whether on account of the amount of the share, or by way of premium, as if the same had been payable by virtue of a call duly made and notified.

TRANSFER OF SHARES

32. The instrument of transfer of any share shall be in any usual or common form or such other form as the Directors may, in their absolute discretion, approve and be executed by or on behalf of the transferor and if in respect of a nil or partly paid up share, or if so required by the Directors, shall also be executed on behalf of the transferee and shall be accompanied by the certificate (if any)

of the shares to which it relates and such other evidence as the Directors may reasonably require to show the right of the transferor to make the transfer. The transferor shall be deemed to remain a holder of the share until the name of the transferee is entered in the Register of Members in respect thereof.

33. The Directors may in their absolute discretion decline to register any transfer of shares without assigning any reason therefor. If the Directors refuse to register a transfer of any shares, they shall within two months after the date on which the transfer was lodged with the Company send to the transferee notice of the refusal.

34. The registration of transfers may be suspended at such times and for such periods as the Directors may, in their absolute discretion, from time to time determine, provided always that such registration shall not be suspended for more than 45 days in any year.

35. All instruments of transfer which are registered shall be retained by the Company, but any instrument of transfer which the Directors decline to register shall (except in any case of fraud) be returned to the person depositing the same.

TRANSMISSION OF SHARES

36. The legal personal representative of a deceased sole holder of a share shall be the only person recognised by the Company as having any title to the share. In the case of a share registered in the name of two or more holders, the survivors or survivor, or the legal personal representatives of the deceased survivor, shall be the only person recognised by the Company as having any title to the share.

37. Any person becoming entitled to a share in consequence of the death or bankruptcy of a Member shall upon such evidence being produced as may from time to time be required by the Directors, have the right either to be registered as a Member in respect of the share or, instead of being registered himself, to make such transfer of the share as the deceased or bankrupt person could have made; but the Directors shall, in either case, have the same right to decline or suspend registration as they would have had in the case of a transfer of the share by the deceased or bankrupt person before the death or bankruptcy.

38. A person becoming entitled to a share by reason of the death or bankruptcy of a Member shall be entitled to the same dividends and other advantages to which he would be entitled if he were the registered Member, except that he shall not, before being registered as a Member in respect of the share, be entitled in respect of it to exercise any right conferred by membership in relation to meetings of the Company.

ALTERATION OF SHARE CAPITAL

39. The Company may from time to time by Ordinary Resolution increase the share capital by such sum, to be divided into shares of such Classes and amount, as the resolution shall prescribe.

40. The Company may by Ordinary Resolution:

(a) consolidate and divide all or any of its share capital into shares of a larger amount than its existing shares;

(b) convert all or any of its paid up shares into stock and reconvert that stock into paid up shares of any denomination;

(c) subdivide its existing shares, or any of them into shares of a smaller amount provided that in the subdivision the proportion between the amount paid and the amount, if any, unpaid on each reduced share shall be the same as it was in case of the share from which the reduced share is derived; and

(d) cancel any shares that, at the date of the passing of the resolution, have not been taken or agreed to be taken by any person and diminish the amount of its share capital by the amount of the shares so cancelled.

41. The Company may by Special Resolution reduce its share capital and any capital redemption reserve in any manner authorised by law.

REDEMPTION AND PURCHASE OF SHARES

42. Subject to the provisions of the Companies Law, the Company may:

(a) issue shares on terms that they are to be redeemed or are liable to be redeemed at the option of the Company or the Member on such terms and in such manner as the Directors may, before the issue of such shares, determine;

(b) purchase its own shares (including any redeemable shares) on such terms and in such manner as the Directors may determine and agree with the Member; and

(c) make a payment in respect of the redemption or purchase of its own shares otherwise that out of profits or the proceeds of a fresh issue of shares.

43. Any share in respect of which notice of redemption has been given shall not be entitled to participate in the profits of the Company in respect of the period after the date specified as the date of redemption in the notice of redemption.

44. The redemption or purchase of any share shall not be deemed to give rise to the redemption or purchase of any other share.

45. The Directors may when making payments in respect of the redemption or purchase of shares, if authorised by the terms of issue of the shares being redeemed or purchased or with the agreement of the holder of such shares, make such payment either in cash or in specie.

CLOSING REGISTER OF MEMBERS OR FIXING RECORD DATE

46. For the purpose of determining those Members that are entitled to receive notice of, attend or vote at any meeting of Members or any adjournment thereof, or those Members that are entitled to receive payment of any dividend, or in order to make a determination as to who is a Member for any other purpose, the Directors may provide that the Register of Members shall be closed for transfers for a stated period which shall not exceed in any case 40 days. If the Register of Members shall be so closed for the purpose of determining those Members that are entitled to receive notice of, attend or vote at a meeting of Members the register shall be so closed for at least 10 days immediately preceding such meeting and the record date for such determination shall be the date of the closure of the Register of Members.

47. In lieu of or apart from closing the Register of Members, the Directors may fix in advance a date as the record date for any such determination of those Members that are entitled to receive notice of, attend or vote at a meeting of the Members and for the purpose of determining those Members that are entitled to receive payment of any dividend the Directors may, at or within 90 days prior to the date of declaration of such dividend fix a subsequent date as the record date for such determination.

48. If the Register of Members is not so closed and no record date is fixed for the determination of those Members entitled to receive notice of, attend or vote at a meeting of Members or those Members that are entitled to receive payment of a dividend, the date on which notice of the meeting is posted or the date on which the resolution of the Directors declaring such dividend is adopted, as the case may be, shall be the record date for such determination of Members. When a determination of those Members that are entitled to receive notice of, attend or vote at a meeting of Members has been made as provided in this Article, such determination shall apply to any adjournment thereof.

GENERAL MEETINGS

49. The Directors may, whenever they think fit, convene a general meeting of the Company. All general meetings shall be held in the United Kingdom.

50. General meetings shall also be convened on the requisition in writing of any Member or Members entitled to attend and vote at general meetings of the Company who hold not less than 10 per cent of the paid up voting share capital of the Company deposited at the Office specifying the objects of the meeting for a date no later than 21 days from the date of deposit of the requisition signed by the requisitionists, and if the Directors do not convene such meeting for a date not later than 45 days after the date of such deposit, the requisitionists themselves may convene the general meeting in the same manner, as nearly as possible, as that in which general meetings may be convened by the Directors, and all reasonable expenses incurred by the requisitionists as a result of the failure of the Directors to convene the general meeting shall be reimbursed to them by the Company.

51. If at any time there are no Directors, any two Members (or if there is only one Member then that Member) entitled to vote at general meetings of the Company may convene a general meeting in the same manner as nearly as possible as that in which general meetings may be convened by the Directors.

NOTICE OF GENERAL MEETINGS

52. At least seven days' notice in writing counting from the date service is deemed to take place as provided in these Articles specifying the place, the day and the hour of the meeting and, in case of special business, the general nature of that business, shall be given in the manner hereinafter provided or in such other manner (if any) as may be prescribed by the Company by Ordinary Resolution to such persons as are, under these Articles, entitled to receive such notices from the Company, but with the consent of all the Members entitled to receive notice of some particular meeting and attend and vote thereat, that meeting may be convened by such shorter notice or without notice and in such manner as those Members may think fit.

53. The accidental omission to give notice of a meeting to or the non-receipt of a notice of a meeting by any Member shall not invalidate the proceedings at any meeting.

PROCEEDINGS AT GENERAL MEETINGS

54. All business carried out at a general meeting shall be deemed special with the exception of sanctioning a dividend, the consideration of the accounts, balance sheets, any report of the Directors or of the Company's auditors, the appointment and removal of Directors and the fixing of the remuneration of the Company's auditors. No special business shall be transacted at any general meeting without the consent of all Members entitled to receive notice of that meeting unless notice of such special business has been given in the notice convening that meeting.

55. No business shall be transacted at any general meeting unless a quorum of Members is present at the time when the meeting proceeds to business. Save as otherwise provided by these

Articles, one or more Members holding at least a majority of the paid up voting share capital of the Company present in person or by proxy shall be a quorum.

56. If within half an hour from the time appointed for the meeting a quorum is not present, the meeting, if convened upon the requisition of Members, shall be dissolved. In any other case it shall stand adjourned to the same day in the next week, at the same time and place, and if at the adjourned meeting a quorum is not present within half an hour from the time appointed for the meeting the Member or Members present and entitled to vote shall form a quorum.

57. If the Directors wish to make this facility available to Members for a specific or all general meetings of the Company, a Member may participate in any general meeting of the Company, by means of a telephone or similar communication equipment by way of which all persons participating in such meeting can hear each other and such participation shall be deemed to constitute presence in person at the meeting.

58. The chairman, if any, of the Directors shall preside as chairman at every general meeting of the Company.

59. If there is no such chairman, or if at any general meeting he is not present within fifteen minutes after the time appointed for holding the meeting or is unwilling to act as chairman, the Members present shall choose any person present to be chairman of that meeting.

60. The chairman may with the consent of any general meeting at which a quorum is present (and shall if so directed by the meeting) adjourn a meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place. When a meeting, or adjourned meeting, is adjourned for 14 days or more, notice of the adjourned meeting shall be given as in the case of an original meeting. Save as aforesaid it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

61. At any general meeting a resolution put to the vote of the meeting shall be decided on a show of hands, unless a poll is (before or on the declaration of the result of the show of hands) demanded by one or more Members present in person or by proxy entitled to vote, and unless a poll is so demanded, a declaration by the chairman that a resolution has, on a show of hands, been carried, or carried unanimously, or by a particular majority, or lost, and an entry to that effect in the book of the proceedings of the Company, shall be conclusive evidence of the fact, without proof of the number or proportion of the votes recorded in favour of, or against, that resolution.

62. If a poll is duly demanded it shall be taken in such manner as the chairman directs, and the result of the poll shall be deemed to be the resolution of the meeting at which the poll was demanded.

63. In the case of an equality of votes, whether on a show of hands or on a poll, the chairman of the meeting at which the show of hands takes place or at which the poll is demanded, shall be entitled to a second or casting vote.

64. A poll demanded on the election of a chairman of the meeting or on a question of adjournment shall be taken forthwith. A poll demanded on any other question shall be taken at such time as the chairman of the meeting directs.

VOTES OF MEMBERS

65. Subject to any rights and restrictions for the time being attached to any share, on a show of hands every Member present in person and every person representing a Member by proxy shall, at a general meeting of the Company, each have one vote and on a poll every Member and every

person representing a Member by proxy shall have one vote for each share of which he or the person represented by proxy is the holder.

66. In the case of joint holders the vote of the senior who tenders a vote whether in person or by proxy shall be accepted to the exclusion of the votes of the other joint holders and for this purpose seniority shall be determined by the order in which the names stand in the Register.

67. A Member of unsound mind, or in respect of whom an order has been made by any court having jurisdiction in lunacy, may vote, whether on a show of hands or on a poll, by his committee, or other person in the nature of a committee appointed by that court, and any such committee or other person, may vote by proxy.

68. No Member shall be entitled to vote at any general meeting unless all calls or other sums presently payable by him in respect of shares carrying the right to vote held by him have been paid.

69. On a poll votes may be given either personally or by proxy.

70. The instrument appointing a proxy shall be in writing under the hand of the appointor or of his attorney duly authorised in writing or, if the appointor is a corporation, either under seal or under the hand of an officer or attorney duly authorised. A proxy need not be a Member.

71. An instrument appointing a proxy may be in any usual or common form or such other form as the Directors may approve.

72. The instrument appointing a proxy shall be deemed to confer authority to demand or join in demanding a poll.

73. A resolution in writing signed by all the Members for the time being entitled to receive notice of and to attend and vote at general meetings of the Company (or being corporations by their duly authorised representatives) shall be as valid and effective as if the same had been passed at a general meeting of the Company duly convened and held.

CORPORATIONS ACTING BY REPRESENTATIVES AT MEETINGS

74. Any corporation which is a Member or a Director may by resolution of its directors or other governing body authorise such person as it thinks fit to act as its representative at any meeting of the Company or of any class of Members or of the Board of Directors or of a committee of Directors, and the person so authorised shall be entitled to exercise the same powers on behalf of the corporation which he represents as that corporation could exercise if it were an individual Member or Director.

DIRECTORS

75. The name of the first Director(s) shall either be determined in writing by a majority (or in the case of a sole subscriber that subscriber) of, or elected at a meeting of, the subscribers of the Memorandum of Association.

76. The Company may by Ordinary Resolution appoint any person to be a Director.

77. Subject to the provisions of these Articles, a Director shall hold office until such time as he is removed from office by Ordinary Resolution.

78. The Company may by Ordinary Resolution from time to time fix the maximum and minimum number of Directors to be appointed but unless such numbers are fixed as aforesaid the number of Directors shall be unlimited.

79. The remuneration of the Directors may be determined by the Board of Directors or by the Company by Ordinary Resolution.

80. There shall be no shareholding qualification for Directors unless determined otherwise by the Company by Ordinary Resolution.

81. The Directors shall have power at any time and from time to time to appoint a person as a Director, either as a result of a casual vacancy or as an additional Director, subject to the maximum number (if any) imposed by the Company by Ordinary Resolution.

ALTERNATE DIRECTOR OR PROXY

82. Any Director may in writing appoint another person to be his alternate and, save to the extent provided otherwise in the form of appointment, such alternate shall have authority to sign written resolutions on behalf of the appointing Director and to act in such Director's place at any meeting of the Directors at which he is unable to be present. Every such alternate shall be entitled to attend and vote at meetings of the Directors as a Director when the Director appointing him is not personally present and where he is a Director to have a separate vote on behalf of the Director he is representing in addition to his own vote. A Director may at any time in writing revoke the appointment of an alternate appointed by him. Such alternate shall not be an officer of the Company and shall be deemed to be the agent of the Director appointing him. The remuneration of such alternate shall be payable out of the remuneration of the Director appointing him and the proportion thereof shall be agreed between them.

83. Any Director may appoint any person, whether or not a Director, to be the proxy of that Director to attend and vote on his behalf, in accordance with instructions given by that Director, or in the absence of such instructions at the discretion of the proxy, at a meeting or meetings of the Directors which that Director is unable to attend personally. The instrument appointing the proxy shall be in writing under the hand of the appointing Director and shall be in any usual or common form or such other form as the Directors may approve, and must be lodged with the chairman of the meeting of the Directors at which such proxy is to be used, or first used, prior to the commencement of the meeting.

POWERS AND DUTIES OF DIRECTORS

84. Subject to the provisions of the Companies Law, these Articles and to any resolutions made in a general meeting, the business of the Company shall be managed in the United Kingdom by the Directors, who may pay all expenses incurred in setting up and registering the Company and may exercise all powers of the Company. No resolution passed by the Company in general meeting shall invalidate any prior act of the Directors that would have been valid if that resolution had not been made.

85. The Directors may from time to time appoint any person, whether or not a Director to hold such office in the Company as the Directors may think necessary for the administration of the Company, including but not limited to, the office of president, one or more vice-presidents, treasurer, assistant treasurer, manager or controller, and for such term and at such remuneration (whether by way of salary or commission or participation in profits or partly in one way and partly in another), and with such powers and duties as the Directors may think fit. Any person so appointed by the Directors may be removed by the Directors. The Directors may also appoint one or more of their number to the office of managing director upon like terms, but any such appointment shall ipso facto determine if any managing director ceases from any cause to be a

Director, or if the Company by Ordinary Resolution resolves that his tenure of office be terminated.

86. The Directors may appoint a Secretary (and if need be an Assistant Secretary or Assistant Secretaries) who shall hold office for such term, at such remuneration and upon such conditions and with such powers as they think fit. Any Secretary or Assistant Secretary so appointed by the Directors may be removed by the Directors.

87. The Directors may delegate any of their powers to committees consisting of such member or members of their body as they think fit; any committee so formed shall in the exercise of the powers so delegated conform to any regulations that may be imposed on it by the Directors.

88. The Directors may from time to time and at any time by power of attorney (whether under Seal or under hand) or otherwise appoint any company, firm or person or body of persons, whether nominated directly or indirectly by the Directors, to be the attorney or attorneys or authorised signatory (any such person being an "**Attorney**" or "**Authorised Signatory**", respectively) of the Company for such purposes and with such powers, authorities and discretion (not exceeding those vested in or exercisable by the Directors under these Articles) and for such period and subject to such conditions as they may think fit, and any such power of attorney or other appointment may contain such provisions for the protection and convenience of persons dealing with any such Attorney or Authorised Signatory as the Directors may think fit, and may also authorise any such Attorney or Authorised Signatory to delegate all or any of the powers, authorities and discretion vested in him.

89. The Directors may from time to time provide for the management of the affairs of the Company in such manner as they shall think fit and the provisions contained in the three next following Articles shall not limit the general powers conferred by this Article **PROVIDED ALWAYS** that the central management and control of the Company shall be conducted in the United Kingdom.

90. The Directors from time to time and at any time may establish any committees, local boards or agencies for managing any of the affairs of the Company and may appoint any persons to be members of such committees or local boards and may appoint any managers or agents of the Company and may fix the remuneration of any such persons.

91. The Directors from time to time and at any time may delegate to any such committee, local board, manager or agent any of the powers, authorities and discretions for the time being vested in the Directors and may authorise the members for the time being of any such local board, or any of them to fill any vacancies therein and to act notwithstanding vacancies and any such appointment or delegation may be made on such terms and subject to such conditions as the Directors may think fit and the Directors may at any time remove any person so appointed and may annul or vary any such delegation, but no person dealing in good faith and without notice of any such annulment or variation shall be affected thereby.

92. Any such delegates as aforesaid may be authorised by the Directors to sub-delegate all or any of the powers, authorities, and discretion for the time being vested in them.

BORROWING POWERS OF DIRECTORS

93. Subject to Article 6, the Directors may exercise all the powers of the Company to borrow money and to mortgage or charge its undertaking, property and uncalled capital or any part thereof, to issue debentures, debenture stock and other securities whenever money is borrowed or as security for any debt, liability or obligation of the Company or of any third party.

THE SEAL

94. The Seal shall not be affixed to any instrument except by the authority of a resolution of the Directors provided always that such authority may be given prior to or after the affixing of the Seal and if given after may be in general form confirming a number of affixings of the Seal. The Seal shall be affixed in the presence of a Director or a Secretary (or an Assistant Secretary) or in the presence of any one or more persons as the Directors may appoint for the purpose and every person as aforesaid shall sign every instrument to which the Seal is so affixed in their presence.

95. The Company may maintain a facsimile of the Seal in such countries or places as the Directors may appoint and such facsimile Seal shall not be affixed to any instrument except by the authority of a resolution of the Board of Directors provided always that such authority may be given prior to or after the affixing of such facsimile Seal and if given after may be in general form confirming a number of affixings of such facsimile Seal. The facsimile Seal shall be affixed in the presence of such person or persons as the Directors shall for this purpose appoint and such person or persons as aforesaid shall sign every instrument to which the facsimile Seal is so affixed in their presence and such affixing of the facsimile Seal and signing as aforesaid shall have the same meaning and effect as if the Seal had been affixed in the presence of and the instrument signed by a Director or a Secretary (or an Assistant Secretary) or in the presence of any one or more persons as the Directors may appoint for the purpose.

96. Notwithstanding the foregoing, a Secretary or any Assistant Secretary shall have the authority to affix the Seal, or the facsimile Seal, to any instrument for the purposes of attesting authenticity of the matter contained therein but which does not create any obligation binding on the Company.

DISQUALIFICATION OF DIRECTORS

97. The office of Director shall be vacated, if the Director:

(a) becomes bankrupt or makes any arrangement or composition with his creditors;

(b) dies or is found to be or becomes of unsound mind;

(c) resigns his office by notice in writing to the Company;

(d) is removed from office by Ordinary Resolution;

(e) is removed from office by notice addressed to him at his last known address and signed by all of his co-Directors (not being less than two in number); or

(f) is removed from office pursuant to any other provision of these Articles.

PROCEEDINGS OF DIRECTORS

98. The Directors may meet together for the despatch of business, adjourn, and otherwise regulate their meetings and proceedings as they think fit **PROVIDED THAT** any such meetings must be held in the United Kingdom. Questions arising at any meeting shall be decided by a majority of votes. In case of an equality of votes the chairman shall have a second or casting vote. A Director may, and a Secretary or Assistant Secretary on the requisition of a Director shall, at any time summon a meeting of the Directors.

99. A Director or Directors may participate in any meeting of the Board of Directors, or of any committee appointed by the Board of Directors of which such Director or Directors are members, by means of telephone or similar communication equipment by way of which all persons participating in such meeting can communicate with each other and such participation shall be

deemed to constitute presence in person at the meeting. Nothing in this Article shall be deemed to allow a meeting to take place outside the United Kingdom.

100. The quorum necessary for the transaction of the business of the Directors may be fixed by the Directors, and unless so fixed, if there be two or more Directors shall be two, and if there be one Director the quorum shall be one. A Director represented by proxy or by an Alternate Director at any meeting shall be deemed to be present for the purposes of determining whether or not a quorum is present.

101. A Director who is in any way, whether directly or indirectly, interested in a contract or proposed contract with the Company shall declare the nature of his interest at a meeting of the Directors. A general notice given to the Directors by any Director to the effect that he is a member of any specified company or firm and is to be regarded as interested in any contract which may thereafter be made with that company or firm shall be deemed a sufficient declaration of interest in regard to any contract so made. A Director may vote in respect of any contract or proposed contract or arrangement notwithstanding that he may be interested therein and if he does so his vote shall be counted and he may be counted in the quorum at any meeting of the Directors at which any such contract or proposed contract or arrangement shall come before the meeting for consideration.

102. A Director may hold any other office or place of profit under the Company (other than the office of auditor) in conjunction with his office of Director for such period and on such terms (as to remuneration and otherwise) as the Directors may determine and no Director or intending Director shall be disqualified by his office from contracting with the Company either with regard to his tenure of any such other office or place of profit or as vendor, purchaser or otherwise, nor shall any such contract or arrangement entered into by or on behalf of the Company in which any Director is in any way interested, be liable to be avoided, nor shall any Director so contracting or being so interested be liable to account to the Company for any profit realised by any such contract or arrangement by reason of such Director holding that office or of the fiduciary relation thereby established. A Director, notwithstanding his interest, may be counted in the quorum present at any meeting of the Directors whereat he or any other Director is appointed to hold any such office or place of profit under the Company or whereat the terms of any such appointment are arranged and he may vote on any such appointment or arrangement.

103. Any Director may act by himself or his firm in a professional capacity for the Company, and he or his firm shall be entitled to remuneration for professional services as if he were not a Director; provided that nothing herein contained shall authorise a Director or his firm to act as auditor to the Company.

104. The Directors shall cause minutes to be made in books or loose-leaf folders provided for the purpose of recording:

(a) all appointments of officers made by the Directors;

(b) the names of the Directors present at each meeting of the Directors and of any committee of the Directors; and

(c) all resolutions and proceedings at all meetings of the Company, and of the Directors and of committees of Directors.

105. When the chairman of a meeting of the Directors signs the minutes of such meeting the same shall be deemed to have been duly held notwithstanding that all the Directors have not actually come together or that there may have been a technical defect in the proceedings unless this defect relates to requirements for meetings to be within the United Kingdom.

106. A resolution in writing signed by all the Directors or all the members of a committee of Directors entitled to receive notice of a meeting of Directors or committee of Directors as the case may be (an alternate Director, subject as provided otherwise in the terms of appointment of the alternate Director, being (i) entitled to sign such a resolution on behalf of his appointor and (ii) required to sign such resolution only in the absence of his appointor), shall be as valid and effectual as if it had been passed at a duly called and constituted meeting of the Directors or committee of Directors as the case may be. When signed a resolution may consist of several documents each signed by one or more of the Directors or his duly appointed alternate.

107. The continuing Directors may act notwithstanding any vacancy in their body but if and for so long as their number is reduced below the number fixed by or pursuant to these Articles as the necessary quorum of Directors, the continuing Directors may act for the purpose of increasing the number, or of summoning a general meeting of the Company, but for no other purpose.

108. The Directors may elect a chairman of their meetings and determine the period for which he is to hold office but if no such chairman is elected, or if at any meeting the chairman is not present within fifteen minutes after the time appointed for holding the meeting, the Directors present may choose one of their number to be chairman of the meeting.

109. A committee appointed by the Directors may elect a chairman of its meetings. If no such chairman is elected, or if at any meeting the chairman is not present within five minutes after the time appointed for holding the meeting, the members present may choose one of their number to be chairman of the meeting.

110. A committee appointed by the Directors may meet and adjourn as it thinks proper **PROVIDED THAT** no meeting may take place outside the United Kingdom. Questions arising at any meeting shall be determined by a majority of votes of the committee members present and in case of an equality of votes the chairman shall have a second or casting vote.

111. All acts done by any meeting of the Directors or of a committee of Directors, or by any person acting as a Director, shall notwithstanding that it be afterwards discovered that there was some defect in the appointment of any such Director or person acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such person had been duly appointed and was qualified to be a Director.

DIVIDENDS

112. Subject to any rights and restrictions for the time being attached to any class or classes of shares, the Directors may from time to time declare dividends (including interim dividends) and other distributions on shares in issue and authorise payment of the same out of the funds of the Company lawfully available therefor.

113. Subject to any rights and restrictions for the time being attached to any class or classes of shares, the Company by Ordinary Resolution may declare dividends, but no dividend shall exceed the amount recommended by the Directors.

114. The Directors may, before recommending or declaring any dividend, set aside out of the funds legally available for distribution such sums as they think proper as a reserve or reserves which shall, in the absolute discretion of the Directors be applicable for meeting contingencies, or for equalising dividends or for any other purpose to which those funds may be properly applied and pending such application may in the absolute discretion of the Directors, either be employed in the business of the Company or, subject to Article 6, be invested in such investments as the Directors may from time to time think fit.

115. Any dividend may be paid by cheque sent through the post to the registered address of the Member or person entitled thereto, or in the case of joint holders, to any one of such joint holders at his registered address or to such person and such address as the member or person entitled, or such joint holders as the case may be, may direct. Every such cheque shall be made payable to the order of the person to whom it is sent or to the order of such other person as the Member or person entitled, or such joint holders as the case may be, may direct.

116. The Directors when paying dividends to the Members in accordance with the foregoing provisions of these Articles may make such payment either in cash or in specie.

117. Subject to any rights and restrictions for the time being attached to any class or classes of shares, all dividends shall be declared and paid according to the amounts paid up on the shares, but if and for so long as nothing is paid up on any of the shares dividends may be declared and paid according to the par value of the shares. No amount paid on a share in advance of calls shall, while carrying interest, be treated for the purposes of this Article as paid on the share.

118. If several persons are registered as joint holders of any share, any of them may give effectual receipts for any dividend or other moneys payable on or in respect of the share.

119. No dividend shall bear interest against the Company.

ACCOUNTS, AUDIT AND ANNUAL RETURN AND DECLARATION

120. The books of account relating to the Company's affairs shall be kept in such manner as may be determined from time to time by the Directors.

121. The books of account shall be kept at the registered office of the Company, or at such other place or places as the Directors think fit, and shall always be open to the inspection of the Directors.

122. The Directors may from time to time determine whether and to what extent and at what times and places and under what conditions or regulations the accounts and books of the Company or any of them shall be open to the inspection of Members not being Directors, and no Member (not being a Director) shall have any right of inspecting any account or book or document of the Company except as conferred by law or authorised by the Directors or by the Company by Ordinary Resolution.

123. The accounts relating to the Company's affairs shall only be audited if the Directors so determine, in which case the financial year end and the accounting principles will be determined by the Directors.

124. The Directors in each year shall prepare, or cause to be prepared, an annual return and declaration setting forth the particulars required by the Companies Law and deliver a copy thereof to the Registrar of Companies in the Cayman Islands.

CAPITALISATION OF RESERVES

125. Subject to the Companies Law, the Directors may, with the authority of an Ordinary Resolution:

(a) resolve to capitalise an amount standing to the credit of reserves (including a share premium account, capital redemption reserve and profit and loss account), whether or not available for distribution;

(b) appropriate the sum resolved to be capitalised to the Members in proportion to the nominal amount of shares (whether or not fully paid) held by them respectively and apply that sum on their behalf in or towards:

(i) paying up the amounts (if any) for the time being unpaid on shares held by them respectively, or

(ii) paying up in full unissued shares or debentures of a nominal amount equal to that sum,

and allot the shares or debentures, credited as fully paid, to the Members (or as they may direct) in those proportions, or partly in one way and partly in the other, but the share premium account, the capital redemption reserve and profits which are not available for distribution may, for the purposes of this Article, only be applied in paying up unissued shares to be allotted to Members credited as fully paid;

(c) make any arrangements they think fit to resolve a difficulty arising in the distribution of a capitalised reserve and in particular, without limitation, where shares or debentures become distributable in fractions the Directors may deal with the fractions as they think fit;

(d) authorise a person to enter (on behalf of all the Members concerned) into an agreement with the Company providing for either:

(i) the allotment to the Members respectively, credited as fully paid, of shares or debentures to which they may be entitled on the capitalisation, or

(ii) the payment by the Company on behalf of the Members (by the application of their respective proportions of the reserves resolved to be capitalised) of the amounts or part of the amounts remaining unpaid on their existing shares,

and any such agreement made under this authority being effective and binding on all those Members; and

(e) generally do all acts and things required to give effect to the resolution.

SHARE PREMIUM ACCOUNT

126. The Directors shall in accordance with the Companies Law establish a share premium account and shall carry to the credit of such account from time to time a sum equal to the amount or value of the premium paid on the issue of any share.

127. There shall be debited to any share premium account on the redemption or purchase of a share the difference between the nominal value of such share and the redemption or purchase price provided always that at the discretion of the Directors such sum may be paid out of the profits of the Company or, if permitted by the Companies Law, out of capital.

NOTICES

128. Any notice or document may be served by the Company or by the person entitled to give notice to any Member either personally, or by posting it airmail or air courier service in a prepaid letter addressed to such Member at his address as appearing in the Register, or by electronic mail to any electronic mail address such Member may have specified in writing for the purpose of such service of notices, or by cable, telex or facsimile should the Directors deem it appropriate. In the case of joint holders of a share, all notices shall be given to that one of the joint holders whose name stands first in the Register in respect of the joint holding, and notice so given shall be sufficient notice to all the joint holders.

129. Any Member present, either personally or by proxy, at any meeting of the Company shall for all purposes be deemed to have received due notice of such meeting and, where requisite, of the purposes for which such meeting was convened.

130. Any notice or other document, if served by (a) post, shall be deemed to have been served five days after the time when the letter containing the same is posted, or (b) facsimile, shall be deemed to have been served upon production by the transmitting facsimile machine of a report confirming transmission of the facsimile in full to the facsimile number of the recipient, or (c) recognised courier service, shall be deemed to have been served 48 hours after the time when the letter containing the same is delivered to the courier service, or (d) electronic mail, shall be deemed to have been served immediately upon the time of the transmission by electronic mail. In proving service by post or courier service it shall be sufficient to prove that the letter containing the notice or documents was properly addressed and duly posted or delivered to the courier service.

131. Any notice or document delivered or sent by post to or left at the registered address of any Member in accordance with the terms of these Articles shall notwithstanding that such Member be then dead or bankrupt, and whether or not the Company has notice of his death or bankruptcy, be deemed to have been duly served in respect of any share registered in the name of such Member as sole or joint holder, unless his name shall at the time of the service of the notice or document, have been removed from the Register of Members as the holder of the share, and such service shall for all purposes be deemed a sufficient service of such notice or document on all persons interested (whether jointly with or as claiming through or under him) in the share.

132. Notice of every general meeting of the Company shall be given to:

(a) all Members holding shares with the right to receive notice and who have supplied to the Company an address for the giving of notices to them; and

(b) every person entitled to a share in consequence of the death or bankruptcy of a Member, who but for his death or bankruptcy would be entitled to receive notice of the meeting.

No other person shall be entitled to receive notices of general meetings.

INDEMNITY

133. Every Director (including for the purposes of this Article any alternate Director appointed pursuant to the provisions of these Articles), Secretary, assistant Secretary, or other officer for the time being and from time to time of the Company (but not including the Company's auditors) and the personal representatives of the same (each an **"Indemnified Person"**) shall be indemnified and secured harmless out of the assets and funds of the Company against all actions, proceedings, costs, charges, expenses, losses, damages or liabilities incurred or sustained by such Indemnified Person, other than by reason of such Indemnified Person's own dishonesty, wilful default or fraud, in or about the conduct of the Company's business or affairs (including as a result of any mistake of judgment) or in the execution or discharge of his duties, powers, authorities or discretions, including without prejudice to the generality of the foregoing, any costs, expenses, losses or liabilities incurred by such Indemnified Person in defending (whether successfully or otherwise) any civil proceedings concerning the Company or its affairs in any court whether in the Cayman Islands or elsewhere.

134. No Indemnified Person shall be liable:

(a) for the acts, receipts, neglects, defaults or omissions of any other Director or officer or agent of the Company; or

(b) for any loss on account of defect of title to any property of the Company; or

(c) on account of the insufficiency of any security in or upon which any money of the Company shall be invested; or

(d) for any loss incurred through any bank, broker or other similar person; or

(e) for any loss occasioned by any negligence, default, breach of duty, breach of trust, error of judgement or oversight on such Indemnified Person's part; or

(f) for any loss, damage or misfortune whatsoever which may happen in or arise from the execution or discharge of the duties, powers, authorities, or discretions of such Indemnified Person's office or in relation thereto;

unless the same shall happen through such Indemnified Person's own dishonesty, wilful default or fraud.

NON-RECOGNITION OF TRUSTS

135. No person shall be recognised by the Company as holding any share upon any trust and the Company shall not, unless required by law, be bound by or be compelled in any way to recognise (even when having notice thereof) any equitable, contingent, future or partial interest in any of its shares or any other rights in respect thereof except an absolute right to the entirety thereof in each Member registered in the Register of Members.

WINDING- UP

136. If the Company shall be wound up, the liquidator may, with the sanction of an Ordinary Resolution of the Company divide amongst the Members in specie or kind the whole or any part of the assets of the Company (whether they shall consist of property of the same kind or not) and may, for such purpose set such value as he deems fair upon any property to be divided as aforesaid and may determine how such division shall be carried out as between the Members or different classes of shares. The liquidator may, with the like sanction, vest the whole or any part of such assets in trustees upon such trusts for the benefit of the contributories as the liquidator, with the like sanction shall think fit, but so that no Member shall be compelled to accept any shares or other securities whereon there is any liability.

AMENDMENT OF ARTICLES OF ASSOCIATION

137. Subject to the Companies Law and the rights attaching to the various classes of shares, the Company may at any time and from time to time by Special Resolution alter or amend these Articles in whole or in part.

REGISTRATION BY WAY OF CONTINUATION

138. The Company may by Special Resolution resolve to be registered by way of continuation in a jurisdiction outside the Cayman Islands or such other jurisdiction in which it is for the time being incorporated, registered or existing. In furtherance of a resolution adopted pursuant to this Article, the Directors may cause an application to be made to the Registrar of Companies to deregister the Company in the Cayman Islands or such other jurisdiction in which it is for the time being incorporated, registered or existing and may cause all such further steps as they consider appropriate to be taken to effect the transfer by way of continuation of the Company.

DISCLOSURE

139. The Directors, or any service providers (including the officers, the Secretary and the registered office agent of the Company) specifically authorised by the Directors, shall be entitled to disclose to any regulatory or judicial authority any information regarding the affairs of the Company including without limitation information contained in the Register and books of the Company.

CERTIFIED TO BE A TRUE AND CORRECT COPY
SIG. ____
D. EVADNE EBANKS
Assistant Registrar
Date. 30 June 2009

REGISTRAR OF COMPANIES
EXEMPTED
CAYMAN ISLANDS

From:	Zhang, Jie: GFRM (NYK) </o=bzw/ou=usa/cn=recipients/cn=zhangjie>
Sent:	Tue Jun 29 2010 12:52:14 EDT
To:	Gargano, Cindy: GFRM (NYK) </o=bzw/ou=usa/cn=recipients/cn=new york/cn=1garganoc>;Brown, Gerry: GFRM (NYK) </o=bzw/ou=usa/cn=recipients/cn=browgerr>;Dyer, Lansford: GFRM (NYK) </o=bzw/ou=usa/cn=nyk ad users/cn=users/cn=dyerlan>
CC:	Wang, Liping: GFRM (NYK) </o=bzw/ou=usa/cn=nyk ad users/cn=users/cn=wanglip>
Subject:	RE: Renaissance
Attachments:	Renaissance.PPT;CWEmbed3.xls;CWEmbed4.xls
Importance:	Normal
Priority:	Normal
Sensitivity:	None

Apologies, that was a typo. Please see the updated one attached.

>____
>From: Gargano, Cindy: GFRM (NYK)
>Sent: Tuesday, June 29, 2010 11:53 AM
>To: Zhang, Jie: GFRM (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)
>Cc: Wang, Liping: GFRM (NYK)
>Subject: RE: Renaissance
>
>Ok it says s&p 500 all world index so I thought it was a global indx
>
>____
>From: Zhang, Jie: GFRM (NYK)
>Sent: Tuesday, June 29, 2010 11:52 AM
>To: Gargano, Cindy: GFRM (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)
>Cc: Wang, Liping: GFRM (NYK)
>Subject: RE: Renaissance
>
>Hi Cindy,
>
>Slide 12 includes the analysis of Beta stressed on the S&P 500. The result turns to be very close to what we obtained from the MSCI All world Index. Please review.
>
>Thanks,
>Jie Zhang
>-27392
>
>
>
>____
>From: Gargano, Cindy: GFRM (NYK)
>Sent: Tuesday, June 29, 2010 11:44 AM
>To: Zhang, Jie: GFRM (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)
>Cc: Wang, Liping: GFRM (NYK)
>Subject: RE: Renaissance
>

>Given the high % of US stocks in the portfolio, is a world index appropriate? I thought we wanted to see it against s&p 500.
>
>____
>From: Zhang, Jie: GFRM (NYK)
>Sent: Friday, June 25, 2010 6:38 PM
>To: Gargano, Cindy: GFRM (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)
>Cc: Wang, Liping: GFRM (NYK)
>Subject: Renaissance
>
>Hi Cindy/Gerry/Lance,
>
>As requested from our meeting of Renaissance portfolio analysis, the attached spreadsheet contains the following updates.
>
>1) A page of DE Shaw Valence VaR by Sector is added
>2) A page of Beta regressed on S&P Index is added
>
>Please review and let me know if you have queries.
>
>In addition, we're going to perform further analysis on the intra-day position of the portfolio. Initially, we thought that it would be ideal to pick a day with relatively large intraday movement. With the market being stabilized lately, however, a random pick would be most likely.
>
> << File: Renaissance.PPT >>
>
>Thanks,
>Jie Zhang
>
><<<<<<<<<>>>>>>>>
>Barclays Capital
>Direct: (212) 412-7392
>Email: jie.zhang@BarclaysCapital.com
>
>

BARCLAYS CAPITAL

Strictly Private and Confidential

Portfolio Analysis of Renaissance Portfolios

CRA

June 2010

BARCLAYS CAPITAL

Strictly Private and Confidential

Palomino Equity Portfolio

Position Overview by Country

- Composed of names of 19 countries

Country Breakdown	Long			Short			Total		
Country	#	Value ($mm)	Weight	#	Value ($mm)	Weight	#	Value ($mm)	Weight
Australia	236	95	1.0%	106	82	0.8%	342	177	0.9%
Belgium	28	27	0.3%	14	9	0.1%	42	36	0.2%
Canada	233	176	1.8%	163	189	1.8%	396	365	1.8%
Denmark	25	43	0.4%	9	28	0.3%	34	71	0.4%
Finland	28	29	0.3%	15	52	0.5%	43	81	0.4%
France	117	259	2.6%	40	171	1.7%	157	430	2.1%
Germany	103	172	1.7%	56	280	2.7%	159	453	2.2%
Great Britain	186	202	2.1%	121	180	1.8%	307	383	1.9%
Hong Kong	284	95	1.0%	170	86	0.8%	454	181	0.9%
Italy	67	96	1.0%	46	116	1.1%	113	212	1.1%
Japan	633	401	4.1%	480	404	3.9%	1,113	806	4.0%
Netherlands	47	182	1.8%	9	49	0.5%	56	230	1.1%
Norway	43	64	0.7%	19	16	0.2%	62	81	0.4%
Portugal	12	2	0.0%	11	8	0.1%	23	10	0.1%
South Africa	121	33	0.3%	26	32	0.3%	147	65	0.3%
Spain	33	16	0.2%	36	140	1.4%	69	156	0.8%
Sweden	83	127	1.3%	32	48	0.5%	115	175	0.9%
Switzerland	59	87	0.9%	34	136	1.3%	93	223	1.1%
United States	1,786	7,790	78.7%	1,548	8,247	80.3%	3,334	16,037	79.5%
Total	4124	9,898	100.0%	2935	10,274	100.0%	7059	20,172	100.0%

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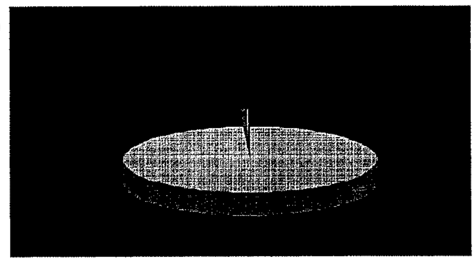
Distribution of NTD* - [redacted]

- NTD distribution across the portfolio – 7059 names with GMV $20.2bn.

[redacted]			
<=1	7,023	(520)	20,009
>1 & <=5	29	110	129
>5 & <=10	5	10	10
>10 & <=20	2	24	24
>20 & <=30	0	0	0
>30 & <=40	0	0	0
>40	0	0	0
Total	7,059	(376)	20,172



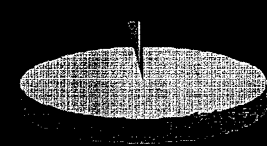
[redacted]

BARCLAYS CAPITAL

Distribution of NTD - Continued

- The NTD distribution for long/short Portions

[redacted]			
<=1	4,094	9,744	9,744
>1& <=5	23	120	120
>5& <=10	5	10	10
>10	2	24	24
Total	4,124	9,898	9,898



[redacted]

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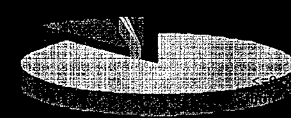
Distribution of % of Free Float

- Across the Portfolios

[redacted]			
<=0.5%	6,602	(775)	18,006
>0.5% & <=1%	207	383	1,704
>1% & <=2%	30	(49)	140
>2% & <=5%	6	(5)	21
>5% & <=10%	0	0	0
>10% & <=25%	1	(2)	2
>25%	0	0	0
n.a.	213	72	300
Total	7,059	(376)	20,172

[redacted]



[redacted]

BARCLAYS CAPITAL

6

Who are those illiquid ones?

>=10D and <20D	Net Position (Shares)	Net Market Value ($)	Gross Market Value ($)	% of Free Float
AZNSEK TQ	519,054	23,167,493	23,167,493	n.a.
NDADKK TQ	159,622	1,623,774	1,623,774	n.a.

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Web-Bench VaR

- 5-Day VaR at 99% Confidence Level

	Names	Gross ($mm)	Net ($mm)	Weight	Total Risk ($mm)	Common Risk ($mm)	Specific Risk ($mm)	VaR ($mm)
Long	4124	9,898	9,898	49%	340	339	15	790
Short	2935	10,274	10,274	51%	302	301	13	701
Total	7,059	20,172	(376)	100%	59	56	20	138

- Manually risking the 35 names, with GMV $2.99mm, dropped from the Web-Bench, we estimated risk around $1mm, 34% of the GMV.
- For comparison, 5-Day Scaled risk in UVaR at 99% Confidence Level

VaR	154
Add-ons	0.004
Equity Liquidity	56
Total Risk	210

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PRISE Execution Cost

- Liquidation Cost is estimated by GMV multiplied by the bps execution cost at 1day bucket. Consistent with execution cost computation in UVaR, the trade period of 1day is chosen to calculate the total liquidation cost.

[redacted]	
0.125	51.48
0.25	45.24
0.5	39.94
0.75	37.21
1	**35.42***
2	31.54
3	29.53
4	28.21
8	25.32
16	22.82
20	22.09

[redacted]	20,172
	71
[redacted]	**121****

[redacted]

***The rationale behind is that the Volatility, one of the factor in PRISE model, usually spikes during stressed markets. Volatility can be noticeably higher intraday than the previous ones.*

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PRISE Execution Cost - Continued

- Liquidation Cost Breakdown by NTD

[redacted]				
<=1	7,023	19,999	34.70	69
>1 and <=5	36	173	115.40	2
Other				0
Total	**7,059**	**20,172**	**35.42**	**71**

- Liquidation Cost Breakdown by Market Capitalization

[redacted]				
Small-Cap (<$1bn)	3,336	1,185	35.37	4
Mid-Cap (>=$1bn & <$5bn)	2,303	4,247	35.37	15
Large-Cap (>=$5bn)	1,420	14,740	35.42	52
Total	**7,059**	**20,172**	**35.42**	**71**

BARCLAYS CAPITAL

Beta Stress Test – FTSE

- Beta regressed on FTSE All World Index as the Portfolio contains international stocks.

	Percentage		
	Long	Short	Total
Correlation	0.98	0.97	67.0%
Beta	1.15	1.00	6.0%

- Shock beta up by 11% (derived from the historical chart in next page)

	Total
Beta	18.0%
Beta Stress Risk $mm	143

** Calculated given annual 90day vol of FTSE All Wold ~20%*

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Beta Stress Test – S&P

- Beta regressed on S&P 500 as the Portfolio contains 80% of US Equities.

	Percentage		
	Long	Short	Total
Correlation	0.98	0.99	0.55
Beta	1.21	1.08	0.05

- Shock beta up by 11% (derived from the historical chart in next page)

Beta	16.0%
Beta Stress Risk ($mm)	150

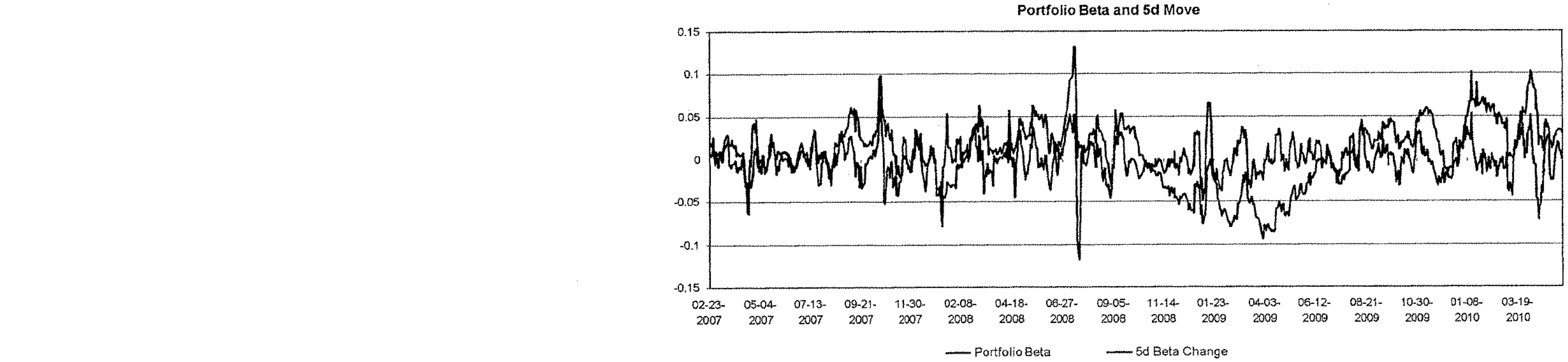
** Calculated given annual 90day vol of S&P 500 ~21%*

BARCLAYS CAPITAL

Portfolio Beta Movements

- From the historical Beta move of the portfolio for the past three year, the 5day Beta absolute movement could go as high as 11%.

Portfolio Beta and 5d Move



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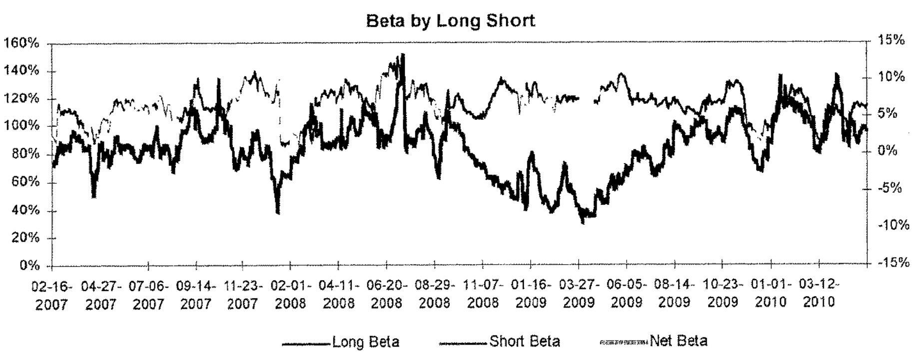
Portfolio Beta Movements

- Historical Simulation of Beta on Long/Short side of the portfolio



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Total Risk

- Combining the above Risk factors

[redacted]	138
	1
	71
Total	**210**

- Stressed Risk

[redacted]	138
	1
	143
	121
Total	**403**

BARCLAYS CAPITAL

VaR Breakdown by Industrial Level

- GICS level 1 for Palomino

Sector Breakdown	Long					Short					Total						
Sector Level 1	#	Value $mm	Wgt	VaR $mm	Beta	#	Value $mm	Wgt	VaR $mm	Beta	#	Value $mm	Wgt	VaR $mm	VaR/G MV $mm	Net Beta
Materials	431	1,028	10.4%	126.5	1.47	301	649	6.3%	63.13	(1.35)	732	1,677	8.3%	73.34	4.4%	0.38
Discretionary	663	1,749	17.7%	175.2	1.15	435	1,461	14.2%	106.70	(1.02)	1098	3,210	15.9%	81.39	2.5%	0.16
Utilities	129	384	3.9%	21.6	0.83	87	264	2.6%	16.51	(0.83)	216	648	3.2%	8.35	1.3%	0.15
Financials	689	1,300	13.1%	138.0	1.19	529	1,634	15.9%	161.07	(1.14)	1218	2,933	14.5%	39.98	1.4%	(0.11)
Industrials	713	1,020	10.3%	89.8	1.11	467	1,259	12.3%	110.48	(1.11)	1180	2,279	11.3%	34.32	1.5%	(0.12)
Services	91	376	3.8%	17.8	0.84	57	240	2.3%	15.12	(0.93)	148	616	3.1%	10.06	1.6%	0.15
Health Care	324	1,245	12.6%	66.8	0.90	327	1,069	10.4%	54.48	(0.89)	651	2,314	11.5%	35.19	1.5%	0.07
Energy	298	762	7.7%	74.2	1.25	197	814	7.9%	82.07	(1.24)	495	1,576	7.8%	20.54	1.3%	(0.03)
Consumer Staples	238	708	7.2%	34.0	0.77	143	888	8.7%	35.37	(0.72)	381	1,596	7.9%	15.27	1.0%	(0.06)
Information Technology	541	1,324	13.4%	108.1	1.12	388	1,994	19.4%	130.75	(1.01)	929	3,319	16.5%	47.06	1.4%	(0.16)
Unknown	7	1	0.0%	0.1	0.39	4	3	0.0%	0.18	0.39	11	4	0.0%	0.17	4.9%	(0.35)
Portfolio Total	4,124	9,898	49.1%	790	1.17	2935	10,274	50.9%	701.44	(0.99)	7059	20,172	100.0%	138	0.7%	0.07

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VaR Breakdown by Industrial Level

[redacted]

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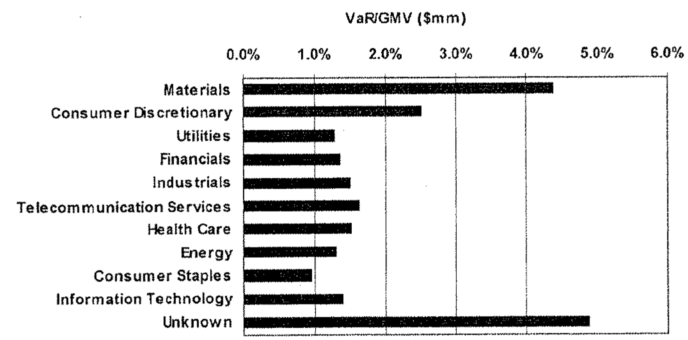
VaR Breakdown by Industrial Level - Continued

- The VaR/GMV ratio chart for each sectors



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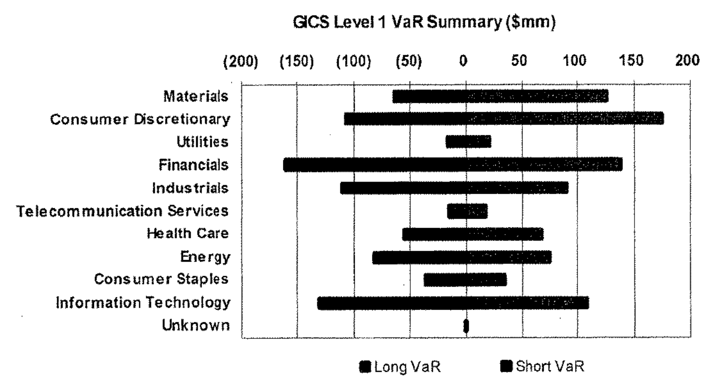
VaR Breakdown by Industrial Level - Continued

- The summary Chart



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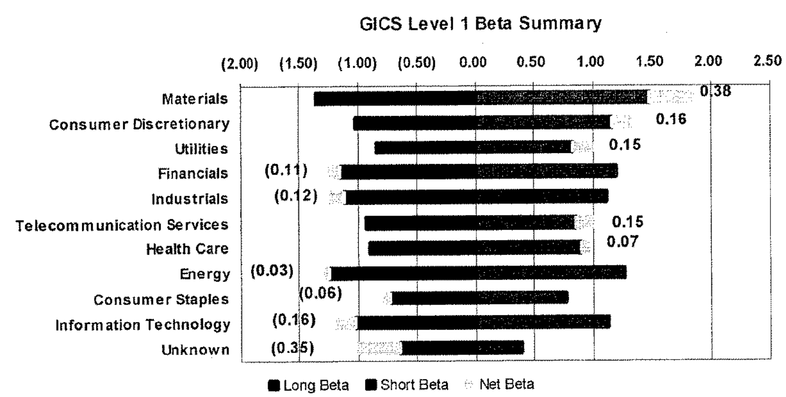
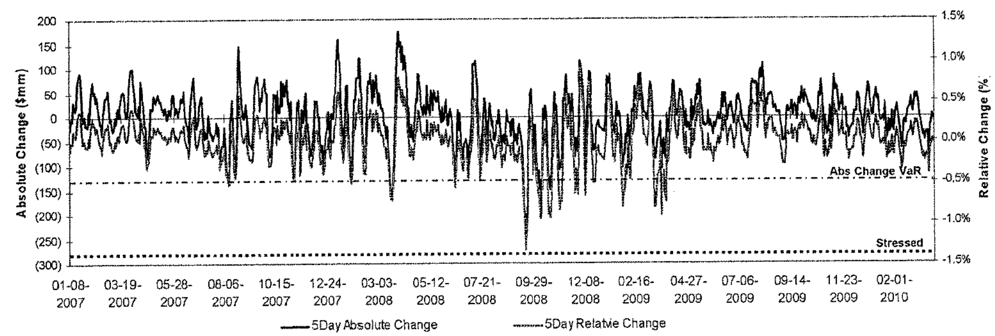
Beta Breakdown by Industrial Level - Continued



BARCLAYS CAPITAL

Portfolio Historical Simulation

- Portfolio Value vs Portfolio 5Day Changes



BARCLAYS CAPITAL

Appendix - Liquidity measure of common equity

- Average Trading Volume
  - 90-day average daily trading volume as a proxy
  - Number of Trading Day (NTD) is calculated for each position

$$NTD = \frac{Position\ Shares}{90D\ Avg\ Daily Trading\ Volume}$$

- Free-Float
  - Free-Float (the number of shares available to the public), rather than the outstanding shares, is a better gauge of the market.
  - Percentage of Free-Float (% FF) is calculated for each position

$$\%\ of\ Free Float = \frac{Position\ Shares}{Free - Float}$$

BARCLAYS CAPITAL

From: Beldner, Brett: Finance (NYK)
Sent: Thursday, May 20, 2010 9:32:31 AM
To: Sherwood, Edward: Barclays Capital (NYK)
CC: Romain, Gary: Finance (LDN)
Subject: RE: COLT XIX - Draft SCM Approvals Notification

Based on the response below, TAG sees the accounting being consistent with our historical treatment for the preceding transactions.

From: Sherwood, Edward: Barclays Capital (NYK)
Sent: Wednesday, May 19, 2010 10:58 AM
To: Beldner, Brett: Finance (NYK)
Subject: RE: COLT XIX - Draft SCM Approvals Notification

▬ = **Redacted by the Permanent Subcommittee on Investigations**

Brett,

You are correct. The assets of Palomino are actually held in prime brokerage accounts with BCI and BCSL in the name of Palomino. The options reference the value of these PB accounts, which is equivalent to them referencing the assets directly, and therefore there is no leakage between the value of the assets (i.e. the value of the PB accounts) and the value of the options. Thus, the net effect is that Barclays is extending senior financing to RenTec.

This is what was intended by the wording from the Approvals Notification that you have highlighted below.

Thanks,
Ed

Edward Sherwood
Barclays Capital
6th Floor | 745 Seventh Avenue | New York | NY 10019
T: +1 212 526 0275 | F: +1 212 412 5681 | C: [redacted]
Email: edward.sherwood@barcap.com

From: Beldner, Brett: Finance (NYK)
Sent: Wednesday, May 19, 2010 10:45 AM
To: Sherwood, Edward: Barclays Capital (NYK)
Subject: RE: COLT XIX - Draft SCM Approvals Notification

My understanding was that the option contracts always were explicitly on the assets that reside within Palomino, such that Barclays' only risk is essentially the senior financing that we've provided (e.g., there is no leakage in value between the assets traded at Palomino and the option.)

Please confirm that this is what you mean when you say "The options reference a set of accounts held by Palomino, namely prime brokerage accounts with Barclays Capital Inc. ("**BCI**") and with Barclays Capital Securities Limited ("**BCSL**") (the "**Accounts**"). "

Thanks

From: Sherwood, Edward: Barclays Capital (NYK)
Sent: Tuesday, May 18, 2010 6:03 PM
To: Mammola, Paolo: GFRM (LDN); Gargano, Cindy: GFRM (NYK); Romain, Gary: Finance (LDN); Beldner, Brett: Finance (NYK); Glover, Michael: Finance (LDN); Currie, James: Finance (NYK); Kleinman, Larry: Group Tax (NYK); Hubbard, Mark: Group Tax (LDN); Versluys, Roger: Finance (LDN); Mcauliffe, Sam: Finance (LDN); Falticeni, Ileana: Compliance (NYK); Sahadi, Nicholas: Compliance (NYK); Kaplan, Alan: Legal (NYK); Schwed, Andrew: Legal (NYK); Forrest, Monty: Operations (NYK); Farrell, Don: Operations (NYK); Dyer, Lansford: GFRM (NYK)
Cc: Shah, Abhinav: Barclays Capital (NYK); Constant, Simon: Barclays Capital (NYK); Greenwood, Nick: Barclays Capital (NYK)
Subject: COLT XIX - Draft SCM Approvals Notification

All

Please find attached a draft SCM Approvals Notification for the new option that RenTec would like to put on next Monday (24th May)
<< File: SCM Approvals Notification - Colt XIX [Draft].doc >>
I would be grateful if you could confirm your approval of the new transaction by close of business NY time Thursday (20th May) prior to circulation of the attached notification to the SCM Approvals Committee.

Should you have any questions, please do not hesitate to contact me.

Kind regards,
Ed

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Edward Sherwood
Barclays Capital
6th Floor | 745 Seventh Avenue | New York | NY 10019
T: +1 212 526 0275 | F: +1 212 412 5681 | C: [redacted]
Email: edward.sherwood@barcap.com

From: Wade, Graham: Structuring (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=wadeg>
Sent: Fri 12 Nov 2010 14:00:57 GMT
To: Siddiq, Nizam: Structuring (NYK) </o=bzw/ou=usa/cn=nyk ad users/cn=users/cn=siddiqn>;Zenios, Jonathan: Structuring (LDN) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=zeniosj>;Simpson, David: Structuring (LDN) </o=bzw/ou=europe/cn=ldn ad users/cn=users/cn=simpsdav>;Hurrell, Brad: Structuring (LDN) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=hurrellb>
CC:
Subject: Privileged - Colt
Attachments: Tax Notes Today_ 2010 TNT 2...pdf

Importance: Normal
Priority: Normal
Sensitivity: None

This is a detailed write up of Colt concluding it doesn't work. We can discuss on MDs call but I intend to reach out to RenTec and Ed Cohen this morning to make sure they are aware. We will also confirm it does not impact Barclays. The only issue for Barclays I could see is some deemed wht agent issue as the memo concludes that RenTec are the legal owner of the stocks.

To me this would signal that IRS is inevitably going to litigate Colt.

Thanks

▬ = Redacted by the Permanent Subcommittee on Investigations

Graham Wade
Barclays Capital
Tel. +1 212 526 9938
Mob.[redacted]
graham.wade@barcap.com

IRS Circular 230 Disclosure: Barclays Capital and its affiliates do not provide tax advice. Please note that (i) any discussion of US tax matters contained in this communication (including any attachments) cannot be used by you for the purpose of avoiding tax penalties; (ii) this communication was written to support the promotion or marketing of the matters addressed herein; and (iii) you should seek advice based on your particular circumstances from an independent tax advisor.

From: Siddiq, Nizam: Structuring (NYK)
Sent: Friday, November 12, 2010 8:43 AM
To: Zenios, Jonathan: Structuring (LDN); Simpson, David: Structuring (LDN); Hurrell, Brad: Structuring (LDN)
Cc: Wade, Graham: Structuring (NYK)
Subject: HF Options

<< File: Tax Notes Today_ 2010 TNT 2...pdf >>
Looks a lot like some of the HF options that we have seen.
Nizam

Nizam Siddiq
Barclays Capital
745 Seventh Avenue, 6th Floor
New York, NY 10019
Tele: (212) 526-1595
Mobile: [redacted]
Nizam.Siddiq@barcap.com

[redacted] = Redacted by the Permanent Subcommittee on Investigations

IRS Circular 230 Disclosure: Barclays Capital and its affiliates do not provide tax advice. Please note that (i) any discussion of US tax matters contained in this communication (including any attachments) cannot be used by you for the purpose of avoiding tax penalties; (ii) this communication was written to support the promotion or marketing of the matters addressed herein; and (iii) you should seek advice based on your particular circumstances from an independent tax advisor.

EK

Memo

Barclays

To **SCM US Approvals Committee**

From Graham Wade, Maxim Kulikov

Date 3 October 2012

Subject COLT XXVII

BARCLAYS

This memo sets out the minutes of the meeting of the SCM US Approvals Committee (the "**Committee**") held on 1 October 2012 at which the COLT XXVII option transaction (the "**New Option Transaction**") was considered:

The attendees were as follows:

Gerard LaRocca ("**GL**") (Chairman)
Phil Jacobs (by phone)
Mark Hubbard (by phone)
Larry Kleinman
Jacob Amato
Matt Welsh (by phone)
Alan Kaplan
Zack Zacharia
Chris Frieda (by phone)
Chris Weidler
Gary Romain (by phone)
James Currie (by phone)
Hemal Sanghrajka (by phone)
Brett Beldner (by phone)
Richard Gee
Don Farrell (by phone)
Graham Wade ("**GW**") (by phone)
Maxim Kulikov
Chris Levy
Nizam Siddiq
Dev Majumdar
Eugene Kim
Lydia Asaf (by phone)
Ajay Nagpal (by phone)
Ashley Wilson (by phone)
Marty Malloy (by phone)

After GL opened the meeting, GW discussed the background of the New Option Transaction and prior COLT option transactions (together with the New Option Transaction, the "**Option Transactions**").

There was a lengthy discussion of the Option Transactions, during which the following points, inter alia, were noted:

- Barclays has entered into 26 Option Transactions since 2002.
- The Internal Revenue Service has been challenging Renaissance Technologies LLC and its affiliates (together, the "**Client**") on the tax treatment of the Option Transactions, and the parties may seek to litigate the matter in court. [redacted]
- The tax risk is assumed by the Client.
- There is a reputation risk for Barclays, especially if the matter proceeds to court.
- The New Option Transaction does not meaningfully increase Barclays' reputation risk in relation to the Option Transactions, because writing a new option (or exercising an existing one) should be viewed as the maintenance of a longstanding structure.

EK

- Unwinding the Option Transactions may not decrease Barclays' reputation risk, but the Option Transactions could be unwound with 2 months' notice. An unwinding would have material implications for the Client relationship that would need careful management.

The Committee felt that other members of senior management may desire to be informed of the Option Transactions in the context of the current internal and external reviews at Barclays (Project Mango and the Salz Review). The Committee felt the right approach was to approve the New Option Transaction but require that the Option Transactions be reviewed and tabled at the Tax Risk Committee (Matt Hammerstein, Mark Harding, Robert Le Blanc, and Chris Lucas) before year-end when the outcome of Project Mango and the Salz Review is clearer. The Committee also felt that the Tax Risk Committee should be promptly made aware of the Committee's decision to approve the New Option Transaction and be given the opportunity to direct a more immediate or different action.

Subsequent to the meeting, it was agreed with GL that Larry Wieseneck, the chair of the CIB Reputational Risk Committee, should also be promptly informed of the Option Transactions.

The respective infrastructure functions assessed the relevant risks for their areas.

The Committee approved the New Option Transaction, subject to the condition mentioned above. The meeting was concluded.

Memo

Barclays

To Tax Risk Committee

From SCM US Approvals Committee

Date 3 October 2012

Subject COLT

BARCLAYS

On 1 October 2012, the SCM US Approvals Committee (the "**Committee**") approved the execution of the COLT XXVII option transaction (the "**New Option Transaction**" and, together with the prior COLT option transactions, the "**Option Transactions**"), subject to any comments that may be raised by additional members of senior management.

Background

- The Option Transactions were originally approved by the SCM Approvals Committee and the New Products Committee in 2002 and have been subject to regular review by the Committee (most recently in March 2011).

- In each Option Transaction, an affiliate of Renaissance Technologies LLC (together with its affiliates, the "**Client**") buys a call option from Barclays, which option references a set of prime brokerage accounts held by Barclays (the "**Accounts**"). The Client has been appointed the investment manager for the Accounts.

- Trading activity in the Accounts generates income for Prime Services (approx. $100m per year).

- Since 2002, the Client has purchased call options from Barclays 26 times (and subsequently exercised the options, except for the 5 most recent options which remain outstanding).

- The Client plans to enter into the New Option Transaction on 9 October 2012, which would increase the fair market value of the outstanding call options from $2.69bn to $2.94bn.

- The Internal Revenue Service (the "**IRS**") has been challenging the Client on the US tax treatment of the Option Transactions.
  - In 2010, the IRS issued a memo (the "**IRS Memo**") arguing that options like the ones in the Option Transactions should not be treated as options for tax purposes. Following a detailed review with outside counsel and the Client, the Committee approved the Option Transactions on 3 December 2010 and 10 March 2011.
  - The IRS and the Client may seek to litigate the matter in court.
  - Both the IRS and Her Majesty's Revenue and Customs reviewed Barclays' involvement in the Option Transactions and those reviews are complete with no issues currently outstanding.

- The tax risk is assumed by the Client.
  - [redacted]
  - Further, Barclays is entitled to a contractual tax indemnity from the Client.

Permanent Subcommittee on Investigations
EXHIBIT #62

- There is a reputation risk for Barclays, especially if the matter proceeds to court and the IRS's challenge and Barclays' role become publicly disclosed.
    - The Committee believes that the New Option Transaction does not meaningfully increase Barclays' reputation risk with respect to the Option Transactions, insofar as any court litigation would relate to prior years and as entering into the New Option Transaction should be viewed as the maintenance of a longstanding structure that has been in existence since 2002.

- Unwinding the Option Transactions may not decrease Barclays' reputation risk, but the Option Transactions could be unwound with 2 months' notice.

The New Option Transaction

On 1 October 2012, the principal issue considered by the Committee was the reputation risk associated with the IRS's challenge of the Client's tax treatment of the Option Transactions (which challenge may be litigated in court) and the entry into the New Option Transaction in the current environment.

The IRS's challenge of the Client's tax treatment was previously considered in detail in 2010 when the IRS Memo was issued, and at that time, the Committee concluded that it was appropriate to approve the execution of additional Option Transactions for various reasons:

- The Client bears all the tax risk, is sophisticated, well advised, clearly understands the risk, and wishes to continue the Option Transactions. The Client considers that the Option Transactions provide significant benefits, including enhanced leverage that would make the transaction structure attractive even without tax benefits.
- [redacted]
- Any court litigation would relate to prior years, and in that respect, it was felt that unwinding the Option Transactions currently would not reduce Barclays' reputation risk.

The Committee felt the above reasons continued to apply and also noted that Barclays has entered into 26 Option Transactions since 2002 and that entering into the New Option Transaction should be viewed as the maintenance of a longstanding structure. However, the Committee also felt that other members of senior management may desire to be informed of the Option Transactions in the context of the current internal and external reviews at Barclays (Project Mango and the Salz Review).

As a result, the Committee felt the right approach was to approve the New Option Transaction but require that the Option Transactions be reviewed and tabled at the Tax Risk Committee before year-end when the outcome of Project Mango and the Salz Review is clearer. The Committee also felt that the Tax Risk Committee should be promptly made aware of the Committee's decision to approve the New Option Transaction and be given the opportunity to direct a more immediate or different action.

Thus, the Committee decided that the Option Transactions should be raised to your attention on an expedited basis, prior to the execution of the New Option Transaction on 9 October 2012.

From:	Gerard.LaRocca@barclayscapital.com
To:	IMCEAEX-_BZW_USA_cn=Recipients_cn=wiesenel@barclayscapital.com
CC:	Graham.Wade@barclayscapital.com; Mark.Merson@barclayscapital.com
Sent:	10/4/2012 11:31:54 AM
Subject:	FW: COLT SCM Transaction/Important
Attachments:	Notice re COLT.DOCX

Larry,

The SCM US Approvals Committee recently approved an option transaction in which US tax reputation risk is an issue, and the Committee has engaged the Tax Risk Committee on the transaction. I wanted to also let you know about this matter, given your capacity as the chair of the CIB Reputational Risk Committee.

The attached notice was sent to the Tax Risk Committee and provides additional information. Please let me or Graham Wade know if you have any questions.

From: LaRocca, Gerard : Investment Bank (NYK)
Sent: Thursday, October 04, 2012 7:31 AM
To: Lucas, Chris : Group Exec; Le Blanc, Robert: Group Risk (LDN); Harding, Mark : Legal; Hammerstein, Matt : Group Centre
Cc: Wade, Graham: Structuring (LDN); Jacobs, Philip: Finance (NYK)
Subject: COLT SCM Transaction/Important

The SCM US Approvals Committee recently approved an option transaction, which is scheduled for execution on 9 October 2012 and in which US tax reputation risk is an issue, and the Committee desires that the transaction (and related prior transactions) be reviewed and tabled at the Tax Risk Committee before year-end when the outcome of Project Mango and the Salz Review is clearer. The Committee also feels that the TRC should be promptly made aware of the Committee's decision and given the opportunity to direct a more immediate or different action.

The attached notice provides additional information. Please let me or Graham Wade know if you have any questions.

Memo Barclays

To **Tax Risk Committee**

From SCM
Date 12 October 2012
Subject COLT

BARCLAYS

This memo explains the background to an investment structure which has been in place for 10 years and explains why, notwithstanding the publicity risk that Barclays is subject to as a witness to the case if the Client proceeds to litigate in court, we believe it remains an appropriate transaction for Barclays to be a party to.

The COLT XXVII option transaction (the "**New Option Transaction**" and, together with the prior COLT option transactions, the "**Option Transactions**") was executed on 9 October 2012. The SCM US Approvals Committee approved the New Option Transaction on 1 October 2012, the chair of the CIB Reputational Risk Committee (Larry Wieseneck) was notified of the New Option Transaction on 4 October 2012, and the Tax Risk Committee discussed the Option Transactions on 8 October 2012.

The Option Transactions were originally approved by the SCM Approvals Committee and the New Products Committee in 2002 and have been subject to regular review by the SCM US Approvals Committee (prior to October 2012, most recently in March 2011).

Background

Investment Structure

In each Option Transaction, an affiliate of Renaissance Technologies LLC (together with its affiliates, the "**Client**") buys a call option from Barclays, which option references a set of prime brokerage accounts held by Barclays (the "**Accounts**"). Further, the Client has been appointed the investment manager for the Accounts.

Barclays has benefited from the Option Transactions primarily from the revenue generated for Prime Services by the trading activity in the Accounts. Since 2002, the revenue has totalled £322.7m. The Option Transactions are the principal structure by which the Client deals with Barclays.[1]

[1] Outside of the Option Transactions, Barclays has received approximately £12m from the Client for the period January 2011 through September 2012.

Permanent Subcommittee on Investigations
EXHIBIT #64

[illegible]			
2002	£7.0	2008	£53.4
2003	£7.2	2009	£37.5
2004	£15.9	2010	£29.8
2005	£20.0	2011	£56.7
2006	£16.8	2012	£59.9[2]
2007	£18.6		
Total			**£322.8m**

Tax Risk

The Internal Revenue Service (the "**IRS**") has been auditing the Client's US tax treatment of the Option Transactions. In 2010, the IRS issued a memo (the "**IRS Memo**") arguing that options like the ones in the Option Transactions should not be treated as options for tax purposes, and that the option owner should be treated as the owner of the referenced accounts. The IRS and the Client may seek to litigate the matter in court. Before going to court, we expect the Client to go to Appeals (which is an informal administrative forum where disagreements between taxpayers and the IRS can be resolved in private without the formality and publicity of a court trial).

On 9 October 2012, the IRS issued a summons requiring Barclays to provide certain documents (and we understand the IRS issued a similar summons to Deutsche Bank, which has entered into a similar investment structure with the Client), and therefore, we expect that Barclays (and Deutsche Bank) will be called as witnesses in due course.

Sophistication of the Client

The Client is a very sophisticated investment firm and one of the most successful hedge funds in the statistical arbitrage space with an almost uniquely successful track record. Since 2002, the Client has purchased call options from Barclays 27 times (and subsequently exercised those options, except for the 6 most recent options, which remain outstanding). The average premium paid for the Option Transactions has been approximately $190m. The substantial premiums for the Option Transactions have been funded by the Client's owners and employees, with no third-party investors.

It was the Client that originally approached Barclays with the idea of the Option Transactions, and the Client has implemented a similar investment structure with Deutsche Bank. The tax and reputational risks in the structure have been discussed with the Client. The structure is overseen by the Client's CFO and COO. (The CFO, who has been with the Client since 1983, is a former CPA with the firm of Seidman & Seidman (now BDO USA) and holds a law degree from NYU law school in tax law. The COO, who has been with the Client since 2008, was formerly the CFO of SAC Capital and the head of Deutsche Bank's Global Equity Finance and Prime Broker businesses.)

A major law firm (Winston & Strawn) has been advising the Client on the tax and legal issues with respect to the Option Transactions.

Why the Option Transactions Remain Appropriate Notwithstanding the IRS Challenge

- [redacted]

  The IRS has argued that the Client should be treated as the owner of the Accounts, because the value of the call options reflect all of the potential for gain on the Accounts and substantially all of the risk of loss. The IRS has argued that Barclays' gap risk, whereby the value of the Accounts falls by an amount in excess of the option premium, is remote and merely theoretical. However, Barclays assumes significant gap risk with respect to the leveraged long-short statistical arbitrage strategy followed by the Accounts. The Accounts

[2] Annualized based on year-to-date revenue as of 30 September 2012.

have performed positively because of the Client's successful investment advice, rather than the Option Transactions' inherent structure.

For example, in August 2007, there was a high level of volatility in the statistical arbitrage industry, and several investment firms were effectively put out of business. The Client was not immune to the volatility, the trading activity in the Accounts came to close to breaching the risk parameters, and Barclays' senior management had to be alerted to the potential imminent financial loss faced by Barclays on the Accounts.

Moreover, the Option Transactions are in the form of options, are cash-settled, do not convey legal title, and permit the Client to access gains only upon exercise. Importantly, in contrast to an owner of the Accounts, the Client would have no claims on the Accounts in a bankruptcy of Barclays and would merely be a general creditor. This feature is ignored by the IRS Memo.

[redacted]

- Both the IRS and Her Majesty's Revenue and Customs reviewed Barclays' involvement in the Option Transactions and those reviews are complete with no issues currently outstanding. [redacted] Discussions regarding the Option Transactions with the IRS to date have had no impact on Barclays' relationship with the IRS, and there is no reason to expect a future impact.

- [redacted] Further, Barclays is entitled to a contractual tax indemnity from the Client.

- It is also important to note that the structure does not reduce the amount of the Client's taxable income; it merely changes the character of the income from short-term capital gains to long-term capital gains, which has a tax rate benefit. Accordingly, the structure can be viewed as having lower tax risk than other types of tax planning (e.g., completely mitigating taxable income).

- There is a reputation risk for Barclays, especially if the matter proceeds to court and the IRS's challenge and Barclays' role become publicly disclosed. However, continuing with the Option Transactions should not meaningfully increase Barclays' reputation risk, insofar as any court litigation would relate to the entire structure. Barclays' role will be that of a witness (alongside Deutsche Bank) and, provided Barclays fully cooperates with the process, there is no reason to expect damaging accusations from the IRS or the court. In particular, Barclays could not be considered to have sold a risky investment structure to an unsophisticated investor that did not understand the risk.

- The Client wishes to continue with the Option Transactions, and Barclays' relationship with the Client since 2002 has been primarily through the Option Transactions. Moreover, the Client's fundamental trading operations with Barclays have been integrated through the structure, and a rapid unwinding would disrupt the Client's activities. Further, the Client has asserted to Barclays and the IRS that it would like to maintain the structure regardless of the tax benefits. Accordingly, unwinding the transaction will be highly damaging to our relationship with the Client.

Memo

To	SCM US Approvals Committee
From	Maxim Kulikov, Rama Subramaniam
Date	[-] November 2012
Subject	**Project COLT XXVIII (Renaissance Technologies) – Approvals Notification**

BARCLAYS

Structured Capital Markets ("**SCM**") and Prime Services have been in discussions with Renaissance Technologies LLC ("**Renaissance**") regarding the purchase of two new call options from Barclays Bank PLC ("**BBPLC**") for a total premium of approximately $400m on or around 27 November 2012, which will be effective on or around 28 November 2012.

By way of background, the COLT transaction was approved by the SCM Approvals Committee on 2 September 2002 and by the NPC (both Global and US) on 30 July 2002. In each COLT transaction, an entity (which, since 2004, has been Badger Holdings L.P. ("**Badger**")) managed by Renaissance, buys one or more call options from BBPLC. In turn, BBPLC buys call options with parallel terms from Palomino Limited ("**Palomino**"), an entity wholly-owned by BBPLC but not consolidated for IFRS accounting purposes. The call options reference a set of accounts held by Palomino, namely prime brokerage accounts with Barclays Capital Inc. ("**BCI**") and with Barclays Capital Securities Limited ("**BCSL**") (the "**Accounts**"). Palomino has appointed Renaissance as trading manager for the Accounts. Renaissance is subject to investment guidelines, which permit the Accounts to consist solely of (i) cash, (ii) long or short positions in equities, depository receipts, or similar equity-related instruments, or (iii) contracts for difference.

Prior to COLT XXVII, BBPLC's positions with respect to call options were booked in BBPLC's New York Branch. Beginning with COLT XXVII, BBPLC's positions have been booked in BBPLC's London Branch. For US tax purposes, BBPLC's and Palomino's income with respect to the COLT transaction should continue to be effectively connected to a US trade or business.

COLT I was executed on 30 September 2002. Subsequently, Renaissance purchased call options in the following transactions:

COLT Options Written			
Deal Name	Trade Date	Deal Name	Trade Date
COLT I	30-Sep-02	COLT XIV	3-Nov-08
COLT II	9-May-03	COLT XV	12-Dec-08
COLT III	14-Jan-04	COLT XVI	5-Jun-09
COLT IV	1-Jun-04	COLT XVII	5-Jun-09
COLT V	1-Oct-04	COLT XVIII	7-Oct-09
COLT VI	21-Dec-05	COLT XIX	24-May-10
COLT VII	6-Dec-06	COLT XX	27-Sep-10
COLT VIII	13-Mar-07	COLT XXI	3-Dec-10
COLT IX	22-Jun-07	COLT XXII	11-Mar-11
COLT X	10-Aug-07	COLT XXIII	13-Oct-11
COLT XI	14-Dec-07	COLT XXIV	12-Dec-11
COLT XII	21-Apr-08	COLT XXV	18-Apr-12
COLT XIII	13-Jun-08	COLT XXVI	19-Jun-12
		COLT XXVII	9-Oct-12

In 2010, the Internal Revenue Service (the "**IRS**") released an advice memorandum describing their position on the treatment of the COLT transaction. In AM 2010-005, the IRS concluded that the call option does not function as an option and should not be treated as one for US tax purposes. In addition, the IRS concluded that Badger should be treated as the US tax owner of the equities in the managed account.

[redacted] Further, Barclays is entitled to indemnification from Badger and the affiliated Renaissance funds under the transaction documents should the IRS attempt to collect such withholding tax as well as interest and penalties from Barclays.

The IRS memorandum was discussed in the SCM US Approvals Committee Meetings in respect of entry into COLT XXI, XXII, and XXVII. Entry into the call options was approved by Tax and by the SCM US Approvals Committee. SCM provided notification of entry into the other COLT options. In April 2012, SCM was informed by Renaissance that the IRS has formally challenged Renaissance's position and that the challenge will be taken to Appeals within the IRS. In October 2012, the IRS issued a summons requiring Barclays to provide documents regarding the COLT transaction. The Tax Risk Committee was informed of the foregoing issues regarding the COLT transaction and approved the continuation of the transaction, with the understanding that the COLT transaction will be further reviewed in early 2013 following the completion of the Mango / TRANSFORM workstreams. There have been no other material developments regarding these issues.

Economic Benefit

Barclays benefits via the spread earned on executing the underlying equity transactions and debit & credit balances maintained on the Accounts. SCM receives a structuring fee from Prime Services equal to 6.5bps on the market value of the short positions in the Accounts (approx. $[5]m per annum).

Key financial data is set out below:

Product limit	*n/a*
Estimated revenue (post costs, except legals)	*1) SCM fee of 6.5bps (approx. $[5]m p.a.)* *2) Prime Services income of approximately $[95]m per annum from the Accounts.*
Tax capacity *Return on Tax capacity*	*Tax capacity generated equal to Prime Services income* *n/a*
RWAs *Return on RWAs*	*Assumed by Prime Services* *n/a*
PUG	*None*
Balance Sheet	*Approximately $3.5bn in relation to the BBPLC - Palomino Options split 75% Prime Services, 25% SCM*

As per the previous call options, the COLT XXVIII options will have a maturity of 3 years or less and will be cash settled. Upon entry into the COLT XXVIII options, the weightings of the existing call options will be rebalanced and the aggregate notional of all the call options (including the COLT XXVIII options) will be $1,800m. Renaissance has also informed BBPLC that it intends to exercise options XXII, XXIII, and XXIV in December 2012. Using current net asset value balances, the exercise of the three options and the addition of the two new options will, on net, bring the balance from $3.1bn to $1.5bn.

Simultaneous with its writing of the two COLT XXVIII options to Badger for premiums of approximately $250m and $150m, BBPLC will enter into two call options with Palomino that matches the obligations of BBPLC under the COLT XXVIII options for premiums of approximately $250.2m and $150.1m. The call option premiums received by BBPLC reflect the economic benefit and cost of the COLT transactions for BBPLC, and the call option premiums received by Palomino reflect the economic benefit and cost of the COLT transactions for Palomino.

Since the terms of the COLT XXVIII options will not alter the terms of the existing COLT transaction, SCM intends to proceed with the COLT XXVIII options without seeking new approval from the SCM US Approvals Committee; however, it has been agreed that COLT XXVIII will be brought to the attention of the Tax Risk Committee ahead of execution. SCM has notified and received approval from the following in relation to proceeding with the proposed transaction: Tax, Finance, Credit Risk, Market Risk, Regulatory, Legal, Compliance, and Operations.

From: Sixsmith, James: Prime Brokerage (LDN) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=sixsmitj>
Sent: Fri Nov 23 2012 10:28:33 EST
To: Malloy, Marty: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=markets/cn=malloym>
CC:
Subject: Palomino options
Attachments:

Importance: High
Priority: Urgent
Sensitivity: None

Hi Marty,
The new options were approved today but David did raise a question around whether Reny should be made aware that if Transform results in the termination of the Colt structure, this could mean the 60 day notice is given on these new options. Chris Levy said that Ajay had talked with Chris Lucas about this scenario, but it was agreed that any exit from this structure would not result in the 60 day notice would be given, rather there would be more notice meaning that Reny would not have to close out the option and suffer short term capital gains tax.
I think David will send Graham a mail on this which may be sent on to Ajay to validate this conversation between Chris and Ajay.
This is just a heads-up, and let me know if what I've described is unclear.
Thanks,
James

BARCLAYS

New COLT Transaction

Transaction Review Committee

December 2013

Confidential Presentation
For Internal Use Only

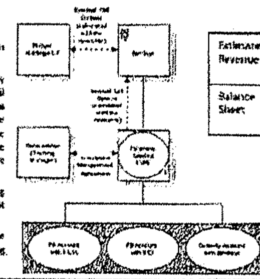
BARCLAYS-PSI-748587

Permanent Subcommittee on Investigations
EXHIBIT #67

The New COLT Transaction

High Level Overview

- Prime Services and Market Structuring are requesting approval to enter into new option transactions (the **New COLT Transaction**) with Renaissance Technologies LLC (**Renaissance**).
- Under the New COLT transaction, Badger Holdings L.P. (**Badger**), an entity managed by Renaissance Technologies LLC (**Renaissance**), will buy one or more call options (**External Options**) from Barclays Bank PLC (**Barclays**). In turn, Barclays will buy one or more call options from Palomino Limited (**Palomino**) an entity wholly-owned by Barclays (**Internal Options**). The maturity of the options will not be greater than 11 months. The External Options and the Internal Options will reference a set of accounts held by Palomino, namely prime brokerage accounts with Barclays Capital Inc. (**BCI**) and Barclays Capital Securities Limited (**BCSL**) and a custody account with Barclays NY Branch (together **The Accounts**).
- Palomino appoints Renaissance as trading manager for the Accounts in return for ongoing management fees. Renaissance is subject to investment guidelines under its investment management agreement with Palomino.
- The New COLT Transaction enables Renaissance to build upon its successful track record in the statistical arbitrage space. The New COLT Transaction also allows Barclays to maintain its long standing relationship with Renaissance, who has been a valuable client for over 10 years.



Estimated Revenue	Barclays earns execution, securities lending, financing and clearing fees of c. $100m per annum.
Balance Sheet	Equal to the fair value of the options (as calculated based on the value of the Accounts)

Background and Commercial Drivers

- The original COLT transaction (the **Original COLT Transaction**) was executed on 30 September 2002. Renaissance has purchased 28 COLT options from Barclays, the latest being COLT XXVIII (executed 27 November 2012). Renaissance subsequently exercised 24 COLT options, leaving 5 options outstanding.
- Barclays is expected to benefit from the spread earned on executing and financing the underlying equity transactions (historically c. $100m p.a.). In addition, the New COLT Transaction provides meaningful benefits to Barclays beyond what is achieved through an ordinary prime brokerage arrangement, including: (i) captive trade flows for up to 11 months, (ii) transparency into the trading activity in the Accounts, (iii) control over the investment criteria through the investment management agreement; (iv) rehypothecation rights for 100% of the collateral, and (v) the value of the Accounts is deemed to be zero if the value of the Accounts falls to an amount equal to 10% of the option premiums.
- From Renaissance's perspective, the New COLT Transaction provides them with committed balance sheet, liquidity and leverage (including no margin calls) beyond the practice for other Barclays prime brokerage arrangements, given Barclays' transparency into and control of the trading activity in the Accounts.
- Each of the Original COLT Transactions has had a maturity of up to 3 years. Where the COLT options were exercised more than a year after purchase, Renaissance has been able to claim a 20% reduction in the US tax rate applied to income on the call option investments (the **Rate Differential Benefit**).
- In 2010, the IRS released a memorandum describing their position on the treatment of a transaction similar to that of the Original COLT Transaction. In October 2012, the IRS issued a summons requiring Barclays to provide documents. In early 2013, the Subcommittee initiated an investigation that included the Original COLT Transaction.
- On 25 March 2013, following the conclusion of Barclays' strategic review (TRANSFORM), the Tax Risk Committee agreed that Renaissance be permitted to enter into the New COLT Transaction with the maturity of the options no greater than 11 months. US individual investors of Renaissance would no longer claim the Rate Differential Benefit.

Our Tax Principles require that our tax planning must:

...support genuine commercial activity,

- See Background and Commercial Drivers for a complete discussion; however, in summary, the New COLT Transaction allows Renaissance to build upon its uniquely successful and profitable track record in the statistical arbitrage space. The New COLT Transaction is expected to generate significant fees to Barclays for providing prime brokerage services.

...comply with generally accepted custom and practice, in addition to the law and the UK Code of Practice on Taxation for Banks,

- Barclays expects to be taxed on its economic profit and loss, consistent with other "business as usual" activities.
- US individual investors of Renaissance will be taxed at the short term capital gains rate on any gain or loss in the year in which the option is exercised.

...be of a type that the tax authorities would expect,

- It is believed that the IRS and the Subcommittee have questioned the Original COLT Transaction because of the Rate Differential Benefit and that an offer to Renaissance to enter into the New COLT Transaction (i.e. without the Rate Differential Benefit) would remove much of the uncertainty as to whether the New COLT Transaction would be "a type that the tax authorities would expect".

...only take place with customers and clients sophisticated enough to assess its risks,

- Renaissance is a very sophisticated investment firm and one of the most successful hedge funds in the statistical arbitrage space with an almost uniquely successful track record. Since 2002, Renaissance has purchased 28 COLT options from Barclays (and subsequently exercised 24 of those options). The substantial premiums for the Original COLT options have been funded by Renaissance's owners and employees, with no third-party investors.
- It was Renaissance that originally approached Barclays with the idea of the Original COLT Transactions. The structure is overseen by Renaissance's CFO and COO.

...be consistent with, and seen to be consistent with, our purpose and values

- As discussed above, the New COLT Transaction supports genuine commercial activity, maintains the client relationship between Barclays and Renaissance and enables Renaissance to build upon its successful track record in the statistical arbitrage space. The transaction as a whole and each element of it, is consistent with Barclays purpose and values.

Short Term COLT Transaction

Key risks identified

- A reputational risk may arise to Barclays if the Original COLT Transaction proceeds to court or is included in a public hearing. However, it is considered that the New COLT Transaction does not meaningfully increase Barclays' reputation risk in relation to the COLT Transactions especially as it eliminates the Rate Differential Benefit
- Market risk on Palomino's positions is hedged, in part, by the External Call Options.
- Renaissance is exposed to 100% of the risks from Palomino's Trading Activity up to a maximum of the call option premiums. Barclays, as a group, is exposed to the gap risk on the securities (i.e. the risk that the value of the positions in the Accounts falls by an amount greater than the aggregate of the call option premiums prior to the time when Palomino is able to cause an unwind of the positions in the Accounts) (Gap Risk). The Investment Guidelines in the IMA impose limits on liquidity, sector exposure, size and leverage in order to substantially reduce the risk that any Gap Risk loss is greater than the call option premiums. The limits are such that Barclays Credit and Market Risk departments are comfortable the Gap risk is managed within acceptable limits
- The risks of COLT generally are reduced by the following risk management techniques:
  - An option expires with zero value if its value falls to 10% or less of the premium amount;
  - Should the equity value of the Accounts fall to an amount equal to 10% of the option premiums, Palomino will have the right to liquidate the positions;
  - Strict Investment Guidelines ability to terminate the IMA if non adherence,
  - Monitoring of trading by Risk to ensure adherence to Investment Guidelines,
  - Trades outside of the Investment Guidelines being transferred out of the Accounts to Renaissance's own account;
  - Ability to reduce leverage if Trading Strategy or risk profile changes;
  - Palomino being able to terminate the IMA for any reason upon 60 calendar day notice

Appendices

1. Transaction Description
2. Economic Benefit
3. Legal
4. Risk
5. Regulatory
6. Tax Analysis
7. Accounting
8. Compliance
9. Miscellaneous

BARCLAYS-PSI-748589

EXCERPT

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 20-F

(Mark One)

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2009

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ______ to ______

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report ______

Commission file numbers	Barclays PLC	1-09246
	Barclays Bank PLC	1-10257

BARCLAYS PLC
BARCLAYS BANK PLC

(Exact Names of Registrants as Specified in their Charter[s])

ENGLAND
(Jurisdiction of Incorporation or Organization)

1 CHURCHILL PLACE, LONDON E14 5HP, ENGLAND
(Address of Principal Executive Offices)

PATRICK GONSALVES, +44 (0)20 7116 2901, PATRICK.GONSALVES@BARCLAYS.COM
1 CHURCHILL PLACE, LONDON E14 5HP, ENGLAND
***(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)**

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Barclays PLC

Title of Each Class	Name of Each Exchange On Which Registered
25p ordinary shares	New York Stock Exchange*
American Depository Shares, each representing four 25p ordinary shares	New York Stock Exchange

* Not for trading, but in connection with the registration of American Depository Shares, pursuant to the requirements of the Securities and Exchange Commission.

Barclays Bank PLC

Permanent Subcommittee on Investigations
EXHIBIT #68

Notes to the accounts
For the year ended 31st December 2009

41 Investment in subsidiaries continued

Entities where the Group's interest exceeds 50% which are excluded from consolidation

Although the Group's interest in the equity voting rights in certain entities exceeds 50%, or it may have the power to appoint a majority of their Boards of Directors, they are excluded from consolidation because the Group either cannot direct the financial and operating policies of these entities, or on the grounds that another entity has a superior economic interest in them. Consequently, these entities are not deemed to be controlled by Barclays.

The table below includes information in relation to such entities as required by the Companies Act 2006 Section 410(2)(b).

Country of registration or incorporation	Name	Percentage of ordinary share capital held %	Equity share-holders' funds £m	Retained loss for the year £m
UK	Fitzroy Finance Limited	100	–	–
Cayman Islands	Palomino Limited	100	1	–

42 Related party transactions and Directors' remuneration

a) Related party transactions

Parties are considered to be related if one party has the ability to control the other party or exercise significant influence over the other party in making financial or operation decisions, or one other party controls both. The definition includes subsidiaries, associates, joint ventures and the Group's pension schemes, as well as other persons.

Subsidiaries

Transactions between Barclays PLC and subsidiaries also meet the definition of related party transactions. Where these are eliminated on consolidation, they are not disclosed in the Group financial statements. Transactions between Barclays PLC and its subsidiary, Barclays Bank PLC are fully disclosed in its balance sheet and income statement. A list of the Group's principal subsidiaries is shown in Note 41.

Associates, joint ventures and other entities

The Group provides banking services to its associates, joint ventures, the Group pension funds (principally the UK Retirement Fund) and to entities under common directorships, providing loans, overdrafts, interest and non-interest bearing deposits and current accounts to these entities as well as other services. Group companies also provide investment management and custodian services to the Group pension schemes. The Group also provides banking services for unit trusts and investment funds managed by Group companies and are not individually material. All of these transactions are conducted on the same terms as third-party transactions.

Entities under common directorships

The Group enters into normal commercial relationships with entities for which members of the Group's Board also serve as Directors. The amounts included in the Group's financial statements relating to such entities that are not publicly listed are shown in the table opposite under Entities under common directorships.

EXCERPT

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
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For the transition period from ____________ to ____________

OR

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Date of event requiring this shell company report ____________

Commission file numbers	Barclays PLC	1-09246
	Barclays Bank PLC	1-10257

BARCLAYS PLC
BARCLAYS BANK PLC
(Exact Names of Registrants as Specified in their Charter[s])

ENGLAND
(Jurisdiction of Incorporation or Organization)

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(Address of Principal Executive Offices)

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1 CHURCHILL PLACE, LONDON E14 5HP, ENGLAND
*(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Barclays PLC

Notes to the financial statements
For the year ended 31st December 2010 continued

32 Investment in subsidiaries continued
Following the restructuring of Group operations in the US during the year, Barclays Group US Inc. is no longer a US Bank Holding Company.

Full information of all subsidiaries will be included in the Annual Return to be filed at UK Companies House.

Entities in which the Group holds less than half the voting rights
There are a number of entities in which the Group holds less than half the voting rights which are consolidated when the substance of the relationship between the Group and the entity indicates that the entity is controlled by the Group. Such entities are deemed to be controlled by the Group when relationships with such entities give rise to benefits that are in substance no different from those that would arise were the entity a subsidiary.

The consolidation of such entities may be appropriate in a number of situations, but primarily when:

- the operating and financial policies of the entity are closely defined from the outset (i.e. it operates on an 'autopilot' basis) with such policies being largely determined by the Group;
- the Group has rights to obtain the majority of the benefits of the entity and/or retains the majority of the residual or ownership risks related to the entity; or
- the activities of the entity are being conducted largely on behalf of the Group according to its specific business objectives. Such entities are created for a variety of purposes including securitisation, structuring, asset realisation, intermediation and management.

Subsidiaries with a different reporting date from that of the Parent of 31st December
Entities may have a different reporting date from that of the parent of 31st December. Dates may differ for a variety of reasons including local reporting regulations or tax laws. In accordance with our accounting policies, for the purpose of inclusion in the consolidated financial statements of Barclays PLC, entities with different reporting dates are made up until 31st December.

Entities where the Group's interest exceeds 50% which are excluded from consolidation
Although the Group's interest in the equity voting rights in certain entities exceeds 50%, or it may have the power to appoint a majority of their Boards of Directors, they are excluded from consolidation because the Group either does not direct the financial and operating policies of these entities, or on the grounds that another entity has a controlling interest in them. Consequently, these entities are not deemed to be controlled by Barclays.

The table below includes information in relation to such entities as required by the Companies Act 2006 Section 410(2)(b).

Country of registration or incorporation	Name	Percentage of ordinary share capital held %	Equity shareholders' funds £m	Retained profit for the year £m
UK	Fitzroy Finance Limited	100	–	–
Cayman Islands	Palomino Limited	100	1	–

33 Profit on disposal of subsidiaries, associates and joint ventures
During the year, the profit on disposal of subsidiaries, associates and joint ventures was £81m (2009: £188m), principally relating to the disposal of Barclays Africa custody business to Standard Chartered Bank for a consideration of £81m generating a gain on disposal before tax of £77m. During 2009, the Group disposed of 50% of Barclays Vida y Pensiones Compañia de Seguros and the 7% of Barclays Africa Botswana business for consideration of £276m generating a gain on disposal before tax of £184m.

34 Discontinued operations
On 1st December 2009 the Group completed the sale of BGI to BlackRock, Inc. (BlackRock) recognising a profit on disposal before tax of £6,331m. The tax charge of £43m reflects the application of UK substantial shareholdings relief in accordance with UK tax law.

The consideration at completion was $15.2bn (£9.5bn), including 37.567 million new BlackRock shares, giving an economic interest of 19.9% of the enlarged BlackRock group. Barclays Group holds 4.9% of the voting rights and under the terms of the transaction may not acquire additional voting rights and will vote in accordance with the recommendations of the BlackRock Board of Directors. John Varley and Bob Diamond were appointed to the BlackRock Board, which comprises 18 Directors. The Group is not deemed to exercise significant influence and the investment has been accounted for as an available for sale equity investment.

EXCERPT

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Date of event requiring this shell company report ____________

Commission file numbers Barclays PLC 1-09246
Barclays Bank PLC 1-10257

BARCLAYS PLC
BARCLAYS BANK PLC
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*(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Barclays PLC

Notes to the financial statements
For the year ended 31 December 2011 continued

Scope of consolidation

This section presents information on the Group's investments in subsidiaries, joint ventures and associates. Detail is also given on securitisation transactions the Group has entered into and arrangements that are held off-balance sheet.

40 Investment in subsidiaries

Accounting for investment in subsidiaries
In the individual financial statements of Barclays PLC, investments in subsidiaries are stated at cost less impairment, if any. Cost includes directly attributable costs of the investment.

Principal subsidiaries for the Group are set out below. This list has been revised to include those subsidiaries that are significant in the context of the Group's business, results or financial position.

Country of registration or incorporation	Company name	Nature of business	Percentage of equity capital held (%)
England	Barclays Bank PLC	Banking, holding company	100
England	Barclays Bank Trust Company Limited	Banking, securities industries and trust services	100
England	Barclays Stockbrokers Limited	Stockbroking	100
England	Barclays Capital Securities Limited	Securities dealing	100
England	FIRSTPLUS Financial Group PLC	Secured loan provider	100*
Isle of Man	Barclays Private Clients International Limited	Banking	100*
Japan	Barclays Capital Japan Limited	Securities dealing	100
Kenya	Barclays Bank of Kenya Limited	Banking	68.5*
South Africa	Absa Group Limited	Banking	55.5*
Spain	Barclays Bank SA	Banking	100*
USA	Barclays Capital Inc.	Securities dealing	100
USA	Barclays Bank Delaware	US credit card issuer	100
USA	Barclays Group US Inc.	Holding company	100*

The country of registration or incorporation is also the principal area of operation of each of the above subsidiaries. Investments in subsidiaries held directly by Barclays Bank PLC are marked*. Full information of all subsidiaries will be included in the Annual Return to be filed at UK Companies House.

Although the Group's interest in the equity voting rights in certain entities listed below may exceed 50%, or it may have the power to appoint a majority of their Boards of Directors, they are excluded from consolidation because the Group either does not direct the financial and operating policies of these entities, or another entity has a controlling interest in them. Consequently, these entities are not controlled by Barclays:

Country of registration or incorporation	Company name	Percentage of ordinary share capital held %	Equity shareholders' funds £m	Retained profit for the year £m
UK	Fitzroy Finance Limited	**100**	**–**	**–**
Cayman Islands	Palomino Limited	**100**	**1**	**–**

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☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2012

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ____________ to ____________

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report ____________

Commission file numbers	Barclays PLC	1-09246
	Barclays Bank PLC	1-10257

BARCLAYS PLC
BARCLAYS BANK PLC
(Exact Names of Registrants as Specified in their Charter[s])

ENGLAND
(Jurisdiction of Incorporation or Organization)

1 CHURCHILL PLACE, LONDON E14 5HP, ENGLAND
(Address of Principal Executive Offices)

PATRICK GONSALVES, +44 (0)20 7116 2901, PATRICK.GONSALVES@BARCLAYS.COM
1 CHURCHILL PLACE, LONDON E14 5HP, ENGLAND
*(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Barclays PLC

Notes to the financial statements
For the year ended 31 December 2012 continued

Scope of consolidation

The notes included in this section focus on information on the Group's investments in subsidiaries, joint ventures and associates. Detail is also given on securitisation transactions the Group has entered into and arrangements that are held off-balance sheet.

38 Investment in subsidiaries

Accounting for investment in subsidiaries
In the individual financial statements of Barclays PLC, investments in subsidiaries are stated at cost less impairment, if any. Cost also includes directly attributable costs of the investment.

Principal subsidiaries for the Group are set out below. This list includes those subsidiaries that are most significant in the context of the Group's business, results or financial position.

Country of registration or incorporation	Company name	Nature of business	Percentage of equity capital held (%)
England	Barclays Bank PLC	Banking, holding company	100
England	Barclays Bank Trust Company Limited	Banking, asset management and trust services	100
England	Barclays Capital Securities Limited	Securities dealing	100
Isle of Man	Barclays Private Clients International Limited	Banking	100*
Japan	Barclays Securities Japan Limited	Securities dealing	100
Kenya	Barclays Bank of Kenya Limited	Banking	68.5*
South Africa	Absa Bank Limited	Banking	55.6*
Spain	Barclays Bank S.A.U.	Banking	100*
USA	Barclays Capital Inc.	Securities dealing	100
USA	Barclays Bank Delaware	US credit card issuer	100

The country of registration or incorporation is also the principal area of operation of each of the above subsidiaries. Investments in subsidiaries held directly by Barclays Bank PLC are marked *. Information on the Group's subsidiaries, as required by the Companies Act, will be included in the Annual Return to be filed at the UK Companies House.

Although the Group's interest in the equity voting rights in certain entities listed below may exceed 50%, or it may have the power to appoint a majority of their Boards of Directors, they are excluded from consolidation because the Group either does not direct the financial and operating policies of these entities, or another entity has a controlling interest in them. Consequently, these entities are not controlled by Barclays:

Country of registration or incorporation	Company name	Percentage of ordinary share capital held (%)	Equity shareholders' funds £m	Retained profit for the year £m
UK	Fitzroy Finance Limited	**100**	**–**	**–**
Cayman Islands	Palomino Limited	**100**	**1**	**–**

EXCERPT

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 20-F

(Mark One)

☐ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**

OR

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2013

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from ____________ to ____________

OR

☐ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Date of event requiring this shell company report ____________

Commission file numbers	Barclays PLC	1-09246
	Barclays Bank PLC	1-10257

BARCLAYS PLC
BARCLAYS BANK PLC
(Exact Names of Registrants as Specified in their Charter[s])

ENGLAND
(Jurisdiction of Incorporation or Organization)

1 CHURCHILL PLACE, LONDON E14 5HP, ENGLAND
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1 CHURCHILL PLACE, LONDON E14 5HP, ENGLAND
*(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

Barclays PLC

Note 38: **Principal Subsidiaries** continued

Significant judgements and assumptions used to determine the scope of the consolidation

Determining whether the Group has control of an entity is generally straightforward based on ownership of the majority of the voting capital. However, in certain instances this determination will involve significant judgment, particularly in the case of structured entities where voting rights are often not the determining factor in decisions over the relevant activities. This judgment may involve assessing the purpose and design of the entity. It will also often be necessary to consider whether the Group, or another involved party with power over the relevant activities, is acting as a principal in its own right or as an agent on behalf of others.

There is also often considerable judgment involved in the ongoing assessment of control over structured entities. In this regard, where market conditions have deteriorated such that the other investors' exposures to the structure's variable returns have been substantively eliminated, the Group may conclude that the managers of the structured entity are acting as its agent and therefore will consolidate the structured entity.

An interest in equity voting rights exceeding 50% would typically indicate that the Group has control of an entity. However certain entities are excluded from consolidation because the Group does not have exposure to their variable returns. These entities are managed by external counterparties and consequently are not controlled by the Group. Where appropriate, interests relating to these entities are included in Note 39 Structured Entities.

Country of registration or incorporation	Company Name	Percentage of voting rights held (%)	Equity shareholder's funds (£m)	Retained profit for the year (£m)
UK	Fitzroy Finance Limited	100	–	–
Cayman Islands	Palomino Limited	100	1	–

Significant restrictions

As is typical for a Group of its size and international scope, there are restrictions on the ability of Barclays PLC to obtain distributions of capital, access the assets or repay the liabilities of members of its group due to the statutory, regulatory and contractual requirements of its subsidiaries and due to the protective rights of non-controlling interests. These are considered below.

Regulatory requirements

Subsidiary companies with assets and liabilities before intercompany eliminations of £1,797bn (2012: £1,963bn) and £1,727bn (2012: £1,900bn) respectively are subject to prudential regulation and regulatory capital requirements in the countries in which they are regulated. These require entities to maintain minimum capital, leverage and exposure ratios restricting the ability of these entities to make distributions of cash or other assets to the parent company, Barclays PLC.

In order to meet capital requirements, subsidiaries may hold certain equity accounted and debt accounted issued financial instruments and non-equity instruments such as Tier 1 and Tier 2 capital instruments and other forms of subordinated liabilities. See the non-controlling interests Note 34 and the subordinated liabilities Note 31 for particulars of these instruments. These instruments may be subject to cancellation clauses or preference share restrictions that would limit the ability of the entity to repatriate the capital on a timely basis.

Liquidity requirements

Regulated subsidiaries of the Group are required to maintain liquidity pools to meet PRA and local regulatory requirements. The main subsidiaries affected are Barclays Bank PLC, Absa Bank Limited and Barclays Capital Inc. which must maintain daily compliance with the regulatory minimum.

See pages 208 to 224 for further details of liquidity requirements, including those of our significant subsidiaries.

Statutory requirements

The Group's subsidiaries are subject to statutory requirements not to make distributions of capital and unrealised profits and generally to maintain solvency. These requirements restrict the ability of subsidiaries to make remittances of dividends to Barclays PLC, the ultimate parent, except in the event of a legal capital reduction or liquidation. In most cases the regulatory restrictions referred to above exceed the statutory restrictions.

As at 31 December 2013, the non-distributable reserves of Barclays Bank PLC, including share capital and other equity instruments were £23,571m (2012: £18,608m).

Contractual requirements

Asset encumbrance

The Group uses its financial assets to raise finance in the form of securitisations and through the liquidity schemes of central banks. Once encumbered, the assets are not available for transfer around the Group. The assets typically affected are disclosed in Note 42 Assets Pledged.

Assets held by consolidated structured entities

£690m of assets included in the Group's balance sheet relate to consolidated investment funds and are held to pay return and principal to the holders of units in the funds. The assets held in these funds cannot be transferred to other members of the Group.

Other restrictions

The Group is required to maintain balances with central banks and other regulatory authorities and these amounted to £4,722m as at 31 December 2013 (2012: £5,169m).

Barclays Africa Group Limited assets are subject to exchange control regulation determined by the South African Reserve Bank (SARB). Special dividends and loans in lieu of dividends cannot be transferred without SARB approval.

MEMORANDUM TO FILE

RE: **Post-GLAM Basket Option Contracts**
FROM: **Ahmad Sarsour, Senior Economist on Detail with U.S. Senate Permanent Subcommittee on Investigations**
DATE: **July 22, 2014**

The purpose of this memorandum is to summarize the basket option activity engaged in by Deutsche Bank, Barclays, and RenTec, after the IRS issued its advisory memorandum on basket options.

After GLAM Activity: Basket Option with 1-Year Term or Greater		
Basket Contracts Initiated Prior to GLAM, but Exercised After		
Bank	**Number**	**Gain**
Deutsche Bank	4	$1.9 billion
Barclays	5	$2.6 billion
Total	9	$4.5 billion

Basket Contracts Initiated After the GLAM, and Exercised After		
Bank	Number	Gain
Deutsche Bank (Exercised)	1	$1.2 billion
Barclays (Exercised)	6	$4.1 billion
Barclays (Still Active)	3	
Total	10	$5.3 billion

Active Basket Options When GLAM Issued. On November 12, 2010, the IRS issued Generic Legal Advice Memorandum (GLAM) No. AM2010-005, determining that an option used to purchase a basket of securities that is essentially managed by the taxpayer holding the option should not be treated as an option for tax purposes.[1] Instead, the IRS concluded that the taxpayer should be treated as owning the securities underlying the alleged option and pay the taxes owed on any capital gains. At that time, Deutsche Bank had four active basket contracts and Barclays had five active basket contracts with RenTec, all of which had originated prior to the GLAM and had a term of one year or longer.[2] After the GLAM was issued, neither Deutsche Bank nor Barclays exercised their contractual right to terminate any of the nine active contracts. Instead, the banks allowed those basket options to be exercised after the GLAM was issued, and they produced profits for RenTec totaling $4.5 billion.

Deutche Bank Post-GLAM Basket Options. Deutsche Bank entered into one long-term basket option contract with RenTec in November of 2010, a few days after the issuance of

[1] 11/12/10 "Hedge Fund Basket Option Contracts," prepared by IRS Office of Chief Counsel Memorandum, at 2, http://www.irs.gov/pub/irs-utl/am2010005.pdf.
[2] See undated chart, "History of COLT Options," prepared by Barclays, BARCLAYS-PSI-748604; undated and untitled chart prepared by Deutsche Bank, DB-PSI 52583-85.

Permanent Subcommittee on Investigations
EXHIBIT #69

the GLAM. That option was exercised and the transaction completed in July 2012. As noted above, of the five long-term basket transactions (4 initiated pre-GLAM and one initiated post-GLAM) that Deutsche Bank administered for RenTec while the GLAM was in effect, RenTec made a profit of $3.1 billion ($1.9 from the pre-GLAM transactions and $1.2 from the post-GLAM transaction). After 2010, the next basket contract that Deutsche Bank offered RenTec was in April 2012. That contract had a term of less than one year and required RenTec to report any profits as short-term trading gains. Since April 2012, Deutsche Bank has written seven similar basket option contracts with RenTec, all with terms of less than one year. Five have been completed and two remain active.

Barclays Post-GLAM Basket Options. Barclays administered fourteen basket contracts for RenTec while the GLAM was in effect. Five were issued before the GLAM, but exercised after the GLAM was issued, with the last in 2011, yielding profits for RenTec totaling $2.6 billion. After the issuance of the GLAM, Barclays entered into nine more basket option contracts with RenTec, each of which had a term of one year or more. The first of those nine contracts was entered into less than a month after the GLAM. The last was entered into in November 2012. Six of those nine transactions have been completed, the last in April 2014, and they generated a total profit for RenTec of $4.1 billion. All of the three basket option transactions still outstanding have surpassed one year in maturity. Those three options have a total initial notional value of $6.5 billion. In January 2014, Barclays entered into another basket contract with RenTec, but that option is for a length of less than one year.

In sum, both banks entered into additional basket option contracts with RenTec after the GLAM was issued. Altogether, since November 2010, those basket option contracts have generated profits for RenTec totaling $9.8 billion, with more to come.

Hearing On
ABUSE OF STRUCTURED FINANCIAL PRODUCTS: Misusing Basket Options to Avoid Taxes and Leverage Limits

July 22, 2014

EXHIBIT #70:

Document Locator List and documents cited in footnotes to *Abuse of Structured Financial Products: Misusing Basket Options to Avoid Taxes and Leverage Limits*, the Report released in conjunction with the Subcommittee hearing on July 22, 2014. The *Document Locator List* provides the Bates numbers or description of the documents cited in the Report and the hearing record page number where the document can be located. Not included are documents related to Subcommittee interviews, which are not available to the public, and widely available public documents.

Permanent Subcommittee on Investigations
EXHIBIT #70

REPORT DOCUMENT LOCATOR LIST

ABUSE OF STRUCTURED FINANCIAL PRODUCTS:

Misusing Basket Options to Avoid Taxes and Leverage Limits

REPORT DOCUMENT LOCATOR LIST

ABUSE OF STRUCTURED FINANCIAL PRODUCTS:

Misusing Basket Options to Avoid Taxes and Leverage Limits

Bates Number or Document Description	Page Number
BARCLAYS-PSI-730031-032 (Printed as Exhibit 56)	677
BARCLAYS-PSI-748148-158 (Printed as Exhibit 2)	258
BARCLAYS-PSI-748506-507 (Printed as Exhibit 60)	730
BARCLAYS-PSI-748575-586 *(See attachment to PSI-Barclays-22-000005-014)*	1015
BARCLAYS-PSI-748587-589 (Printed as Exhibit 67)	744
BARCLAYS-PSI-748590 (Printed as Exhibit 63)	736
BARCLAYS-PSI-748595-598 *(See attachment to PSI-Barclays-22-000005-014)*	1015
BARCLAYS-PSI-748604 *(See attachment to PSI-Barclays-20-000001-005)*	1009
DB-PSI 00000001-047 (Printed as Exhibit 24)	372
DB-PSI 00000181-209 (Printed as Exhibit 27)	425
DB-PSI 00000320-337	864
DB-PSI 00001599 (Printed as Exhibit 15)	345
DB-PSI 00005713-715	882
DB-PSI 00006875	885
DB-PSI 00006983-984 (Printed as Exhibit 26)	423
DB-PSI 00008625-627 (Printed as Exhibit 30)	460
DB-PSI 00009727-730	886
DB-PSI 00010767-769 (Printed as Exhibit 14)	342
DB-PSI 00012949	890
DB-PSI 00018721-723	891
DB-PSI 00019248-250	894
DB-PSI 00020110-117	897
DB-PSI 00020740-748 (Printed as Exhibit 34)	469
DB-PSI 00025033-034 (Printed as Exhibit 16)	346
DB-PSI 00025040-041	905
DB-PSI 00028006-007	907
DB-PSI 00033762-765 (Printed as Exhibit 25)	419
DB-PSI 00036241-244 (Printed as Exhibit 28)	454
DB-PSI 00036700-701 (Printed as Exhibit 29)	458
DB-PSI 00045265-266 (Printed as Exhibit 31)	463
DB-PSI 00047768-796	909
DB-PSI 00052577-582	938
DB-PSI 00052583-587 *(See attachment to PSI-DeutcheBank-24-000001-003)*	1041
DB-PSI 00052588-590	944
DB-PSI 00079017-021 (Printed as Exhibit 21)	359

REPORT DOCUMENT LOCATOR LIST

ABUSE OF STRUCTURED FINANCIAL PRODUCTS:

Misusing Basket Options to Avoid Taxes and Leverage Limits

Bates Number or Document Description	Page Number
DB-PSI 00112522-523 (Printed as Exhibit 33)	467
DB-PSI 001130213-241	947
DB-PSI 00116157-160, 177 (Printed as Exhibit 19)	353
DB-PSI 00122457 *(As transcribed by Deutsche Bank.)*	976
DB-PSI 00122457 (Printed as Exhibit 22b)	365
DB-PSI 00122458 (Printed as Exhibit 22a)	364
DB-PSI 00122467	978
DB-PSI 00123196-208 (Printed as Exhibit 7)	279
DB-PSI 00123209-221	979
DP-PSI 00112132-133 (Printed as Exhibit 32)	465
FRBNY to PSI(MAPs) 000238 [Sealed Exhibit]	*
GWALLC-PSI-0000745-844 [Sealed Exhibit]	*
GWALLC-PSI-0002164-203	992
GWALLC-PSI-0002328 (Printed as Exhibit 20)	358
GWALLC-PSI-0002492-494	1003
GWALLC-PSI-0002504-505 (Printed as Exhibit 17)	348
GWALLC-PSI-0003427-428	1006
GWALLC-PSI-0009484	1008
PSI-Barclays-20-000001-005 (with attachment, BARCLAYS-PSI-748604)	1009
PSI-Barclays-22-000005-014 (with attachments, BARCLAYS-PSI-016951-952; BARCLAYS-PSI-748575-586; and BARCLAYS-PSI-748595-598)	1015
PSI-DeutcheBank-23-000001-005 [Sealed Exhibit]	*
PSI-DeutcheBank-24-000001-003 (with attachment, DB-PSI 00052583-587)	1041
PSI-Renaissance-06-000001, 004	1049
PSI-Renaissance-37-000001-007 (with attachments, RT-PSI-00384763, 764-777)	1051
PSI-RenaissanceTech-20-000001-002 (with attachment, RT-PSI-00384762)	1071
RT-PSI-00000001-402 [Sealed Exhibit]	*
RT-PSI-00000914-931 (Printed as Exhibit 9)	312
RT-PSI-00000932-933	1074
RT-PSI-00002319-322 (Printed as Exhibit 12)	336
RT-PSI-00004630-632 (Printed as Exhibit 10)	330
RT-PSI-00046119-121 (Printed as Exhibit 18)	350
RT-PSI-00054256-257 (Printed as Exhibit 13)	340

REPORT DOCUMENT LOCATOR LIST

ABUSE OF STRUCTURED FINANCIAL PRODUCTS:

Misusing Basket Options to Avoid Taxes and Leverage Limits

Bates Number or Document Description	Page Number
RT-PSI-00062957-959 (Printed as Exhibit 11)	333
RT-PSI-00068362 (Printed as Exhibit 3)	269
RT-PSI-00068592-599	1076
RT-PSI-00134963-5013	1084
RT-PSI-00234974-998 (Printed as Exhibit 57)	679
RT-PSI-00235499-500 (Printed as Exhibit 52)	645
RT-PSI-00236253-258 (Printed as Exhibit 23)	366
RT-PSI-00236651-655 (Printed as Exhibit 55)	667
RT-PSI-00236914-918 (Printed as Exhibit 55)	667
RT-PSI-00361844-847 (Printed as Exhibit 52)	645
RT-PSI-00361879-881 (Printed as Exhibit 52)	645
RT-PSI-00363679-717	1135
RT-PSI-00363694 (Printed as Exhibit 1c)	253
RT-PSI-00364418 (Printed as Exhibit 5)	273
RT-PSI-00368695-697 (Printed as Exhibit 4)	270
RT-PSI-00384762 *(See attachment to PSI-RenaissanceTech-20-000001-002)*	1071
RT-PSI-00384763, 764-777 *(See attachments to PSI-Renaissance-37-000001-007)*	1051
RT-PSI-00384778 [Sealed Exhibit]	*
RT-PSI-00385993-6124 [Sealed Exhibit]	*
RT-PSI-00386466-513 [Sealed Exhibit]	*
RT-PSI-00386514-741 [Sealed Exhibit]	*
RT-PSI-00387786-921 [Sealed Exhibit]	*
RT-PSI-00390362 [Sealed Exhibit]	*
RT-PSI-00396296-315 (Printed as Exhibit 41)	537
RT-PSI-00396316-317	1158
RT-PSI-00396318-321 (Printed as Exhibit 35)	478
RT-PSI-00396344	1160
RT-PSI-00396351-355 (Printed as Exhibit 6)	274
RT-PSI-00396394-413 (Printed as Exhibit 8)	292
SEC_RT13_001965-993 [Sealed Exhibit]	*
SEC_RT13_001994-019 [Sealed Exhibit]	*
SEC_RT13_002020-074 [Sealed Exhibit]	*
SEC_RT13_002075-079 [Sealed Exhibit]	*
SEC_RT13_010650-511 [Sealed Exhibit]	*
12/21/2010 Department of Justice, U.S. Attorney for the Southern District of New York, letter regarding *Deutche Bank AG - Non Prosecution Agreement*.	1161

REPORT DOCUMENT LOCATOR LIST
ABUSE OF STRUCTURED FINANCIAL PRODUCTS:
Misusing Basket Options to Avoid Taxes and Leverage Limits

Bates Number or Document Description	Page Number
7/22/2014 "Post-GLAM Basket Option Contracts," Memorandum to File prepared by the Subcommittee (summarizing Deutsche Bank, Barclays, and RenTec involvement with basket options after the November 2010 issuance of the IRS advisory memorandum on basket options). (Printed as Exhibit 69)	758
* Sealed exhibits retained in the files of the Subcommittee.	

EXECUTION VERSION

Barclays Bank PLC
200 Park Avenue
New York NY 10166

Tel: +1 (212) 412 4000

BARCLAYS

13 June 2008

Badger Holdings L.P.

c/o Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022
Attention: Mr. Mark Silber

Ref: Option RR

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the Transaction entered into between Barclays Bank PLC ("Party A"), acting through its New York Branch, and Badger Holdings L.P. ("Party B") on the Trade Date specified below (the "Transaction").

This Confirmation constitutes a complete and binding agreement between Party A and Party B as to the terms and conditions of the Transaction to which this Confirmation relates, and it supersedes all prior or contemporaneous written or oral agreements between Party A and Party B in relation to the Transaction (except to the extent explicitly stated in any other written agreement between the parties hereto executed contemporaneously herewith). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below.

The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 1996 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc., are incorporated by reference into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern, and in the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern. For purposes of the Equity Definitions, the Transaction shall constitute an Index Option Transaction.

This Confirmation supplements, forms part of, and is subject to, the ISDA Master Agreement dated as of October 1, 2004 between Party A and Party B, as amended by that certain Amendment No. 1 dated as of December 21, 2005, as further amended by that certain Amendment No. 2 dated as of December 6, 2006 and as such agreement may be further amended and supplemented from time to time (the "Agreement"). All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

1. The terms of the particular Transaction to which this Confirmation relates are as follows:

General Terms:

Trade Date:	June 13, 2008
Effective Date:	June 16, 2008
Option Style:	American.
Option Type:	Call.
Seller:	Party A.
Buyer:	Party B.
Index:	The Basket Value.
Number of Options:	One.
Multiple Exercise:	Inapplicable.
Strike Price:	USD 2,650,000,000 (Two Billion Six Hundred Fifty Million US Dollars)
Premium:	USD 265,000,000 of which USD 106,000,000 constitutes and is referred to herein as "Amortizable Premium".
Premium Payment Date:	The 2nd (second) Business Day immediately following the Effective Date.
Reference Accounts:	The BCSL Account, the BCI Account and the Synthetic Account, each as defined below, and any additional prime brokerage or futures trading account that Party A and Party B shall designated by mutual agreement as a "Reference Account", provided that such additional prime brokerage or futures trading account has been established with Barclays Bank PLC, Barclays Capital Inc. or Barclays Capital Securities Limited by and in the name of Palomino Limited.
Trading Strategy:	A trading strategy to be exclusively implemented based on and in accordance with the Investment Guidelines, as defined below.
Exchange(s):	Each exchange or quotation system, which constitutes with respect to any of the Shares, the

	principal exchange or quotation system on which such Share is actively traded, as reasonably determined by the Calculation Agent.
Business Day:	New York.
Business Day Convention:	Following Business Day.
Shares:	The equity interests and other securities that, at any time during the Valuation Period, constitute (or underlie) Designated Positions.
Issuer:	The issuer of the relevant Shares.

Procedure for Exercise:

Latest Exercise Time:	5 p.m. (local time in New York City).
Expiration Time:	5 p.m. (local time in New York City).
Expiration Date:	The date which is the earliest of: (i) June 13, 2011 (the "Scheduled Expiration Date"), (ii) a Knock-out Event Date, or (iii) an Early Termination Date designated by either party in respect of the Transaction.
Exercise Date:	The Exchange Business Day during the Exercise Period on which the Option is or is deemed to be exercised by Party B.
Knock-out Event Date:	Any Valuation Exchange Business Day on which Party A notifies Party B (which notice may be telephonic (confirmed in writing) or by electronic message) that if Party B had exercised this Option and such Valuation Exchange Business Day were the "Valuation Date" hereunder the amount that would have been determined (at the Valuation Time on the previous Valuation Exchange Business Day) as the "Cash Settlement Amount" under this Option would have been equal to or less than 10% of the sum of (a) the Premium Settlement Amount and (b) Total Amortized Premium.

Automatic Exercise:	Applicable.	
Seller's Agent's Telephone Number and Telex and/or Facsimile Number and Contact Details for Purpose of Giving Notice:	Seller's Agent's Name:	John Stracquadanio
	Specified Location:	Barclays Bank PLC, New York Branch 200 Park Avenue New York, New York 10166
	Tel:	(212) 412-2180
	Fax:	(212) 412-7463

Valuation:

Valuation Time:	In respect of each Designated Position, for any date, the close of trading in respect of the Share(s) constituting or underlying such Designated Position on the Exchange corresponding to such Share(s), on such date; or, if no trading occurred on such date in respect of such Share(s) on such Exchange, such other time as may be agreed upon by Party A and Party B.
Valuation Date:	The earlier of: (i) the 4th (fourth) Valuation Exchange Business Day immediately following the Exercise Date, or (ii) the ninth (9th) Business Day immediately following the Exercise Date.
Valuation Period:	The period commencing on, and including, the Effective Date and ending on, and including, the Valuation Date.
Valuation Exchange Business Day:	An Exchange Business Day during which there has not been (i) a Trading Suspension in Shares that comprise, on the commencement of such day, more than 20 percent, in value, of (A) the long Designated Positions or (B) the short Designated Positions, in each case, then credited to, included or deemed included within the Reference Accounts, or (ii) an event of force majeure beyond the control of Party A (or any Affiliate thereof) occurring after the Effective Date, preventing the execution of transactions within the Reference Accounts or making the execution of such transactions impossible or impracticable.

For purposes of this Confirmation, the term "Trading Suspension" means, with respect to any security a suspension of trading (by reason of movements in price exceeding limits permitted by the relevant Exchange or otherwise) on the relevant Exchange for a period of more than one (1) hour.

Calculation Date:	The Effective Date, the Valuation Date and each day during the Valuation Period that is either (i) the "Effective Date" of any other Transaction that is an Index Option Transaction in respect of the Reference Accounts ("RA Option"), (ii) the day immediately following the "Valuation Date" of any RA Option, or (iii) if any RA Option is otherwise terminated and no "Valuation Date" is specified, the day on which such RA Option is terminated.
Calculation Period:	Each period from, and including, one Calculation Date to, but excluding, the immediately following Calculation Date during the Valuation Period, except that (i) the initial Calculation Period will commence on, and include, the Effective Date, and (ii) the final Calculation Period will end on, and include, the Valuation Date.
Calculation Period Factor:	In respect of each Calculation Period, the quotient obtained by dividing (i) the amount that would have been payable as the "Cash Settlement Amount" under this Option if Party B had exercised this Option, calculated (x) if the Calculation Period commences after the Effective Date, as if the last day of the immediately preceding Calculation Period were the "Valuation Date" hereunder, and (y) if the Calculation Period commences on the Effective Date, as if the first day of the Calculation Period were the "Valuation Date" hereunder, the value of the "Settlement Price" hereunder equaled the Strike Price, and the "Total Amortized Premium" hereunder had equaled zero, by (ii) the sum of (A) the sum of the amounts that would have been payable as "Cash Settlement Amounts" under all Outstanding Options, if Party B had exercised all such options and the last day of the immediately preceding Calculation Period were treated as the "Valuation Date" for purposes of all such options, and (B) the sum of the amounts that would have been payable as "Cash Settlement Amounts" under all Outstanding Options that have an "Effective

	Date" on the first day of the Calculation Period, if Party B had exercised all such options, calculated as if (x) the first day of the Calculation Period were treated as the "Valuation Date" for purposes of all such options, (y) the value of the "Settlement Price" of each such option equaled its "Strike Price", and (z) the "Total Amortized Premium" of each such option equaled zero. For purposes hereof, in respect of each Calculation Period, "Outstanding Options" means all RA Options and this Option, whether or not exercised, whose "Valuation Date" has not occurred prior to the first day of the Calculation Period and that has not otherwise been terminated on or prior to such day.
Calculation Period Amount:	In respect of each Calculation Period, the sum of (A) the product obtained by multiplying the Amortized Daily Premium by the number of calendar days in the Calculation Period and (B) the product obtained by multiplying (i) the Calculation Period Return for such Calculation Period, by (ii) the Calculation Period Factor for such Calculation Period.

Settlement Terms:

Cash Settlement:	Applicable.
Cash Settlement Amount:	Other than in respect of a Knock-out Event Date, an amount equal to the greater of (i) zero, and (ii) the sum of (A) the Settlement Price, minus (B) the Strike Price, plus (C) the Premium Settlement Amount. In respect of a Knock-out Event Date, zero.
Settlement Price:	The level of the Index at the close of the Valuation Date.
Basket Value:	The sum of (i) the Strike Price, plus (ii) the sum of the Calculation Period Amounts for all Calculation Periods included within the Valuation Period.
Federal Funds Rate:	For any day, the rate set forth in H.15(519) for the first Business Day immediately preceding such day, opposite the caption "Federal funds (effective)", as such rate is displayed on the Telerate Page 120 (or

any successor page). If by 5:00 p.m., New York City time, on the first day that is one Business Day following such day, the rate for such day does not appear on the Telerate Page 120 (or any successor page) or is not yet published in H.15(519), the rate for such day will be the arithmetic mean of the rates for the last transaction in overnight U.S. Dollar Federal funds arranged by each of three leading brokers of U.S. Dollar Federal funds transactions in New York City selected by the Calculation Agent, prior to 9:00 a.m., New York City time, on that Business Day.

Settlement Currency:	USD.
Cash Settlement Payment Date:	The 3rd (third) Business Day immediately following the Valuation Date.

Adjustments:

Method of Adjustment:	Calculation Agent Adjustment.

Extraordinary Events:

Consequences of Potential Adjustment Events, Merger Events, Nationalization or Insolvency:	The Calculation Agent shall use reasonable best efforts to determine, in good faith, based on its commercially reasonable judgment and upon consultation with Party B, the consequences of Potential Adjustment Events, Merger Events, Nationalization or Insolvency in respect of Shares, and the adjustments to the Basket Gains, Basket Losses, Basket Value and any other variable relevant to this Transaction.

2. Calculation Agent: Party A shall be the Calculation Agent.

a. The Calculation Agent will notify Party B promptly after the close of each Calculation Period of the determined Calculation Period Amount for such period and of the Calculation Period Factor for the immediately following Calculation Period, and promptly after the Valuation Date of the determined Cash Settlement Amount, and of the determination of each variable and component used to calculate, or affecting, directly or indirectly, the relevant Calculation Period Amount, Calculation Period Factor and the Cash Settlement Amount, as applicable.

b. The Calculation Agent shall prepare and deliver to Party B within three (3) Business Days after the last Business Day in each calendar month (the "Report Date") a report (the "Monthly Report") containing its calculation of the amount that would have been payable as the "Cash Settlement Amount" under this Option if Party B had exercised this Option and the Report Date were the "Valuation Date" hereunder, and each variable and component used to calculate, or affecting, directly or indirectly, such calculated "Cash Settlement Amount". If Party B disagrees with any statement or other item in any Monthly Report, it shall notify the Calculation Agent within 30 (thirty) Business Days of receiving the Monthly Report and the Calculation Agent and Party B will cooperate to resolve their differences with respect to such disagreement. The Monthly Report and the statements and items included therein shall not be conclusive or binding, except that a Monthly Report (as adjusted and modified by Party A and Party B) shall be conclusive and binding with respect to Party A and Party B if agreed to in writing by Party A and Party B.

3. Account Details:

Account for payments to Party A:

Bank:	Federal Reserve Bank of New York, New York
ABA No:	[redacted]
A/C:	Barclays Bank PLC, New York
Favor:	Barclays Swaps & Options Group, New York
A/C No:	[redacted]
Swift:	BARCUS33

Account for payments to Party B:
To be, and as, provided by Party B.

4. Additional Terms and Definitions:

For purposes of this Confirmation, the following terms shall have the meaning specified or referred to in this Section 4:

a. "BCSL Account" means the prime brokerage accounts established by and in the name of Palomino Limited ("Palomino") with Barclays Capital Securities Limited ("BCSL"), account no. [redacted] and [redacted], pursuant to the Amended and Restated Prime Brokerage Agreement, effective as of June 13, 2008, as may be restated, amended, or modified by the parties thereto from time to time (the "BCSL Agreement").

b. "BCI Account" means the prime brokerage accounts established by and in the name of Palomino with Barclays Capital Inc. ("BCI"), account no. [redacted], [redacted], and [redacted], pursuant to the Amended and Restated Prime Broker Margin Account Agreement, effective as of June 13, 2008, as may be restated, amended, or modified by the parties thereto from time to time (the "BCI Agreement").

c. "Synthetic Account" means a record prepared by the Calculation Agent and titled "Reference Synthetic Positions", identifying, at all times, (A) the outstanding Synthetic Positions and (B) all other outstanding Permitted Securities, including derivative financial instruments, entered into in accordance with the Investment Guidelines and designated by Renaissance Technologies LLC (the "Advisor") to be included in the Synthetic Account. For purposes of this Confirmation, the term "Permitted Securities" shall have the meaning ascribed to it in the Investment Guidelines.

d. "Investment Guidelines" means the Investment Guidelines set forth in Annex A to the Investment Management Agreement between Palomino and the Advisor, effective as of June 13, 2008, as restated, amended, or modified by the parties thereto from time to time (the "Investment Management Agreement").

e. "Designated Positions" means, in respect of each Calculation Period, equity securities, Synthetic Positions and other financial positions (whether long or short), credited to, included or deemed included in the Reference Accounts at any time during such Calculation Period, excluding cash.

f. "Calculation Period Return" means, in respect of each Calculation Period, the sum of the corresponding (i) Basket Gains, minus (ii) Basket Losses, minus (iii) Basket Cost.

g. "Basket Gains" means, in respect of each Calculation Period, the sum of all (i) gains realized in respect of Designated Positions at any time during the Calculation Period, (ii) unrealized gains in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the close of the Calculation Period (where the unrealized gain in respect of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on the last day of the Calculation Period), (iii) dividends accrued (based on ex-dividend dates) at any time during the Calculation Period in respect of long Designated Positions, adjusted as set forth in Section 5 below, and (iv) interest and other income received or accrued on or in respect of Designated Positions at any time during the Calculation Period.

h. "Basket Losses" means, in respect of each Calculation Period, the sum of all (i) losses realized in respect of Designated Positions at any time during the Calculation Period, (ii) unrealized losses in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the close of the Calculation Period (where the unrealized loss in respect of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on the last day of the Calculation Period), and (iii) dividend and interest equivalent amounts paid or accrued (based on ex-dividend and ex-interest dates, as applicable) at any time during the Calculation Period in respect of short Designated Positions, adjusted as set forth in Section 5 below.

i. "Basket Cost" means, in respect of each Calculation Period, the (positive or negative) sum of (i) all commissions and fees in connection with the execution of transactions to acquire, create, dispose of or otherwise terminate Designated Positions, to the extent authorized under the Investment Management Agreement (excluding any fees paid to the Advisor and any interest and other financing charges), paid or accrued in connection with the trading of Designated Positions in accordance with the Investment Management Agreement during the Calculation Period and any expenses reimbursed by Client to the Advisor in accordance with the Investment Management Agreement, plus (ii) the Debit Amount, plus (iii) the Stock Borrow Fee Amount, minus (iv) any realized and unrealized gains (determined at the close of the Calculation Period), interest and other income received or accrued in respect of cash, property or other financial positions credited to, included or deemed included in the Reference Accounts or otherwise credited to the Reference Accounts (excluding gain and income items included in Basket Gains) at any time during the Calculation Period.

j. "Debit Amount" means, in respect of each Calculation Period, the number, denoted by DA, calculated in accordance with the following formula:

$$DA = \sum_{n=1}^{N} DA_n * (\tfrac{FFR_n}{360}), \text{ where:}$$

"N" is, in respect of each Calculation Period, the number of days in the Calculation Period;

"n" is, in respect of each Calculation Period, a series of whole numbers from one to N, each representing the corresponding day in the Calculation Period, where the days in such period are arranged in chronological order from, and including, the first day in such Calculation Period to, and including, the last day in such Calculation Period;

"DA_n" means, in respect of each day included in the Calculation Period, the (negative or positive) sum of (i) the absolute value of the long Designated Positions included (or deemed included) in the Reference Accounts at the close of the nth day of the Calculation Period (where the value of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on such day), minus (ii) the amount of cash held in connection with, or as collateral for, short Designated Positions in the Reference Accounts at the close of the nth day of the Calculation Period, minus (iii) the sum of the amounts that would have been payable as "Cash Settlement Amounts" under all Outstanding Options (excluding any and all items deemed accrued or deferred as part of the calculation of "Basket Gains", "Basket Losses" or "Basket Cost" in respect thereof) on the nth day of the Calculation Period whose "Valuation Date" has not occurred on or prior to the immediately preceding day, if Party B had exercised all such options, such nth day were treated as the "Valuation Date" for purposes of all such options, and the corresponding "DA_n" for such day for each such option (which may have a different subscript index number under each such option) were zero; and

"FFR_n", for any day in the Calculation Period, is equal to (i) if DA_n for such day is positive, the rate for such day determined by the formula set out in the appropriate currency row of the column entitled "Financing Long Charge" in Annex B to the Investment Management Agreement and (ii) if DA_n for such day is negative the rate for such day determined by the formula set out in the appropriate currency row of the column entitled "Financing Long Charge" in Annex B to the Investment Management Agreement.

k. "Premium Settlement Amount" means USD 265,000,000 minus the Total Amortized Premium.

l. "Total Amortized Premium" means the product obtained by multiplying (i) the Amortized Daily Premium, by (ii) the number of calendar days in the period commencing on, and including, the Effective Date and ending on, but excluding, the Valuation Date.

m. "Amortized Daily Premium" means the quotient obtained by dividing (i) the Amortizable Premium, by (ii) the number of calendar days in the period commencing on, and including, the Effective Date, and ending on, but excluding, the Scheduled Expiration Date.

n. "Stock Borrow Fee Amount" means, in respect of each Calculation Period, the sum of FA_1 and FA_2, where FA_1 is calculated in accordance with the following formula:

$$FA_1 = \sum_{n=1}^{N} SA_n * \left(\frac{SBFn}{360}\right)$$

where:

"N" is, in respect of each Calculation Period, the number of days in the Calculation Period;

"n" is, in respect of each Calculation Period, a series of whole numbers from one to N, each representing the corresponding day in the Calculation Period, where the days in such period are arranged in chronological order, from, and including, the first day in such Calculation Period to, and including, the last day in such Calculation Period;

"SA_n" means, in respect of each day included in the Calculation Period, the sum of the market value of each short Designated Position that is not deemed to be "hard-to-borrow" securities;

"SBF_n", for any day in the Calculation Period, is equal to the rate set out in the appropriate currency row of the column entitled "Stock Loan Charge-GC" in Annex B to the Investment Management Agreement; and

"FA_2" represents the sum of actual fees paid in regard to each short Designated Position that is deemed to be "hard-to-borrow".

5. For purposes of determining Basket Gains, Basket Losses and Basket Cost, (i) gain, loss and any other income or expense items will be computed and taken into account without giving effect to any Tax that might be imposed in respect or by reason thereof, (ii) in respect of each Calculation Period, for purposes of determining gain or loss in such period, the basis of each Designated Position outstanding at the close of the day immediately preceding the first day of such Calculation Period shall be the value used to determine the unrealized gain or loss on such Designated Position in respect of the immediately preceding Calculation Period (or if no such Calculation Period exists, the value of such Designated Position at the Valuation Time applicable to such Designated Position on such immediately preceding day), (iii) any portion of a dividend paid or accrued in respect of shares of stock of a corporation incorporated in any of the countries listed in Annex A hereto (as amended from time to time by the parties hereto), which will be subject to withholding tax by the country in which such corporation is incorporated (or, when the distributing corporation is incorporated in the United States, will be subject to U.S. federal income tax as a taxable dividend), shall be adjusted by multiplying the original amount of such portion by the percentage set forth next to the name of the applicable country in the column "Percentage of Dividends Received on Long Positions", and (iv) any dividend equivalent amount paid or accrued in respect of a short position in stock of a corporation incorporated in any of the countries listed in Annex A hereto (as amended from time to time by the parties hereto), which will be subject to withholding tax by the country in which such corporation is incorporated (or,

when the distributing corporation is incorporated in the United States, will be subject to U.S. federal income tax as a taxable dividend), shall be adjusted by multiplying the original amount of such dividend equivalent amount by the percentage set forth next to the name of the applicable country in the column "Percentage of Dividends Paid on Short Liabilities".

6. This Option and the rights and obligations thereunder are not transferable (whether by way of security or otherwise) by either party without the prior written consent of the other party and any purported transfer without such consent shall be void and of no effect.

7. Additional Representations:

Party A and Party B each makes (and as indicated, only Party A or only Party B makes) the following additional representations:

a. It is entering into the Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise, and no other person has any interest herein.

b. Its execution and delivery of this Confirmation and its entering into the Transaction to which this Confirmation relates have been authorized by all required internal actions and do not violate any laws of its jurisdiction of organization or residence, or the terms of any agreement to which it is a party.

c. Upon due execution and delivery of this Confirmation, this Confirmation will constitute its legal, valid and binding obligations, enforceable against it in accordance with its terms, subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally, and subject, as to enforceability, to equitable principles of general application (regardless of whether enforcement is sought in a proceeding in equity or in law).

d. It is acting for its own account, and has made its own independent decision to enter into this Confirmation and to participate in the Transaction to which this Confirmation relates and as to whether this Confirmation and the Transaction are appropriate or proper for it based upon its own judgment and upon advice of such advisors as it deems necessary.

e. It acknowledges, agrees and confirms that (i) it has not received any advice or counsel from, and is not relying, and has not relied, upon any communication (written or oral) of, the other party or any Affiliate thereof with respect to the legal, accounting, tax or other implications of this Confirmation or the Transaction (including the expiration, sale, assignment or other termination thereof), and that it has conducted its own due diligence review and analyses of the legal, accounting, tax, regulatory and other implications of this Confirmation and the Transaction, including, without limitation, registration or disclosure requirements in respect of the Transaction under any applicable securities, tax or other laws, (ii) information and explanations related to the terms and conditions of this Confirmation and the Transaction shall not be considered investment advice or a recommendation to enter into this Confirmation or to participate in the Transaction, (iii) it has received independent tax advice with respect to this Confirmation and the Transaction, (iv) it is entering into this Confirmation and is participating in the Transaction with a full understanding of all of the terms and risks hereof (economic and otherwise), is capable of evaluating and understanding (on its own behalf or through independent professional advice), and understands and accepts, such terms and risks, and is capable of assuming (financially and otherwise), and assumes, those risks, (v) neither the other party nor any Affiliate thereof is acting as a fiduciary for or an advisor to it in respect of this Confirmation or the Transaction, (vi) it has a valid business purpose for entering into this Confirmation and participating in the Transaction, and the transactions contemplated herein are consistent with its overall business and investment strategy, and (vii) it participated with the other party in the structuring of the Transaction, and in the negotiation and drafting of the Confirmation and the other agreements, documents and instruments to be entered into in connection with the Transaction.

f. Party A represents and agrees that (i) Palomino is an existing corporation, incorporated under the laws of the Cayman Islands, and will remain in existence and in good standing throughout the term of the Transaction, (ii) it directly or indirectly owns, and will directly or indirectly own at all times during the term of the Transaction, all of the outstanding stock of Palomino, (iii) Palomino has elected to be "disregarded as an entity separate from its owner" for U.S. federal income tax purposes and will retain this status throughout the entire term of the Transaction, (iv) all of the continuing representations made by Palomino, BCI and BCSL, respectively, in the Investment Management Agreement, the BCSL Agreement and the BCI Agreement are, and shall remain throughout the entire term of the Transaction (unless any such agreement in which such respective representations are made is terminated as of an earlier date), true and accurate in all material respects, (v) it shall, and shall cause Palomino, BCSL and BCI to, fully comply with and duly perform all of its and their respective covenants and material obligations under the Investment Management Agreement, the BCSL Agreement and the BCI Agreement, (vi) the BCSL Agreement and the BCI Agreement will not be terminated, amended or modified in any way during the term of the Transaction, unless a written notice has been delivered to the Advisor at least ten (10) Business Days prior to the effective date of the relevant amendment or modification, (vii) the Reference Accounts shall be used exclusively to effect transactions based on the Trading Strategy in accordance with the Investment Guidelines, and (viii) until the close of the Cash Settlement Payment Date, no securities, any other property or any financial positions (whether long or short) will be (A) distributed or withdrawn from any of the Reference Accounts, or (B) deposited, contributed or assigned to any of the Reference Accounts, except in either case (w) that cash may be distributed or withdrawn from, and deposited or contributed to, any of the Reference Accounts, (x) in connection with the settlement of transactions effected within the Reference Accounts based on the Trading Strategy in accordance with the Investment Guidelines, (y) in connection with borrowing, financing, or other leveraging transaction effected in accordance with the Investment Guidelines, and (z) in connection with transfers of cash, securities or other property or financial positions (whether long or short) between the Reference Accounts.

g. Party B represents that it (i) is a limited partnership formed under the laws of the State of Delaware and is treated as a partnership for U.S. Federal income tax purposes, (ii) will timely file (taking into account applicable extensions) the applicable U.S. Federal income tax returns it is required to file, and (iii) shall properly and timely withhold any amount it is required to withhold under Sections 1441 and 1446 of the U.S. Internal Revenue Code of 1986, as amended (the "Code"), and the Treasury Regulations thereunder and shall comply with all reporting requirements pertaining to such withheld amounts.

8. The parties agree, that if the Advisor designates the execution of any transaction in accordance with the Investment Guidelines and such transaction is not timely executed, or is not executed, for any reason or for no reason whatsoever, such transaction will be treated, for purposes of this Confirmation, as if it were actually timely executed in accordance with such designation of the Advisor and, therefore, (i) any stock, securities and other financial positions

(whether long or short) that would have been credited to or included in the Reference Accounts if such transaction were actually timely executed in accordance with such designation of the Advisor, will be treated as included in the Synthetic Account as of the date (and time) designated by the Advisor for the execution of the relevant transaction (a "Synthetic Position") and will be treated as disposed of or otherwise terminated on the day (and time) so designated by the Advisor, as applicable; (ii) any stock, securities and other financial positions (whether long or short) that would have been disposed of or otherwise terminated if such transaction were actually timely executed in accordance with such designation of the Advisor, shall be treated as if actually disposed of or otherwise terminated, and excluded from the relevant Reference Account, on the day (and time) so designated by the Advisor; and (iii) any dividend, interest or any other income that would have been received or accrued on or in respect of Synthetic Positions if such transaction were actually timely executed in accordance with such designation of the Advisor, will be credited to the relevant Reference Account in which such transaction would have been executed.

9. In the event that Palomino has replaced the Advisor with respect to any of the Reference Accounts, Palomino has otherwise assumed management of any of the Reference Accounts or the Advisor is prevented for any reason from effectively managing the Reference Accounts, unless otherwise agreed to in writing by the Advisor, Party A shall cause the commencement of an orderly liquidation and reduction to USD cash of the assets and financial positions (whether long or short) then credited to, included or deemed included within the Reference Accounts over the period commencing on the Exercise Date to and including the Valuation Date, with the objective of minimizing risk and preserving the equity value of the Designated Positions.

10. Party A and Party B agree that for purposes of this Confirmation and the Transaction, including, without limiting the foregoing, for purposes of determining the Basket Gains and Basket Losses, Designated Positions and any other relevant stock, securities or other financial positions (whether long or short) will be valued according to the following valuation methods: (i) stock, securities and other financial positions which are traded on an Exchange shall be valued at any time at the last sales price quoted for the securities on (A) the consolidated tape on the date and at the time for which value is being determined, or (B) if no sale occurred on such date, at the mean between the "bid" and the "asked" prices on such date as reported in a recognized interdealer quotation system, (ii) stock, securities and other financial positions which are not traded on an Exchange, but are traded over the counter, shall be valued at the mean between the "bid" and the "asked" prices quoted for such securities, and (iii) stock, securities and other financial positions that are not described in subsections (i) and (ii) above, shall be valued based on a method of valuation to be agreed upon by Party A and Party B.

11. Each of Party A and Party B agrees that for regulatory and tax purposes, it and any Affiliate thereof will treat and report the Transaction as a derivative financial instrument and treat and report the Designated Positions and any other assets or positions that may be credited to or included within the Reference Accounts as assets and positions of which either Party A or Palomino, as applicable, is the sole legal and beneficial owner and to which Palomino and Party A, as applicable, is the party, as the case may be. Further, Party A agrees that for IAS accounting purposes, it and any Affiliate thereof will treat and report the Transaction as a derivative financial instrument and treat and report the Designated Positions and any other assets or positions that may be credited to or included within the Reference Accounts as assets and

positions of which either Party A or Palomino, as applicable, is the sole legal and beneficial owner and to which Palomino and Party A, as applicable, is the party, as the case may be. Party B agrees that for US GAAP purposes it will treat and report the Transaction as a derivative financial instrument and treat and report the Designated Positions and any other assets or positions that may be credited to or included within the Reference Accounts as assets and positions of which either Party A or Palomino, as applicable, is the sole legal and beneficial owner and to which Palomino and Party A, as applicable, is the party, as the case may be, provided, however, that if any party hereto reasonably determines that due to a Change in U.S. Tax Law, as defined in Section 15 below, the Designated Positions and any other assets or positions included within the Reference Accounts are required to be treated and reported for U.S. federal income tax purposes as assets and positions of which Party B (or any Affiliate thereof) is the beneficial owner, Party A and Party B shall consult with each other and agree, in good faith and with the objective of preserving, to the maximum extent possible, the objectives of the Transaction and the tax and economic implications that would have resulted to each party had such a Change in U.S. Tax Law not occurred, regarding the appropriate treatment and reporting of such assets and positions, and, further provided, that if there is any change in the IAS accounting principles that materially affects the financial reporting for IAS purposes of the Designated Positions, Party A shall give Party B notice thereof as soon as reasonably practicable. Party A agrees and represents that for U.S. federal income tax purposes it will treat and report all income, deduction, gain and loss with respect to the Transaction as "effectively connected with the conduct of a trade or business within the United States" (as such term is defined under Code Section 864 and the Treasury Regulations thereunder) and such income or gain is "includible in" its "gross income for the taxable year" (within the meaning used in Treasury Regulation § 1.1441-4(a)(1)).

12. Party B shall pay any and all documentary, stamp, registration or similar taxes and charges that may be payable in respect of (i) the execution of this Confirmation, (ii) the exercise of the Option, and (iii) the payment of the Premium.

13. This Confirmation shall be governed by and construed in accordance with the laws of the State of New York.

14. Each of Party A and Party B shall use its reasonable best efforts to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary, proper and advisable to consummate and make effective as promptly as practicable the transactions contemplated by this Confirmation and the Transaction to which it relates in accordance with the terms and conditions hereof and thereof, including (a) using reasonable best efforts to remove any legal impediment to the consummation of such transactions, and (b) the execution and delivery of all such deeds, agreements, assignments and further instruments of transfer and conveyance, necessary, proper or advisable to consummate and make effective the transactions contemplated by this Confirmation and the Transaction in accordance with the terms and conditions hereof and thereof, provided that any such action or thing would not materially prejudice the legal or commercial position of the relevant party.

15. Notwithstanding anything to the contrary in this Confirmation, Party A may, in its sole discretion, terminate this Transaction upon ten (10) Business Days prior written notice to Party B, in the event that (i) any change in applicable law (including, without limitation, any laws, treaties, ordinances, rules, regulations, rulings, interpretations and authorizations of the

United States or the United Kingdom or of any political subdivision, regulatory body having authority over Party A or taxing authority thereof or therein) materially and adversely affects Party A's capital charges directly resulting from the Transaction, or (ii) due to the enactment, promulgation, execution or ratification of, or any change in or amendment to, the Code or the Treasury Regulations promulgated thereunder (or in the application or official interpretation thereof by the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires) that occurs on or after the date on which the Transaction is entered into (a "Change in U.S. Tax Law"), Party A is required to treat and report the Designated Positions and any other assets or positions included within the Reference Accounts as assets and positions of which Party B (or an Affiliate thereof) is the beneficial owner for U.S. federal income tax purposes.

16. Except as otherwise hereinafter set forth, the parties hereto agree and acknowledge that the structure and tax aspects of the Transaction and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Transaction and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with the Transaction, including, without limitation, that such party has entered into the Transaction with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of the Transaction hereunder. Notwithstanding the foregoing, either party may disclose any such Confidential Information (i) to its lawyers or accountants (or similar professional, but not a financial or investment advisor), on a "need-to-know" basis, in connection with advice directly related to the entry, operation or enforcement of any Transaction provided that such person agrees, in writing, not to disclose Confidential Information or (ii) if required by law or any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

17. Party A covenants and agrees to provide prompt written notice to Party B upon the occurrence of any downgrade in either the short-term or the long-term unsecured (without credit enhancement) debt rating of Party A, or placement of Party A on negative credit watch, in any case, by Standard & Poor's Ratings Services (or any successor thereto) or Moody's Investors Service Inc. (or any successor thereto).

18. It is the intention of the parties that the obligations of Party A in respect of the Transaction evidenced by this Confirmation are general recourse obligations of Party A. To the extent that, in any relevant proceeding or under any applicable law, Party B should have the right to marshall, to appoint a receiver over, or otherwise have recourse to, the ownership or equity interest of Party A in Palomino or the assets of Palomino, Party B hereby waives, and agrees not

to enforce, such rights provided that such waiver and agreement shall not reduce or limit the obligations of Party A hereunder.

19. To the extent that Party A can direct or control the decisions of Palomino, Party A need not take account of the interests of any third party in voting or otherwise exercising any of the rights of Palomino in the BCSL Account, the BCI Account (or any asset in such accounts) and/or the Designated Positions.

20. Party B acknowledges that it has no rights in (to receive distributions on, the proceeds of disposition of or information received in respect of) the Designated Positions or the Accounts.

21. All amounts required to be paid hereunder to Party B shall be made to a U.S. dollar account maintained in a bank, trust company, broker/dealer or similar financial institution maintained in the United States.

22. Party B shall maintain its status as a domestic US partnership, not engaged in a United States trade or business and shall provide Party A an IRS Form W-9 contemporaneously with the execution of this confirmation (and shall update it as requested by Party A).

23. Notwithstanding paragraph 6 above, Party A shall not unreasonably refuse consent to the transfer of the Option provided that Party B provides not less than 45 days prior written notice of its intention to transfer. A refusal to consent shall not be considered unreasonable if the proposed transferee is not an existing customer of Party A (or is not willing to comply with Party A's standard operating procedures for becoming a customer) or if the transfer of the Option to the proposed transferee would be inconsistent with Party A's standard operating procedures fairly applied.

[Signature page follows]

Please confirm that the foregoing correctly sets forth the terms of our agreement by executing the copy of this Confirmation enclosed for that purpose and returning it to us to the attention of John Stracquadanio, c/o Barclays Bank PLC, New York Branch, 200 Park Avenue, New York, NY 10166, Facsimile no.: (212) 412-7463.

Yours sincerely,

BARCLAYS BANK PLC,
acting through its New York Branch

By:
Name: Brian Sidling
Title: Director

Confirmed as of the date
first above written:

BADGER HOLDINGS L.P.

By: RENAISSANCE TECHNOLOGIES LLC
its sole General Partner

By:
Name:
Title:

ANNEX A

DIVIDENDS AND DIVIDEND EQUIVALENT AMOUNTS ADJUSTMENT SCHEDULE

Country of Company Paying a Dividend	Percentage of Dividends Received on Long Positions	Percentage of Dividends Paid on Short Liabilities	
ARGENTINA	TBD	TBD	
AUSTRALIA	100	100	
AUSTRIA	85	100	
BELGIUM	85	100	
BRAZIL	TBD	TBD	
CANADA	85	85	
DENMARK	85	85	
FINLAND	100	100	
FRANCE	85	85	
GERMANY	85	85	
HONG KONG	100	100	
INDONESIA	TBD	TBD	
IRELAND	100	100	
ITALY	85	85	Risp 87.5 (long and short)
JAPAN	93	93	
MEXICO	TBD	TBD	
NETHERLANDS	85	85	
NEW ZEALAND	85	85	
NORWAY	85	85	
PHILIPPINES	TBD	TBD	
PORTUGAL	TBD	TBD	
SINGAPORE	100	100	
SOUTH AFRICA	TBD	TBD	
SOUTH KOREA	TBD	TBD	
SPAIN	85	85	
SWEDEN	95	95	
SWITZERLAND	85	100	
UNITED STATES	100	100	

Memo

Barclays Capital

BARCLAYS

To	Iain Abrahams
From	Hamish McPherson
Date	15 August 2007
Subject	**Project Colt X (Renaissance Technologies)**

On Monday 13 August, Barclays received an exercise notice for Option NN from Renaissance Technologies Corporation ("**RenTec**"), which was entered into on 22 June 2007 for a premium of $275m. As a result, the Valuation Date for this option will be Friday 17 August followed by cash settlement on Wednesday 22 August.

As of close of business on Monday 13 August:

- Account Equity $2,300m
- Long Assets $10.85bn
- Short Assets $10.31bn
- Gross Assets $21.16bn
- Leverage 9.2
- Option NN valuation $274m

Based on these figures the exercise of Option NN will result in a short term capital loss of $1m to Badger Holdings L.P. and the account leverage will increase to 10.4.

Under the Investment Management Agreement ("**IMA**"), Palomino has appointed RenTec as the investment manager in respect of a set of prime brokerage accounts ("**PB Accounts**") and as such is subject to the Investment Guidelines contained within the IMA. In summary these guidelines contain:

- Position Limits;
- Sector Limits;
- Maximum gross long and short positions of $38bn;
- Maximum leverage 20:1 assuming portfolio is market neutral, and less than 20:1 if the portfolio is directional.

Based on recent market events and conversations with risk management (Paolo Mammola and Cindy Gargano) Palomino is in the process of renegotiating some of the terms of the IMA, and in particular:

- Reducing the maximum gross long and short positions to $26bn;
- Reducing the maximum leverage from 20:1 to 15:1.

In addition Barclays is able to terminate the investment management relationship and cause the commencement of an orderly liquidation of the assets and financial positions over approximately 4 days. Such termination can occur as follows:

- 60 calendar days for any reason;
- Immediately after 6-months of non-material trading violations;
- Immediately for cause (material breach or violation) or on a change in tax law;
- Immediately if the account equity falls below 10% of the aggregate premium of the outstanding options (currently $147.5m).

BARCLAYS

~~COLT V – Renaissance - Product Summary – Approvals review~~

PRODUCT NAME	COLT V: Renaissance
GROUP LEGAL ENTITY (IES) SRUs/MRUs	Palomino Limited, BBPLC – NY Branch
SCM CONTACT NAME/SPONSOR	Jonathan Zenios
COUNTERPARTY (IES)	(i) Badger Holdings LP– "**Option Purchaser**" (ii) Renaissance Technologies Corp. – "**Manager**"
NARRATIVE	BBPLC NY Branch sells an American style call option to Option Purchaser over the performance of certain Palomino Prime Brokerage Accounts. Palomino will sell a back-to-back derivative to BBPLC- NY Branch. Palomino will also appoint Manger to act as the Investment Manager with respect to these accounts.
KEY TAX ISSUES	None
TAX CAPACITY	None required
SOLO CONSOLIDATION	Palomino is not solo consolidated
PARA 13 FUNDING	Not applicable
ACCOUNTING TREATMENT	a. Palomino should be consolidated with BB PLC. b. Palomino should be accounted for on trading book. c. Fee income should be recognizable when paid. d. The Call Options and the PB Accounts are marked to market and should offset in the income statement. e. On the balance sheet, the mark-to-market value of the Call Options should be reported as "Amounts Arising from Off-Balance Sheet Derivatives", and the positions in Palomino should be reported as "Equity Securities" or other, depending upon the nature of the investments.
TAX COMPLIANCE	Palomino is a check the box entity and would be included in BBPLC NY Branch annual tax filing with IRS. SCM Product Control and US Tax will coordinate to ensure proper filing is done.
PRODUCT LIMIT & SPECIAL CONDITIONS	Product Limit: N/A Special Conditions: N/A
PROVISION LEVEL	FINANCIAL INFORMATION WHICH IS NOT RELEVANT
AGREED BY SCM	Signed: [signature] Date: 14/2/05

APPPROVED BY GROUP TAX	Signed:	Date: 1/5/05

Memo

Barclays Capital

To	SCM Approvals Committee
From	Jonathan Zenios
Date	3 September 2004
Subject	Approvals paper – COLT V: Renaissance Restructuring

BARCLAYS CAPITAL

1. SUMMARY

Structured Capital Markets ("**SCM**") is seeking approval for a restructuring of an existing Project COLT transaction with a fund managed by Renaissance Technologies Corp. The new transaction (the '**Fifth Renaissance Transaction**') will involve the purchaser of existing COLT options (Bass Equities Limited ("**Bass**")) exercising all such options and a newly formed US partnership (Badger Holdings L.P. ("**Fund**")) purchasing substantially similar options on the same day.

Since Fund will be a United States partnership for US tax purposes, BBPLC-NY Branch should not be required to withhold US withholding tax on any payments to Fund, regardless of their characterization for tax purposes. This change will allow removal on the restrictions of Palomino receiving dividends on US equities. This additional activity will generate a larger trading balance in Palomino and incremental revenue for the Collateralised Finance Group ("**CFG**").

This Fifth Renaissance Transaction uses existing infrastructure from the previous transactions, and it will involve writing options that are almost identical to the options written in the Second, Third and Fourth Renaissance Transactions (the only difference is the place of formation of the option purchasing entity) Further, the size of the trading positions is expected to increase by at least $1.5 billion – in aggregate the transaction will have on average around 9,000 to 12,000 trades per day, approximately $5 billion long and $5 billion short, and approximately 4,500 names in the portfolio.

Economic Benefit

The Fourth Renaissance transaction generated $9.5 million of fee income for SCM. SCM will earn only a nominal additional fee for this restructuring transaction since this transaction (i) follows only three months after the Fourth Renaissance transaction, (ii) does not use any SCM attributes and (iii) involves no restructuring for Barclays.

However, Collateralized Finance Group ('**CFG**') will recognize even greater benefits created b[redacted] Project COLT transactions - profits will increase by $[3] million to approximately $[27]m p.a., whi[redacted] the group's largest profit source by a factor of two and will be placed at risk if we do not execute the Fifth Renaissance Transaction. CFG's large returns arise from this transaction for the following reasons –

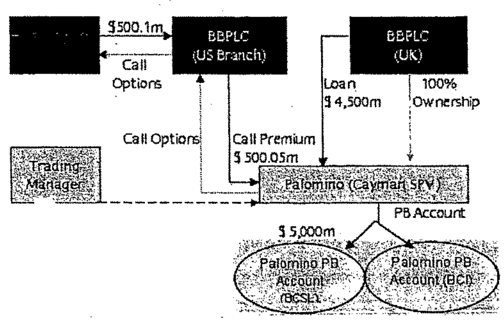
- The Fund spreads its very large balances among 3 main prime brokers – two, including us, that have a COLT-type structure, and one that is an historic relationship of the Fund -
  - Due to COLT, CFG will be able to increase access to a larger piece of the Fund's US activity (of which it previously had none), and
  - Due to COLT, CFG has received an even larger piece of the non-US activity (of which it had about USD 6m in the past and would have lost if not for the first COLT execution);
- To maximize benefits from the COLT transaction, transactions must be kept running for at least 12 months, which contributes to a stable gross position size and consequently a stable revenue stream that is driven largely by the size of those positions; and
- Consistently good service from Barclays (CFG on day-to-day business and from SCM from structuring and execution of new transactions) has led to winning new execution business for different parts of the COLT portfolio (business that initially was only cleared by CFG, but is now executed and cleared by CFG).

The key financial data is set out below:

Proposed product limit	n/a
Estimated revenue	$[3]m per annum for CFG for 3 years
Tax capacity *Return on Tax capacity*	None *N/a*
WRAs *Return on WRAs*	No new WRAs (CFG has existing utilised WRAs allocation that will be utilised by this transaction) *N/a*
PUG	FINANCIAL INFORMATION WHICH IS NOT RELEVANT
Tenor	3 Years

This Approvals paper contains a description of all significant tax, credit, market and operational risks.

2. DETAILED TRANSACTION DESRCIPTION



2.1 Day 1 Flows

Identical to the previous transactions, the NY branch of BB PLC will write American-style call options to the Fund with respect to the value of the PB Account (collectively, the '**Call Option**'), for which the Fund will pay a premium ('**Call Premium**') of $[500.1]m comprising:

- $[500]m representing the collateral for the Trading Strategy;
- $[100,000] representing SCM structuring fee.

The Call Option will have a term of 3 years and will be cash settled. The notional of the Call Option will be $[5,000]m and the strike price will be $[4,500]m, plus an appropriate charge for leverage ('**Call Strike**').

Simultaneous with its writing of the Call Option, BB PLC will enter into an explicit call option with Palomino that will perfectly match BB PLC's obligations under the Call Option.

Palomino Limited ('**Palomino**') has already borrowed $1,900m out of a possible line of $2,500m from BB PLC (UK) on an unsecured basis (out of CFG's existing line with BB PLC and within the treasury concession). CFG believes that this existing line will be sufficient to fund the Fifth Renaissance Transaction, so no new funding will be required.

2.2 Ongoing Flows

No ongoing flows are anticipated among the Fund, BB PLC, and Palomino. Trading activity will continue to occur in Palomino's existing prime brokerage trading accounts held with both BCSL and BCI (collectively referred to as the "**PB Account**"). Trading activities in the BCI prime brokerage margin account is expected to increase as a result of this restructured COLT transaction.

The PB Account will continue to be managed by Renaissance Technologies Corp, which is the '**Trading Manager**' that has managed the PB Account since 30 September, 2002.

2.3 Unwind Flows

When the Fund exercises the Call Option, BB PLC's option with Palomino will automatically become exercised. Therefore, Palomino will pay BB PLC the settlement value out of cash from the PB Account (which will be on hand as equity), and BB PLC will in turn pay the same settlement value to the Fund.

3. ECONOMICS AND ECONOMIC DRIVERS

3.1 Fund Benefit

US individual investors of the Fund would obtain a post-tax benefit if the Call Option is exercised after 12 months, because all the gain on the Call Option would be treated as a long-term gain for US tax purposes and would therefore be taxed at 15%, as opposed to 35%.

3.2 BB PLC Benefit

Collateralized Finance Group ('**CFG**') will recognize even greater benefits created by the Project COLT transactions - profits will increase by a further $[3] million to approximately $[27]m p.a. which is the group's largest profit source by a factor of two and will be lost if we do not execute the Fifth Renaissance Transaction.

4 TAX ANALYSIS

4.1 Barclays

4.1.1 UK Tax

Same analysis as previous COLT transactions. Palomino is a CFC, which makes $50,000 for this Fifth COLT transaction. All profits from the transaction will be distributed to BB PLC under an acceptable distribution policy.

4.1.2 US Tax

Same analysis as previous transactions, which follows:

Both BB PLC's NY branch and Palomino (check-the-box election will be made to disregard as separate entity and therefore treated as part of NY branch of BB PLC) are US taxpayers.

SCM's profit, in the event SCM earns a fee income from the transaction, will be earned in the NY branch of BB PLC and therefore will be taxed in the US. We received an opinion from counsel (Akin, Gump) that LPP

LPP we have received an opinion from counsel (Coudert Brothers) that LPP As in previous transactions, we will obtain a new opinion to cover the new options written in this transaction (an opinion that Coudert Brothers has agreed to write in the context of this new transaction).

L.P.P.

This conclusion is analysed and supported in the expanded tax opinion that Coudert Brothers has agreed to provide. Draft of this new opinion has already been reviewed by Group Tax in NY and London.

4.1.3 US Tax Shelter Disclosure/List-Keeping Rules

Under the final Tax Shelter Regulations, we should not be required to disclose or keep a list for this Fifth Renaissance Transaction. However, our current procedures are to maintain a list and determine at the time of an IRS request whether we must submit such list – we will follow these procedures.

4.2 Fund – US Tax

LPP

5. TAX RISK

Since this transaction involves the tax position of the Fund, as opposed to our own, the risk to Barclays is confined to our reputation.

6. ACCOUNTING

The treatment will follow the previous transactions, which was provided by London Finance (Nitesh Pankhania) and was agreed by PWC.

- Palomino will continue to be consolidated with BB PLC and accounted for on trading book.
- SCM Fee, if any, will be recognizable immediately.
- The Call Option and the PB Account will be marked to market and should offset in the income statement (i.e., there is no time value to the Call Option).
- On the balance sheet, the mark-to-market value of the Call Option and the Call Premium will be reported as "Amounts Arising from Off-Balance Sheet Derivatives", and the positions in Palomino will be reported as "Equity Securities".

7. CREDIT AND MARKET RISK

The Fifth Renaissance Transaction will use the risk monitoring process already in place as a result of the previous transactions.

Accordingly, Palomino will not have any credit risk or market risk in the transaction, due to the fact that its PB Account is hedged by the back-to-back Call Option and Prime Brokerage effectively has taken the downside risk. The risk borne by Prime Brokerage is akin to the risks taken in a normal collateralised Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time.

Therefore, risks of COLT generally are reduced by the risk management techniques approved for use by BCSL's and BCI's Prime Brokerage group when transacting with hedge funds. In addition to those techniques, specific investment guidelines have been agreed with the Trading Manager, and adherence to those investment guidelines will continue to be monitored on a daily basis. Importantly, there have been no violations of those investment guidelines during the previous twenty two months of this transaction.

8. REGULATORY CAPITAL

FSA approval was received to treat the positions on Palomino's books in the following manner -

- Palomino may be treated as a trading book; and
- Since Position Risk Requirements for Palomino will in all cases be nil, there is no need to calculate such on a daily basis;
- The document asserts that the existing Palomino fund is sufficient for the additional trade and hence no additional funding will be required. Therefore, no additional treasury concession usage for funding.
- Whilst the options are back to back there will be a Large Exposure ("LE") for BB plc solo equal to the mark to market of the bought option (to be marked against the underlyings of the fund)
- At the consolidated level the assets are deemed on balance sheet and the LE will be calculated via PRMS. No offset is available from the sold call to the fund.

9. PROVISION

9.1 FINANCIAL INFORMATION WHICH IS NOT RELEVANT

10. CLIENT ENGAGEMENT

- Bruce Yablon (Relationship Manager) and Carla Porter (Counsel) have been engaged. Further Mark Silber (Tax Director) has overseen the documentation work on this transaction.
- SCM will confirm that the COLT transaction has been approved the Trading Manager and the Fund prior to actual execution of transaction documents.

11. MATERIALITY OF DEAL WITH COUNTERPARTY

- The Fund or its partners do not publicly publish their financial statements - as such information on tax rate and tax disclosures are not publicly available.
- In assessing the materiality of COLT on the Funds profit and loss account the following should be considered:
    - The Fund itself will not be subject to US tax. It will provide its partners with a partnership statement and the partners would be subject to US tax based on the performance of the fund. See section 4.2
    - US individual investors of the Fund would obtain a post-tax benefit if the Call Option is exercised after 12 months, because all the gain on the Call Option will be treated as a long-term gain for US tax purposes and would therefore be taxed at 15%, as opposed to 35%. See section 3.1.

12. OTHER

- Since this transaction is identical to existing transactions, we propose that a notification to the US NPC is the appropriate approvals process for this transaction (which is the same approach utilized for the Fourth Renaissance Transaction that was executed in June of 2004).
- Barclays does not provide any directors for any external entity. No external person will be a Director of any Barclays entity involved in this transaction.

DOCUMENT REMOVED AS LPP

Memo

Barclays Capital

To	**SCM Approvals Committee**
From	**Chris Daniels**
Date	**17 September 2004**
Subject	**Project Colt V – Approvals Meeting Minutes**

BARCLAYS

Present:

Frank McGarahan (Chair) ("**FM**")
Roger Jenkins ("**RJ**")
Iain Abrahams ("**IA**")
Jonathan Zenios ("**JZ**")
Paul Emney ("**PE**")
Betsy Konvalinka ("**BK**")
Matthew Durkin ("**MD**")
Pritesh Pankhania ("**PP**")
Chris Daniels ("**CD**")
Trevor Mullin ("**TM**")
Kris Bhattacharjee ("**KB**")

General

- JZ explained the rationale behind the present transaction being the potential increase in revenues to EFG as well as possibility of fee income. Potential fee income of USD 1.5 million will be sought.
- There was a discussion about the fit of this transaction within EFG franchise. This will be kept under review

Accounting

- PP confirmed satisfied with transaction.

Legal

- MD confirmed that BarCap Legal was satisfied with the transaction.

Regulatory

- KB outlined the FSA treatment of call options. IHA requested further details on this point.

Credit

- Credit had previously granted approval for the transaction.

Tax

Nil effect of Barclays current tax position. David Williams has previously signed off.

Compliance

- TM confirmed compliance were comfortable with the transaction but highlighted the importance of ensuring compliance with Reg Y and Reg K.

Operations

- BK confirmed she had no issues.

Market Risk

- No issues.

The transaction was approved, subject to the following:

- **KB to follow up with IHA on FSA advice on deep in the money options**

M[redacted]an, Sadat: Structuring (LDN)

om:	Versluys, Roger: Finance (LDN)
Sent:	20 September 2004 09:46
To:	Zenios, Jonathan: Structuring (LDN); Emney, Paul: Structuring (LDN)
Cc:	Abrahams, Iain: Structuring (LDN); Ullman, Steve: Structuring (LDN); Mannan, Sadat: Structuring (NYK); Clackson, Patrick: Finance (LDN); Westenberger, Andrew: Finance (LDN); Bhattacharjee, Kris: Finance (LDN); Pankhania, Pritesh: Finance (LDN)
Subject:	RE: COLT

Following a meeting this morning (between Jonathan, Steve and myself) to discuss the attached paper it was agreed that Barclays/Palomino remain beneficial owners of the underlying assets albeit hedged by the OTC contract. It was also agreed that it would be preferable to treat the options under IPRU (Banks) LE 7.3.1 and not take an issuer risk offset for the sold call. As such the treatment is reverting to that applied prior to Q2 2004. The impact as seen in the previous attachment is immaterial.

Regards

-----Original Message-----

From:	Versluys, Roger: Finance (LDN)
Sent:	17 September 2004 10:05
To:	Zenios, Jonathan: Structuring (LDN); Emney, Paul: Structuring (LDN)
Cc:	Abrahams, Iain: Structuring (LDN); Ullman, Steve: Structuring (LDN); Mannan, Sadat: Structuring (NYK); Clackson, Patrick: Finance (LDN); Westenberger, Andrew: Finance (LDN); Bhattacharjee, Kris: Finance (LDN); Pankhania, Pritesh: Finance (LDN)
Subject:	COLT

Please find enclosed a document setting out the regulatory reporting treatment of the Colt transaction and clarification of the LE treatment. It also sets out an FSA correspondence chronology.

The document also suggests next steps. I'd be happy to come round at your convenience and discuss the best way forward.

Regards
<< File: COLT.doc >>

Memo

Barclays Capital

To	Colt V: Deal File
Cc	
From	Sadat Mannan
Date	20 October 2004
Subject	Approvals meeting

BARCLAYS CAPITAL

The purpose of this note is to confirm that following the SCM Approvals meeting. Kris Bhattacharjee and Roger Versluys met with Jonathan Zenios and and Steve Ullman.

After analysing the sepcific facts of this transaction it was decided to maintain the FSA treatment agreed and applied for the first COLT transaction.

Mannan, Sadat: Structuring (LDN)

From:	Gauld, Nadine: Barclays Capital (LDN)
Sent:	01 October 2004 08:51
To:	Mannan, Sadat: Structuring (NYK)
Subject:	FW: Project Colt V - Approval Meeting final signoff

-----Original Message-----
From: McGarahan, Frank: Barclays Capital
Sent: 30 September 2004 19:16
To: Gauld, Nadine: Barclays Capital (LDN)
Subject: Re: Project Colt V - Approval Meeting final signoff

Sign off given

-----Original Message-----
From: Gauld, Nadine: Barclays Capital (LDN) <Nadine.Gauld@barclayscapital.com>
To: McGarahan, Frank: Barclays Capital <Frank.McGarahan@barclayscapital.com>
Sent: Thu Sep 30 14:26:20 2004
Subject: FW: Project Colt V - Approval Meeting final signoff

Pls see email below.

-----Original Message-----
From: Mannan, Sadat: Structuring (NYK)
Sent: 30 September 2004 14:22
To: Gauld, Nadine: Barclays Capital (LDN)
Subject: FW: Project Colt V - Approval Meeting final signoff

Nadine,
Please could you mention to Frank about this e-mail. I would be grateful if Frank is able to give us the signoff. Please contact me at GD: 8412 3123 if you have any questions on this. Regards, Sadat

-----Original Message-----
From: Mannan, Sadat: Structuring (NYK)
Sent: Wednesday, September 29, 2004 3:55 PM
To: McGarahan, Frank: Barclays Capital; Whittaker, John: Operational Risk (LDN)
Cc: Zenios, Jonathan: Structuring (LDN); Fail, David: Structuring (LDN); Emney, l: Structuring (LDN); Versluys, Roger: Finance (LDN)
Subject: Project Colt V - Approval Meeting final signoff

Frank/ John,

The purpose of this e-mail is to confirm that the single outstanding item from the SCM approvals meeting for this transaction has been resolved. It's been agreed to continue with the original regulatory treatment for the call options. An e-mail from Roger Versluys confirming this is attached herewith.
<<RE: COLT>> Since no outstanding points remain on this transaction - please can you confirm, by return e-mail, that SCM can proceed with the final document execution on October 1, 2004.

Regards, Sadat

-----Original Message-----
From: Kinderman, Felicia: Structuring (LDN)
Sent: Friday, September 17, 2004 9:30 AM
To: Pearce, Kate: Structuring (LDN); Mannan, Sadat: Structuring (NYK); Chocr, Renate: Structuring (LDN); Daniels, Chris: Structuring (LDN); Williams, David C: Group Tax (LDN); Abrahams, Iain: Structuring (LDN); Bhattacharjee, Kris: Finance (LDN); Clackson, Patrick: Finance (LDN); Durkin, Matthew: Legal (LDN); Flowers, Brett: Finance (LDN); Gurney, Lloyd: GFRM (LDN); Guy, Lee: GFRM (LDN); Harding, Mark: Retail Bank; Jenkins, Roger: Structuring (LDN); Konvalinka, Betsy: Operations (LDN); McGarahan, Frank: Barclays Capital; Moore, Patricia: GFRM (NYK); Morse, Stephen:

Compliance (LDN); Pankhania, Pritesh: Finance (LDN); Sees, Karl: GFRM (LDN); Versluys, R[illegible]r: Finance (LDN); Westenberger, Andrew: Finance (LDN)
Cc: Thomas, Margot: Legal (LDN); Cassidy, Sam: Structuring (LDN); Corani, linda: Structuring (LDN); Deacon, Suzanne: GFRM (LDN); Donovan, Liz: Finance (LDN); Evans, Juliette: Structuring (LDN); Granger, Lisa: Operations (LDN); Hale, Sarah: Structuring (LDN); Hanna, Louise: Structuring (LDN); Johnson, Denise: Finance (LDN); Mantripp, Anne: Group Tax (LDN); Marchant, Emma: Compliance (LDN); O'Connell, Roslynne: GFRM (LDN); Snowdon, Leigh: Product Control (LDN); Zenios, Jonathan: Structuring (LDN); Bracey, Andrew: Structuring (LDN); Broomhead, Geoff: Structuring (LD; Deeg, Michael: Structuring (NYK); Emney, Paul: Structuring (LDN); Fail, David: Structuring (LDN); Hackett, Darren: Structuring (LDN); Hurrell, Brad: Structuring (LDN); Jobanputra, Sushma: Structuring (LDN); Keeley, Michael: Structuring (LDN); Sultan, Sohail: Structuring (LDN)
Subject: Project Colt - Approval Meeting Minutes

Pleas find attached the minutes for Approval Meeting - Project Colt that was conducted on the 13th September 04.

<< File: Minutes Approvals 17 Sep 04.doc >>
Regards

Felicia Kinderman
PA to Paul Emney
& Business Management Team
Structured Capital Markets
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Fax: +44 (0) 207 773 1868
felicia.kinderman@barcap.com

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Monday, 12 August 2002

Ralph Mountford
Financial Services Authority
Major Financial Groups Division
25 The North Colonnade
Canary Wharf
London
E14 5HS

BARCLAYS

Dear Ralph

PROJECT COLT

Further to the meeting held on Wednesday, 7 August please find enclosed, as requested

1) Explanation as to the proposed capital treatment.
2) Further information regarding the structure
    a. Summary description of the control environment, including reference to responsible areas.
    b. The investment guidelines.
    c. Global New Product Committee paper. Of the papers submitted to the Committee this provides an up to date description of the structure.

Please do not hesitate to contact me should you require any further information.

Yours sincerely

John Shone.

John Shone
Director
Financial Control
0207 773 2791
E-mail john.shone@barcap.com

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Regulatory Capital Treatment

1. **Barclays Bank PLC ('BBPLC')**

   (a) BBPLC funds Palomino (Cayman SPV) ('Palomino'), entering into a short term facility. As an intra group exposure this falls within the scope of the Treasury concession and does not attract wra's. Subject to FSA consent a new limit is being established involving a reallocation from the existing BBPLC BCSL limit.
   (b) Palomino sells a call option to BBPLC (US branch) who enters into a back to back option with Fund – the purchase of the call option by BBPLC (US branch) gives rise to an exposure to Palomino which, being an intra group exposure, is subject to the Treasury Concession limit.
   (c) BBPLC deducts its investment in Palomino.

2. **Palomino (Cayman SPV) ('Palomino').**

   As a wholly owned subsidiary Palomino is subject to consolidated supervision and consolidated applying aggregation plus, on the basis it has a Trading Book.

   Subject to FSA consent, Trading Book treatment would apply. The instruments booked in the entity, equities and the call option, are Financial Instruments, the option providing a hedge to the equity positions which are held for short term gain.

   In accordance with the FSA's requirements for trading book treatment the instruments are marked to market on a daily basis, as part of the internal risk management process.

   (a) The equity positions are booked in the prime brokerage system. Details of the positions are extracted in aggregate using a spreadsheet for the purposes of meeting Palomino's reporting requirements. Due to the number of positions involved the individual positions will not be booked into Sophis.
   (b) The call option is booked and valued in Sophis. Risk provide the inputs including volatility. In order to reflect the economic substance the call option is treated as having a zero strike price from the NAV of the fund, being the NAV less the loan from BBplc.

   Subject to FSA non-objection, the PRR, General and specific risk, arising within Palomino could be calculated from the option information booked in Sophis and other sources representing the net asset value of Palomino. On the basis that there are controls over the prime brokerage accounts to manage the leverage and prevent the call option going out of the money, no PRR arises

   In addition Palomino opens prime brokerage accounts with both Barclays Capital Securities Limited ('BCSL') and Barclays Capital Inc ('BCI'). These accounts would be subject to standard documentation designed to meet the requirements of Chapter CB section 3.2.1 (d) and (e).

   For Palomino no CRR arises on excess collateral lodged with the prime brokers as this would constitute an intra group exposure that would be eliminated on consolidation.

3. **Additional transactions.**

   In addition to the above a series of transactions are entered into in order to create a synthetic long and short position within the Palomino PB account.

   (a) BCI borrows securities from market and sells those securities to HYMF Limited (Cayman). These transactions are subject to normal treatment applied by BCI.

(b) Palomino (Cayman SPV) enters into transactions with HYMF Limited (Cayman) and Mustang Inc. Mustang Inc assigns its interest to HYMF Limited (Cayman) as a consequence Palomino (Cayman SPV) has an exposure to HYMF Limited but as an intra group exposure does not attract a capital requirement.

4. Barclays Capital Securities Limited ('BCSL') and Barclays Capital Inc ('BCI').

BCSL – treats the Palomino (Cayman SPV) account as any other prime brokerage account. These are documented in the form of repos and as such BCSL would suffer CRR on any net exposures where it has taken insufficient collateral from Palomino.

Consequently, Barclays Group will suffer CRR in event of BCSL not taking sufficient collateral.

5. Overview.

(a) BBPLC solus - since BBPLC has no external exposures no wra's arise. Though, the funding of Palomino and the purchase of the option from Palomino generates exposures under the treasury concession.
(b) BCSL solus - CRR arises on the PB account. Palomino is treated as a third party.
(c) BCI solus- US local requirements apply.
(d) BBPLC consolidated- Consists of
    i. the requirements arising in BCSL and BCI, which are consolidated applying aggregation plus.
    ii. PRR, if any arising in Palomino.

6. Comparison with treatment of third party prime brokerage.

In the case of third party prime brokerage the Fund enters into a contract with BCSL or BCI. As a consequence within BCSL and BCI any counterparty exposure to the fund attracts a capital requirement. The calculation is identical to that applied if the fund is Palomino. The third party fund itself is not consolidated therefore no PRR arises.

7. Other considerations

(a) In event of internal funding not being available then Palomino would seek to obtain external funding. The lender would have an exposure to Palomino which would attract a weighting. No requirement would arise in Palomino.
(b) Application of Banking Book would result in the option not being recognised as a hedge against the equity positions. As a consequence the gross long equity position would attract a wra weighting.
(c) In event of no model being available the option would be subject to carve out treatment per Chapter TE section 5.3.2. As a sold American call option with covered positions that is in the money PRR is based on the market value of the underlying positions multiplied by P% minus the mark to market value of the option (subject to a maximum reduction to 0%). P being the sum of the specific and general risk for each security, assume 16%. This treatment would have to be discussed with the FSA given that the option has a maturity in excess of 6 months and is referenced to the net assets of Palomino.

JAS
080802

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Credit and Market Risk in Proposed Structure

The Subsidiary will not have any credit risk or market risk in the transaction, due to the fact that its PB Accounts are hedged by the Call Option (100% of upside and $200m of premium collected to cover loss from $2,000m to $1,800m) and Prime Brokerage effectively has taken the downside risk (since in all events it will return at least $1,800m to the Subsidiary). That risk borne by Prime Brokerage, however, is akin to the risks taken in a normal collateralised Prime Brokerage relationship, where the risks generally are confined to catastrophic losses occurring over a short period of time.

Therefore, risks of Project COLT generally are reduced by the risk management techniques approved for use by BCSL's and BCI's Prime Brokerage group when transacting with hedge funds. In addition to those techniques, specific investment guidelines will be agreed with each prospective Trading Manager, and the Market Risk/Credit Risk teams will undertake daily risk monitoring.

Prime Brokerage Risk Management Techniques (Implemented primarily by Cindy Gargano from Prime Brokerage Credit Risk Management)

Trading levels will be constantly monitored and will be reduced as trading strategies become more risky.

In a Prime Brokerage relationship, a Fund would post collateral, say $200. BB PLC's internal risk analysts (both credit and market) would assign a multiple to the Fund based upon the relative risk of the strategy to be traded and the current market conditions. In the example of $200 collateral, a multiple of 10 would mean that the Fund could acquire up to $1,000 long positions and $1,000 short positions (note that the multiple is for gross positions, or $2,000 gross, but that is generally split between long and short positions, or $1,000 each side). Two events could cause the maximum trading positions to be affected: i) BB PLC's internal risk analysts decide to lower the multiple to reflect increased risk in the strategy or in the market (i.e., lowering the multiple to 4 times means that at the same $200 of collateral trading levels of only $400 would be warranted), or ii) the Fund's strategy loses money, in which case the collateral is decreased and it can no longer support the same trading level (i.e., loss of $10 means $190 of collateral remaining, times gross multiple of 10 = gross maximum of $1,900, or $950 long and $950 short positions).

The only meaningful difference between a typical prime brokerage relationship and COLT relates to the possible remedies available with respect to the trading level. In a typical relationship, a Fund could do one of two things: i) provide more collateral to rationalize the same trading level (i.e., pay $10 to bring the collateral up from $190 to $200 if the multiple remains at 10 times), or ii) remove positions to reduce the trading level to the currently authorized level (i.e., bring the long/short positions down from $2,000 to $1,900). For COLT, only the second remedy exists. This is a procedural difference, rather than a substantive difference, that would not impact the overall risk profile of the transaction.

Specific Investment Guidelines (implemented by John Spillane and Alistair Rew from Market Risk Management and Cindy Gargano from Prime Brokerage Credit Risk Management)

A limited framework must be agreed within which the portfolio will be managed and stress risks controlled. This framework will include measures to encourage portfolio diversification and minimise related market risk, event risk and gap risk exposures.

Risk Management and Credit Risk will sign-off on each proposed Trading Manager Agreement and proposed PB Account.

Daily Risk Monitoring (implemented by John Spillane and Alistair Rew from Market Risk Management)

a. Risk Management will receive a daily summary analysis of the account from Prime Brokerage. This will be used to review the account and ensure that no investment guidelines have been breached and to track the leverage of the account. Prime Brokerage will be notified of any breaches.

b. High levels of liquidity and full transparency are provided by the fact that assets would be held directly by a subsidiary of BB PLC.

ANNEX C

INVESTMENT GUIDELINES

A. Permitted Investments:

The Accounts shall consist solely of:

(i) Cash;

(ii) Long and short positions in equity securities actively traded on established exchanges in the countries listed herein below or on any other exchanges as may be permitted by the Client and the Custodians from time to time upon the recommendation of the Manager (collectively "Permitted Equity Markets"):

- Argentina
- Australia
- Belgium
- Brazil
- Canada
- Denmark
- Finland
- France
- Germany
- Hong Kong
- Indonesia
- Italy
- Japan
- Mexico
- Netherlands
- Norway
- Philippines
- Portugal
- South Africa
- South Korea
- Spain
- Sweden
- Switzerland
- United States;

[(iii) repo transactions and corresponding cash-settlement forward transactions with affiliates of the Client.]

B. Position Limits:

The limitations set forth below shall apply to the aggregate position or positions, as applicable, included in the Accounts.

1. The aggregate position in any security [(in terms of value)] on any day that is a trading day on the principal exchange on which such relevant security is traded (a "Trading Day"), will not exceed the lesser of:

(i) the greater of (A) 3 (three) times the average daily trading volume [(in terms of value)] during the first 10 Trading Days immediately preceding such day in the relevant security and in other related securities of the same issuer, and (B) 5% of the Accounts Equity, as defined below; and

(ii) 3% of the [value of the] respective issuer's total outstanding shares of stock.

2. The value of the aggregate long positions in shares of the financial institutions set forth in Annex I herein, shall not exceed USD 40 million.

3. No positions (whether long or short) in securities issued by Barclays Bank PLC will be included in the Accounts.

C. Trading Limits:

1. No borrowing, financing, or other leveraging transaction with any lender or counterparty, other than the Custodians pursuant to the Prime Brokerage Agreements, will be effected within the Accounts.

2. The value of L + S, as defined below in Section C.3 to these Investment Guidelines, shall not be, at any time, greater than 500% of the Base Amount, as defined below in Section C.3 to these Investment Guidelines.

3. The Accounts Equity, as defined below, shall at no time be lesser than the greater of (i) the sum of (A) 5% of L + S, plus (B) 90% of the Base Amount, and (ii) the sum of (A) 4.166% of L + S, plus (B) 90% of the Base Amount, plus (C) [20.833]% of the absolute value of L - S, where:

"L" means the sum of the absolute values of all long positions included within the Accounts;

"S" means the sum of the absolute values of all short positions included within the Accounts;

"Base Amount" means USD 2,000 million; and

"Accounts Equity" means the sum of L - S plus any cash (and cash equivalents) included within the Accounts.

D. Sector Limits:

The aggregate value of positions included within the account which relate to one particular industry sector, shall not exceed at any time 25% of the sum of L plus S.

From: Ul Islam, Noor: GFRM (LDN) </O=BZW/OU=EUROPE/CN=RECIPIENTS/CN=ULNOOR>
Sent: Thursday, December 8, 2011 2:19 PM
To: Friedman, Jordan: Prime Brokerage (NYK) <Jordan.Friedman@barclayscapital.com>
Cc: Jakovleva, Elena: CFG (NYK) <Elena.Jakovleva@barclayscapital.com>; Malafronte, Lauren: Prime Brokerage (NYK) <Lauren.Malafronte@barclayscapital.com>; Majumdar, Devasish: Structuring (NYK) <Devasish.Majumdar@barclayscapital.com>; Loveridge, Adam: Structuring (NYK) <Adam.Loveridge@barclayscapital.com>; Mammola, Paolo: GFRM (LDN) <Paolo.Mammola@barclayscapital.com>; Ul Islam, Noor: GFRM (LDN) <Noor.UlIslam@barclayscapital.com>
Subject: FW: COLT Option XXIV - GFRM

Hi Jordan

The option has been approved subject to the conditions below.

There is one point of clarification: we expect the equity to fall from USD 2.2 Bln **by** USD 1.3 Bln **to USD 0.9 Bln**.

Kind regards
Noor

From: Ul Islam, Noor: GFRM (LDN)
Sent: 08 December 2011 19:08
To: Majumdar, Devasish: Structuring (NYK)
Cc: Loveridge, Adam: Structuring (NYK); Dyer, Lansford: GFRM (NYK); Brown, Gerry: GFRM (NYK); Gargano, Cindy: GFRM (NYK); Mammola, Paolo: GFRM (LDN); Ul Islam, Noor: GFRM (LDN)
Subject: RE: COLT Option XXIV - GFRM

Hi Dev

We've looked at the proposed option transaction for USD 200,000,000 and approve it. Given the client's intention to exercise the Option ZZ (Colt XX1, struck Dec 2010, premium USD 450,000,000) very soon after the new option is done, we expect the equity to fall to from USD 2.2 Bln to USD 1.3 Bln. All things being equal, the leverage would then rise to 16.7 times which is permissible.

However, we need to make sure of two things:

1) The order of transactions is not reversed. That is, the old option is not exercised BEFORE the new one is put on, as otherwise the leverage could go as high as 21, which would cause a problem.
2) The client starts reducing the long and short positions thus bringing down gross exposure before the option is exercised. This is the normal practice that we have observed in the past, but we need to make sure that it happens here as well since we are close to the boundary otherwise.

Subject to the above the above new option is approved. Please send us confirmation of the details (such as tenor, etc) when you get them.

Kind regards
Noor

From: Majumdar, Devasish: Structuring (NYK)
Sent: 06 December 2011 05:14
To: Ul Islam, Noor: GFRM (LDN); Dyer, Lansford: GFRM (NYK)
Cc: Loveridge, Adam: Structuring (NYK)
Subject: COLT Option XXIV - GFRM

Noor and Lansford,

RenTec is looking to enter into a new COLT option (Option CCC) with Barclays on or around Monday 12 December 2011. This is a repeat transaction (COLT XXIV) and the new option will have substantially the same terms as the previous options which have been entered into with RenTec since 2002. For completeness, please note that RenTec is also expecting to exercise one of its existing options (Option ZZ) on or around Wednesday 14 December 2011.

I have attached the draft Approvals Notification for the transaction which we are looking to circulate this week. Please let me know if you have any comments on the notification, if you would like to schedule a further briefing or if you are otherwise comfortable proceeding with the transaction from a Credit/Market Risk perspective.

Thanks so much,
Dev

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Devasish Majumdar | BARCLAYS CAPITAL

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P: +1 212 526 3916 | [redacted] F: +1 646 758 6317
E-mail: devasish.majumdar@barcap.com

Memo

Barclays

To **Tax Risk Committee**

From Structured Capital Markets
Date 21 November 2012
Subject Colt

BARCLAYS

In October 2012, the Tax Risk Committee approved the continuation of the Colt option transactions (further described in the memos dated 3 October 2012 and 12 October 2012), with the understanding that the transaction will be reviewed again in early 2013 following the completion of the Mango / TRANSFORM process.

An affiliate of Renaissance Technologies LLC (the "**Client**") has requested purchasing two new call options from Barclays for a total premium of $400m on or around 27 November 2012. The Client has also informed Barclays that it intends to exercise in December 2012 three of the six options currently outstanding. Based on current valuations, the addition of the two new options and the exercise of the three options will, on net, decrease the aggregate value of the outstanding options from $3.1bn to $1.5bn. There have been no other material developments regarding the Colt option transactions.

Structured Capital Markets and Prime Services intend to proceed with the addition of the two new options and the exercise of the three options, subsequent to notifying the SCM US Approvals Committee and receiving approval from Tax, Finance, Credit Risk, Market Risk, Regulatory, Legal, Compliance, and Operations.

November 18, 2008

Renaissance Technologies Corp

Prime Services Brief on existing BarCap relationship and legacy Lehman relationship

Generic RenTec Background

- **Key People:**
  - Jim Simons (Founder) – Founded RenTec in 1982 after teaching math at MIT and Harvard and serving as chair of the math department at Stony Brook University.
  - Jim Rowen (COO) – former CFO of SAC Capital; left SAC and became COO of RenTec in January 2008
  - Mark Silber (CFO)
  - Peter Brown (Co-Executive President)
  - Bob Mercer (Co-Executive President)
  - Paul Broder (Trading Desk Manager)
- **Funds:**

[redacted]

2. Medallion Fund

- Medallion is a $7bln fund owned exclusively by Renaissance's 254 employees
- 15+ to 1 leverage; very high frequency trading
- This fund executes 500k trades / day
- The fund invests in any of the global markets with liquidity

[redacted]

Existing BarCap Relationship

- BarCap has served as PB for RenTec's Medallion fund for past 7-8 years; [redacted]

- **Pricing and Fund Structure:**
  - A Structured Options Trade has been the backbone of the arrangement between Barclays and RenTec's Medallion fund
    - Within this structure, Barclays traded mostly US equities through CFDs and cash (~ 65% US, 35% International)
    - Entities in the Trade:
      - Palamino Structure is the BCS entity
      - St. Verons Structure is the RenTec entity
  - BarCap prices RenTec in such a way that they generate revenue exclusively through the financing of their long and short balances. Execution pricing is at Cost Plus (currently $1.72 per name, per side).

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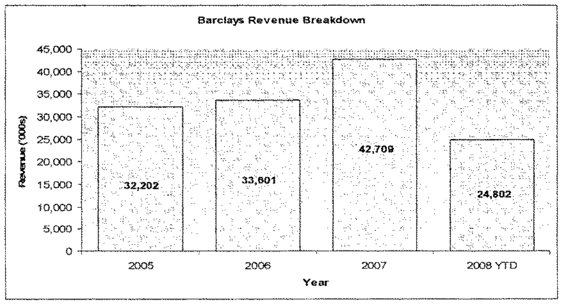
   - Three months ago, BarCap raised the stock loan fee to 50bps from 41bps (consolidated pricing). RenTec considered this a *major* concession. BarCap has higher pricing than legacy Lehman due to the embedded fee for the Structured Options Trade.
   - **For the past 6 months, RenTec has requested a 90 day lockup**
- **Balances / Revenue Breakdown:**
   - RenTec has intentionally been delevering its Medallion fund. Leverage is down to 7:1 from it's height of 16:1.



   - Current Balances *Palomino*:
      - $3B Long/Short US
      - $1.1B Long/Short non-US
         - Across AUD, CAD, DKK, EUR, HKD, JPY, NOK, NZD, SEK
      - $300M Long/$350M Short CFD
         - Across CHF, GBP
      - Total NAV of $2.4B
   - Current Balances at *St. Verans*
      - $121M Long /$113M Short
         - Across AUD, CAD, CHF, DHK, EUR, GBP, HKD, JPY, NOK, NZD, SEK, USD
- **Contacts within Barclays Capital**
   - Jerry del Missier (President) – has met with Jim Simons
   - Marty Malloy (Managing Director, Head of Prime Brokerage)
   - John Stracquadanio (Managing Director, Head of Prime Brokerage Americas and Head of Product Management)
   - Roger Jenkins (Managing Director, Head of Structured Capital Markets)
   - Jon Zenios (Managing Director, Structured Capital Markets)
   - Lauren Malafronte (Director, Client Service)
   - Don Ferrell (Associate Director, Operations)
   - Tammy Timothy (Integration)

[redacted]

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From: Malloy, Marty: CFG Mgmt (NYK) </o=bzw/ou=usa/cn=recipients/cn=markets/cn=malloym>
Sent: Wed May 18 2011 08:11:53 EDT
To: Feraca, John: Markets (NYK) </o=bzw/ou=usa/cn=recipients/cn=feracajo>
CC:
Subject: FW: Palomino deconsolidates from Barclays Group
Attachments:

Importance: Normal
Priority: Normal
Sensitivity: None

you know the SCM team did the work on this .. wanted to make sure you have the background

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From: Malafronte, Lauren: Prime Brokerage (NYK)
Sent: Tuesday, May 17, 2011 10:44 PM
To: Malloy, Marty: CFG Mgmt (NYK)
Subject: Fw: Palomino deconsolidates from Barclays Group

Didn't see you on here - fyi - it is a lenghty read

From: Dyer, Lansford: GFRM (NYK)
To: Dyer, Lansford: GFRM (NYK); McGinnell, Jennifer: GFRM (LDN); Shah, Keval: GFRM (LDN); Brown, Gerry: GFRM (NYK); Ul Islam, Noor: GFRM (LDN)
Cc: English, Simon: GFRM (LDN); Malafronte, Lauren: Prime Brokerage (NYK)
Sent: Tue May 17 13:52:54 2011
Subject: RE: Palomino deconsolidates from Barclays Group

Jen, please copy me on the various responses and the final submission.

Lansford Dyer • Barclays Capital • GFRM • Work: 212 412 3576 • Mobile: [redacted] • Email: lansford.dyer@barcap.com

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From: Dyer, Lansford: GFRM (NYK)
Sent: Tuesday, May 17, 2011 1:33 PM
To: McGinnell, Jennifer: GFRM (LDN); Shah, Keval: GFRM (LDN); Brown, Gerry: GFRM (NYK); Ul Islam, Noor: GFRM (LDN)
Cc: English, Simon: GFRM (LDN); Malafronte, Lauren: Prime Brokerage (NYK)
Subject: RE: Palomino deconsolidates from Barclays Group

Hi Jen, please see my changes/comments in "brown" in the preceding email

Lansford Dyer • Barclays Capital • GFRM • Work: 212 412 3576 • Mobile: [redacted] • Email: lansford.dyer@barcap.com

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From: McGinnell, Jennifer: GFRM (LDN)
Sent: Tuesday, May 17, 2011 1:05 PM
To: Dyer, Lansford: GFRM (NYK); Shah, Keval: GFRM (LDN); Brown, Gerry: GFRM (NYK)
Cc: English, Simon: GFRM (LDN); Malafronte, Lauren: Prime Brokerage (NYK)
Subject: RE: Palomino deconsolidates from Barclays Group

Lansford, Gerry

Please let me know if you agree with below, high level description of the structure and Reg treatment

Thanks

Jen

Background

Palomino Ltd was established to provide a synthetic PB structure for Renaissance Technologies (Ren Tech). It is a JV between the SCM and Prime businesses, providing a tax benefit and PB services to the client.

BBPLC NY sits between Badger LP (an affiliate of Ren Tech) and Palomino Ltd; the entity Palomino is funded indirectly via funded, option premiums on decollateralized equity options sold by BBPlc to Badger and holds PB accounts at BCI and BCSL

Accounting treatment: deconsolidate as risk and rewards on the assets in the PB accounts flow to Badger LP

Regulatory treatment: Palomino must still be consolidated as BBPLC holds > 20% of the share capital

Consolidated and Solo level:

* Flat for market risk; no market risk regulatory charge applies for gap risk on the bought and sold equity options- but if risk management determine that any provision needs to taken for the gap risk then this will impact capital directly. I understand that no market risk applies on the options, but shouldn't there be a market risk calculation on the equity portfolio? The output of 1-day 95% VaR for this portfolio will most likely come in well below 5% of GMV; hence, you will most likely end up with zero market risk because the collateral covers the drawdown. I think it may be useful to confirm and state that a market risk computation is done for the equity portfolio; however, the outcome is always zero. Noor, please chime in here.

* Credit risk: zero counterparty credit risk RWA on sold options to Badger, mirror BBPLC bought options vs Palomino eliminate on consolidation

* Zero counterparty credit risk on SFT trades between Palomino and BCI and BCSL, all BBPLC entities therefore eliminate on consolidation [LD] What does SFT stand for?. I understand that intercompany balances would be eliminated upon consolidation.

Note: BCSL is required to report to FSA on a solo basis, at this level there is an counterparty credit RWA generated on the stock borrow and stock loans vs Palomino (RWA <£100m)

From: Dyer, Lansford: GFRM (NYK)
Sent: 17 May 2011 18:03
To: Shah, Keval: GFRM (LDN); McGinnell, Jennifer: GFRM (LDN); Brown, Gerry: GFRM (NYK)
Cc: English, Simon: GFRM (LDN); Malafronte, Lauren: Prime Brokerage (NYK)

Subject: RE: Palomino deconsolidates from Barclays Group

<< File: Summary of Terms of Outstanding Options March 2011.xls >>

Hi Keval, the live options are on the one-sheet tab in the attached spreadsheet, which I circulated last month. The option trades with Badger may be booked in Sophis; however, I don't see these trades as they have no credit risk – Badger has ISDA with no CSA; hence there is no mtm on these options.

Jennifer, Lauren may be the most qualified person to give you a detailed overview of SLAT & its variations.

Lansford Dyer • Barclays Capital • GFRM • Work: 212 412 3576 • Mobile: [redacted] • Email: lansford.dyer@barcap.com

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From: Shah, Keval: GFRM (LDN)
Sent: Tuesday, May 17, 2011 12:25 PM
To: Dyer, Lansford: GFRM (NYK); McGinnell, Jennifer: GFRM (LDN); Brown, Gerry: GFRM (NYK)
Cc: English, Simon: GFRM (LDN)
Subject: RE: Palomino deconsolidates from Barclays Group

as an aside, Is it possible to get a list of the options that are live at the moment? And where are they booked?

From: Dyer, Lansford: GFRM (NYK)

Sent: 17 May 2011 14:43

To: Shah, Keval: GFRM (LDN); McGinnell, Jennifer: GFRM (LDN); Brown, Gerry: GFRM (NYK)

Cc: English, Simon: GFRM (LDN)

Subject: RE: Palomino deconsolidates from Barclays Group

The RSLAT structure refers to the sec lending arrangement between BCSL and Palomino as captured by the right half of the following diagram. Basically, Palomino shorts securities that must be borrowed from the Street by BCI & BCSL, which collateralize the stock-borrowed position with cash obtained from Palomino & BBPlc.

<< OLE Object: Picture (Enhanced Metafile) >>

Lansford Dyer • Barclays Capital • GFRM • Work: 212 412 3576 • Mobile: [redacted] • Email: lansford.dyer@barcap.com

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From: Shah, Keval: GFRM (LDN)
Sent: Tuesday, May 17, 2011 4:05 AM
To: McGinnell, Jennifer: GFRM (LDN); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)
Cc: English, Simon: GFRM (LDN)
Subject: RE: Palomino deconsolidates from Barclays Group

Jen - I'm not aware of the RSLAT structure.

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Lance and Gerry - can you comment on the Jen's questions below?

Thks

Keval

From: McGinnell, Jennifer: GFRM (LDN)

Sent: 16 May 2011 19:58

To: Shah, Keval: GFRM (LDN)

Subject: FW: Palomino deconsolidates from Barclays Group

Hi Keval

Some further detail on the Palomino structure, I'm not aware of the mechanics of a RSLAT structure but I suspect this is the STD SFT exposure Reg Finance are calculating at a solo level. Given Palomino is non consolidating for accounting now, is this SFT exposure something you would want to see from a limit management perspective? Do you know if provides us with the same level of security as a regular bilateral stock loan arrangement? I'll catch up with Jess & Warren tomorrow on whether the downside gap risk on the BBPLC call options carries any market risk RWA, I suspect it does not.

Thanks

Jen

From: Chan, Jessica: Finance (LDN)
Sent: 16 May 2011 19:29
To: McGinnell, Jennifer: GFRM (LDN)
Subject: FW: Palomino deconsolidates from Barclays Group

Jen- do you have any further questions?

thanks

Jessica Chan | Regulatory Reporting | Barclays Capital
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From: Reed, Warren: Markets (NYK)

Sent: 16 May 2011 18:44

To: McGinnell, Jennifer: GFRM (LDN); Chan, Jessica: Finance (LDN)

Subject: RE: Palomino deconsolidates from Barclays Group

Jen,

You won't see any counterparty risk/exposure with Badger because Badger is buying the option from BBPLC NY Branch and it is uncollateralized. Palomino will not have any external credit risk or market risk in the transaction, due to the fact that its PB Account is hedged by the back-to-back call options and BBPLC NY effectively has taken the downside gap risk (which is a standard risk in a Prime Services brokerage account). There is an ISDA in place with Badger but no CSA as no mark to market is ever collected.

Palomino holds equities through its PB accounts with BCI and BCSL. These are capitalized through the Revised Stock Loan Arranged Transfer (RSLAT) structure for most of Prime's clients. RSLAT provides funding to Palomino via a stock loan arrangement which involves Palomino pledging the long equity positions in its PB accounts.

Let me know if you have further questions.

Regards,

Warren

From: McGinnell, Jennifer: GFRM (LDN)

Sent: Monday, May 16, 2011 1:15 PM

To: Chan, Jessica: Finance (LDN); Reed, Warren: Markets (NYK)

Subject: RE: Palomino deconsolidates from Barclays Group

Thanks Jess, this makes sense that Palomino itself is market risk flat via the eq options with BCI and BCSL, similarly at a firm level we are also market risk flat via the wash through to 3rd party (Badger L.P). The question is from Elena Matrullo who was presenting to Jerry Del Missier and Rich Ricci today on the Prime business. She is interested in how we capitalise the Palomina deal at a firm (i.e. Consolidated) level. From below I understand Reg Policy advised in 2009 the change in the deal structure which enabled the accounting deconsolidation did not meet the criteria for Reg deconsolidation, so the equities in the fund remain on B/S for Reg. Are these capitalised through STD rules SMR charges? I would also then expect to see counterparty OTC drt exposure on the hedge with Badger, however am having trouble finding this exposure in our systems, Warren do you have any more detail on this?

Regards

Jen

From: Chan, Jessica: Finance (LDN)
Sent: 16 May 2011 17:25
To: McGinnell, Jennifer: GFRM (LDN); Reed, Warren: Markets (NYK)
Subject: RE: Palomino deconsolidates from Barclays Group

Hi Jen

Warren from SCM kindly came back me- Palomino is an SCM joint venture structure with Prime Services, and has been around for a few years now and represents a synthetic PB arrangement

Palomino holds some cash and OTC equity options facing NY Branch over the PB accounts it has with BCI/ BCSL. So Palomino should be risk flat

* SFT exposure- Palomino v BCI/ BCSL, offset by
* Options- Palomino v BBPLC NYBR

BBPLC NYBR then faces an external cpty

Warren- just a thought, should there not be a cpty risk charge on the options between NYBR and Palomino?

Just going into a meeting now so Jen please feel free to liaise with Warren direct in time for your deadline? Also can you pls confirm (again!) who the recipient of this information is

Many thanks

Jess

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From: Chan, Jessica: Finance (LDN)

Sent: 16 May 2011 16:20

To: McGinnell, Jennifer: GFRM (LDN)

Subject: FW: Palomino deconsolidates from Barclays Group

Jessica Chan I Regulatory Reporting I Barclays Capital
10 South Colonnade I Canary Wharf I London I E14 4PU
* +44 (0) 20 777 32365

From: Davies, John James: Finance (LDN)

Sent: 28 July 2009 19:43

To: Shah, Abhinav: Barclays Capital (NYK); Feraca, John: Markets (NYK); Lange, Kevin: GFRM (NYK); Hutson, Steve: GFRM (LDN); Varano, Jason: Markets (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)

Cc: Tofte, Oystein: GFRM (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Long, Adin: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN); Haycock, Simon: GFRM (LDN); Barnes, Daniel: GFRM (NYK);

Budhram, Arjune: Markets (NYK); Maloney, Walter G: Markets (NYK); Vasser III, James: Markets (NYK); Mcauliffe, Sam: Finance (LDN); Berryman, Marc: Finance (LDN); Atkin, Elizabeth: Finance (LDN)

Subject: RE: Palomino deconsolidates from Barclays Group

All,

As Abhinav states below, Palomino should be be consolidated for regulatory purposes. Having spoken to Sam Mcauliffe the reason for this being that under FSA rules if we own over 20% of an entity we have to consolidate for regulatory purposes, unless we receive a waiver from the FSA explicitly allowing deconsolidation.

We have put in place procedures to work around the differing accounting and reg treatments and going forward Palomino will be treated as a consolidated entity.

Regards

John Davies

From: Shah, Abhinav: Barclays Capital (NYK)

Sent: 28 July 2009 18:31

To: Feraca, John: Markets (NYK); Lange, Kevin: GFRM (NYK); Hutson, Steve: GFRM (LDN); Varano, Jason: Markets (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Long, Adin: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN); Haycock, Simon: GFRM (LDN); Barnes, Daniel: GFRM (NYK); Budhram, Arjune: Markets (NYK); Maloney, Walter G: Markets (NYK); Vasser III, James: Markets (NYK); Mcauliffe, Sam: Finance (LDN)

Subject: RE: Palomino deconsolidates from Barclays Group

To clarify:

Barclays Bank PLC ("BBPLC") held and continues to hold 100% of the ordinary share capital of Palomino Limited ("Palomino"). Palomino holds prime brokerage accounts (the "PB Accounts") with BCI and BCSL and the accounts are managed by Renaissance Technologies LLC (the hedge fund). In addition, Palomino has written options with BBPLC NY Branch over the value of the PB Accounts (the "Palomino Options"). To hedge itself, BBPLC NY Branch has written mirror options with a partnership called Badger L.P., an affiliate/fund of RenTec (the "Barclays Options").

Prior to 30 June 2009, the Barclays group used to consolidate Palomino for accounting and regulatory purposes. As a result of some changes made to the transaction, Palomino was deconsolidated from the Barclays group for accounting purposes only. Thus, the assets held in the PB Accounts are no longer on the consolidated balance sheet of Barclays. Instead, Barclays has derivative positions on its solus and consolidated balance sheet, being the Palomino Options (assets) and Barclays Options (liabilities). I presume it is the Palomino Options that are generating the RWAs.

Notwithstanding the deconsolidation of Palomino for accounting purposes, Palomino continues to be consolidated for regulatory reporting purposes. Thus, the regulatory reporting position should be unchanged and no RWAs should be reported.

Sam - I should be grateful if you could confirm that my understanding of the regulatory treatment is accurate.

Abhinav Shah | BARCLAYS CAPITAL

[redacted] = Redacted by the Permanent Subcommittee on Investigations

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From: Feraca, John: Markets (NYK)

Sent: 28 July 2009 13:03

To: Lange, Kevin: GFRM (NYK); Hutson, Steve: GFRM (LDN); Varano, Jason: Markets (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Long, Adin: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN); Haycock, Simon: GFRM (LDN); Barnes, Daniel: GFRM (NYK); Budhram, Arjune: Markets (NYK); Maloney, Walter G: Markets (NYK); Vasser III, James: Markets (NYK); Mcauliffe, Sam: Finance (LDN); Shah, Abhinav: Barclays Capital (NYK)

Subject: RE: Palomino deconsolidates from Barclays Group

To all:

I had a subsequent conversation with Abhinav Shah from SCM who were principally involved in the Palomino deconsolidation from the business side. He informed me that although Palomino was deconsolidated for balance sheet reporting purposes, the entity should not be deconsolidated for regulatory reporting purposes. He referred me to Sam Mcauliffe.

Sam,

Can you opine on this? If this is correct, should Palomino be reclassified as an internal counterparty for RWA purposes?

JF

From: Lange, Kevin: GFRM (NYK)

Sent: 28 July 2009 12:29

To: Hutson, Steve: GFRM (LDN); Varano, Jason: Markets (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Feraca, John: Markets (NYK); Long, Adin: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN); Haycock, Simon: GFRM (LDN); Barnes, Daniel: GFRM (NYK); Budhram, Arjune: Markets (NYK); Maloney, Walter G: Markets (NYK); Vasser III, James: Markets (NYK)

Subject: RE: Palomino deconsolidates from Barclays Group

I see nothing that references ownership by a hedge fund. I would suggest that whomever instructed the deconsoldiation of this entity, provide verification as to why this should be done and who is the current owner.

From: Hutson, Steve: GFRM (LDN)

Sent: Tuesday, July 28, 2009 12:13 PM

To: Lange, Kevin: GFRM (NYK); Varano, Jason: Markets (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Feraca, John: Markets (NYK); Long, Adin: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN); Haycock, Simon: GFRM (LDN); Barnes, Daniel: GFRM (NYK); Budhram, Arjune: Markets (NYK); Maloney, Walter G: Markets (NYK); Vasser III, James: Markets (NYK)

Subject: RE: Palomino deconsolidates from Barclays Group

Kevin

I've looked ino Blueprint which is the application which Group Secretariat use for monitoring intra-Group subsidiaries and extracted details into this doc. They still show this as a Barclays owned subsidiary, but there are contact details as to who you should contact for latest info:

<< File: Palomino Limited.doc >>

Steve

From: Lange, Kevin: GFRM (NYK)

Sent: 28 July 2009 15:31

To: Varano, Jason: Markets (NYK); Brown, Gerry: GFRM (NYK); Dyer, Lansford: GFRM (NYK)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Feraca, John: Markets (NYK); Long, Adin: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN); Hutson, Steve:

GFRM (LDN); Haycock, Simon: GFRM (LDN); Barnes, Daniel: GFRM (NYK); Budhram, Arjune: Markets (NYK); Maloney, Walter G: Markets (NYK); Vasser III, James: Markets (NYK)

Subject: RE: Palomino deconsolidates from Barclays Group

The financials for 2007 reflect that Palomino Limited is a subsidiary of Barclays. Does anyone have updated information that speaks to the current ownership structure?

From: Varano, Jason: Markets (NYK)

Sent: Tuesday, July 28, 2009 9:54 AM

To: Brown, Gerry: GFRM (NYK); Lange, Kevin: GFRM (NYK); Dyer, Lansford: GFRM (NYK)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Feraca, John: Markets (NYK); Long, Adin: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN); Hutson, Steve: GFRM (LDN); Haycock, Simon: GFRM (LDN); Barnes, Daniel: GFRM (NYK); Budhram, Arjune: Markets (NYK); Maloney, Walter G: Markets (NYK); Vasser III, James: Markets (NYK)

Subject: RE: Palomino deconsolidates from Barclays Group

Gerry/Kevin/Lansford,

As you can see in the below email chain, the fact that Palomino has been deconsolidated is causing a substantial RWA charge. Compounding the RWA issue is the fact that the counterparty has not yet been graded by credit (which results in a punative RWA calculation). Daniel Barnes mentioned that Lansford may be familiar with the counter-party and the structure.

Would it be possible for one of you to 1) verify that Palomino has been deconsolidated and 2) calculate a credit grade for this counterparty?

If you could move quickly on this it would be much appreciated since, as I mentioned earlier, without a credit grade the RWA charge from this counterparty is significant.

Please let me know if you have any questions.

Thanks,

Jason

From: Hutson, Steve: GFRM (LDN)

Sent: 28 July 2009 09:26

To: Barnes, Daniel: GFRM (NYK)

Cc: Chatterton, Simon: Barclays Treasury (LDN); Long, Adin: GFRM (LDN)

Subject: Palomino deconsolidates from Barclays Group

Daniel

As you have responsibility for US Financial Institutions, would you liaise with Simon and consider taking over credit responsibilit for Palomino which apparently has been deconsolidated from Barclays Group, although I leave you to verify this.

If it does not fall within your remit, please agree a CRE in the usual way.

Thanks. Steve

From: Chatterton, Simon: Barclays Treasury (LDN)

Sent: Tuesday, July 28, 2009 4:11 AM

To: Haycock, Simon: GFRM (LDN); Hutson, Steve: GFRM (LDN)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Varano, Jason: Markets (NYK); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Feraca, John: Markets (NYK); Long, Adin: GFRM (LDN)

Subject: RE:

Simon,

That looks to be the case. Per the attached, Adin is looking to see who the new CRE should be.

Rgds,

Simon

<< Message: RE: >>

From: Haycock, Simon: GFRM (LDN)

Sent: 28 July 2009 09:02

To: Hutson, Steve: GFRM (LDN); Chatterton, Simon: Barclays Treasury (LDN)

Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Varano, Jason: Markets (NYK); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN); Feraca, John: Markets (NYK); Long, Adin: GFRM (LDN)

Subject: RE:

Steve / Simon

Further to the below, Palamino Ltd has been deconsolidated – however on GCIS2 the entity still appears in the Barclays Group. Should the entity now be set up in its own group and a BarCap CRE assigned so that we can get it graded?

Regards

Simon

— = Redacted by the Permanent Subcommittee on Investigations

Simon Haycock

Barclays Capital 5 The North Colonnade Canary Wharf London E14 4BB

Extension (877)34342 Phone +44 (0) 20 7773 4342 Mobile [redacted]

Email <mailto:simon.haycock@barclayscapital.com> simon.haycock@barclayscapital.com

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From: Feraca, John: Markets (NYK)
Sent: 24 July 2009 17:00
To: Haycock, Simon: GFRM (LDN); Long, Adin: GFRM (LDN)
Cc: Tofte, Oystein: GFRM (LDN); Davies, John James: Finance (LDN); Young, Mark: Finance (LDN); Cawston, Grant: GFRM (LDN); Varano, Jason: Markets (NYK); Holliman, Chris: GFRM (LDN); King, Martin: GFRM (LDN)
Subject:

Simon/Adin

As of June 30, the below counterparty was changed from internal to external as a result of deconsolidation. As you can see, the counterparty has a current risk weighting of 100%. Can we look into regrading before the coming month-end?

JF

SDSid CounterpartyName BookingEntity CostCentre EAD RWA GBP PD LGD M RW BBTB ApproachID
40210952 Palomino Limited 115,744,334.82 115,744,334.82 0.00030 0.600000 0.00273973 1.00000000 TB 3
40210952 Palomino Limited 77,162,889.88 77,162,889.88 0.00030 0.600000 0.00273973 1.00000000 TB 3

Project COLT

New Product Proposal

Confidential

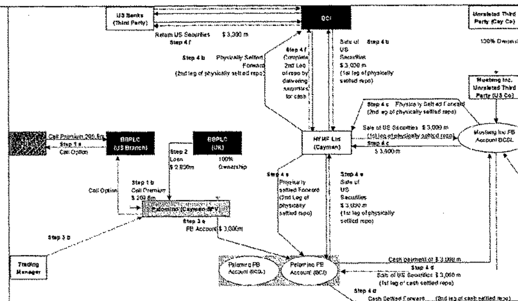
31 July, 2002

Product Sponsors

Jonathan Zenios (SCM), Jerry Smith (SCM), Marty Malloy (EFG), and Mark D'Andrea (Prime Brokerage)

BUSINESS PROPOSAL

1. Executive summary	COLT is an investment product for hedge funds ('**Funds**') and is based largely on the normal operation of the Prime Brokerage business that has already received approval from the US New Product Committee. In its original form, **the SCM Approvals Committee approved COLT on 27 March, 2002 and the Global New Product Committee approved COLT on 8 April, 2002 and on 28th May 2002**. Both approvals were subject to FSA approval to treat the SUB as a trading book for regulatory purposes. FSA approval is still outstanding, but will be obtained prior to closing the transaction. However given the structure has changed since the aforementioned committees we are seeking approval of the revised structure. All the relevant areas have been kept informed of the changes in the structure and their approval has been sought prior to going to the Global New Product Committee ***General Description of Product COLT Structure*** COLT is targeted at those Funds with a high proportion of US individual investors, stable year-on-year returns and strategies involving short-term trading. This gives rise to significant short-term capital gains for the investors regardless of whether or not they are invested in the fund for the shorter or longer term. COLT provides an after tax benefit to these investors through the conversion of their return from the fund from short term capital gains (taxed at 39.6%) to long term capital gains (taxed at 20%). This would be achieved by substituting the Fund's direct execution of its trading strategy with a cash settled call option over a SUB's proprietary account whose performance *substantially* replicates the Fund's trading strategy. Any gain on the call option would be long-term gain provided the call option is held by the Fund for at least 12 months. Due to the Call Premium (defined below) and rigorous controls (explained below), including de-leveraging and daily risk monitoring, the economic risk to Barclays in the transaction would be confined to a one-day catastrophic risk (i.e. gap risk). Structurally, this risk would reside in BCSL and BCI, specifically within their prime brokerage divisions ('**Prime Brokerage**'). Notably, Prime Brokerage currently undertakes this same risk in its day-to-day relationships with hedge funds. The intended launch date is mid-August.

<table>
<tr><td></td><td>SCM would earn fee income at the onset of the transaction of approximately $9.5 million. Further, it is anticipated that increased revenue will be created in certain other areas within Barclays Capital: approximately $7m p.a. to $10m p.a. from increased clearing charges and execution revenue for Prime Brokerage. Further, Renaissance (the Fund that is the first target) has indicated that it will move its account to another bank if we do not provide them with this product, which would result in approx. $6m per year of lost revenue to Prime Brokerage.</td></tr>
<tr><td>2. Business Proposal description</td><td>


Structure Diagram

Set up of Structure (Day 1):
The Structure is set up by following the steps described below:

Step 0:
Prior to structure initiation Barclays Bank PLC (BBPLC (UK)), with the help of a Cayman legal counsel, sets up a Cayman SPV (Palomino) - a 100% owned, controlled and consolidated subsidiary of BBPLC. Palomino opens one Prime Brokerage account (PB account) with Barclays Capital Securities Limited (BCSL) and one PB account with Barclays Capital Incorporated (BCI).

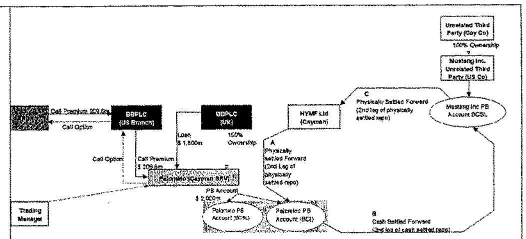
HYMF Inc a wholly owned subsidiary within Barclays Group sets up HYMF Ltd (Cayman) a 100% owned Cayman subsidiary of HYMF Inc. For tax purposes the company will be US resident because Barclays will "check the box".

Cayman Counsel sets up an unrelated Cayman legal entity (CayCo) which in turn sets up US Co (Mustang Inc), a US subsidiary of CayCo. US Co then opens a PB account with BCSL.

Step 1:
1-a: The Fund purchases a 3-year, American style call option ("Call Option") from BBPLC (US Branch) with respect to the value of the PB accounts of Palomino. The Fund pays a premium of $209.6 million. The Call
</td></tr>
</table>

	Option is cash settled. **1-b:** To completely hedge out its exposure BBPLC (US Branch) then buys an identical option over the same accounts from Palomino. To avoid intra-group credit exposure, BBPLC's obligations under its call option with the fund only arise if BBPLC is paid under its option with Palomino. Step 2 BBPLC (UK) lends $2,800 million to Palomino. **Step 3:** **3-a:** Palomino places $3,000 million into its BCI PB accounts. **3-b:** Palomino then hires Fund's existing investment manager ('Trading Manager') to manage the investments. **Step 4:** With existing $3,000 million in its BCI PB Account Palomino will purchase $3,000 million of US Securities from US corporation that will be treated as a quasi-subsidiary of BBPLC for UK accounting and regulatory purposes (Mustang Inc.). To address the 'Up tick rule' of the Securities and Exchange Commission (SEC) the following steps will be implemented: **4-a:** Borrow from Third Parties: BCI will borrow a basket of US securities from US Banks or Broker/Dealer (Third Party) and deliver $3,000 million on market terms as collateral. **4-b:** "Repo" from BCI to HYMF Ltd. (Cayman): HYMF Ltd (Cayman), a fully consolidated company within the Barclays Group will then enter into a transaction whereby it will buy the US Securities from BCI for $3,000 (the prevailing market price) and then simultaneously forward sell those securities to be physically delivered to BCI at maturity. The combined steps will be structured as a sale and repurchase agreement over the US Securities. Later the same day, this position will be closed in Step 4-e. **4-c:** "Repo" from HYMF Ltd. (Cayman) to Mustang Inc.: Mustang Inc. will then enter into a transaction, which will be documented as a repo, whereby it will buy the US Securities from HYMF Inc for $3,000 million (the prevailing market price) and have them delivered into its PB Account with BCSL and then simultaneously forward sell those securities to be physically delivered to HYMF at maturity. The combined steps will be structured as a sale and repurchase agreement over the US Securities. Manufactured payments will be made from Mustang Inc. to HYMF to account for dividend income arising out of the US Securities. [In addition, mark to market payments (related to value of securities) will be made between the parties over the life of the transaction to appropriately adjust the levels of collateral.]

	4-d: <u>"Repo" from Mustang Inc. to Palomino:</u> Mustang Inc. will sell Palomino the said US Securities for $3,000 million (the prevailing market price). Palomino will then forward sell the US Securities to Mustang Inc. at maturity but the contract will be cash settled. The combined steps will be structured as cash settled sale and repurchase agreement over the US Securities. Manufactured payments will be made from Palomino to Mustang Inc. to account for dividend income arising out of the US Securities. [In addition, mark to market payments (related to value of securities) will be made between the parties over the life of the transaction to appropriately adjust the levels of collateral.] **4-e:** <u>"Repo" from Palomino to HYMF Ltd. (Cayman):</u> Palomino will sell to HYMF for $3,000 million the same US securities. HYMF will then forward sell the US Securities to Palomino for physical delivery at maturity. The combined steps will be structured as physically settled sale and repurchase agreement over the US Securities. Manufactured payments will be made from HYMF to Palomino to account for dividend income arising out of the US Securities. [In addition, mark to market payments (related to value of securities) will be made between the parties over the life of the transaction to appropriately adjust the levels of collateral.] **4-f:** <u>Close out "Repo" between BCI and HYMF Ltd. (Cayman) and "Borrow" from Third Parties:</u> HYMF Ltd (Cayman) will then complete the 2nd leg of its open repo with BCI by delivering the securities to BCI for Cash who would then return the same US Securities to US Banks or Broker/Dealer (Third Party). **Day 1 Close of Business:** As a result of Step 4-f, BCI and US Banks or Broker/Dealer (Third Party) are not part of the structure after initial set-up. Further, $3,000 million of cash sits with Palomino and various forward obligations exist between HYMF Ltd, Mustang Inc. and Palomino (see below). • Palomino will use $1,000 million (of its $3,000) to partially pay off the loan it receives from BBPLC (UK), leaving a $1,800 million loan outstanding with BCSL (UK) and $2,000 of cash in the PB Accounts (distributed according to the desires of the trading Manager). As a result at the close of business on day 1 the structure Colt will resemble the following diagram:



Risk Mitigation and Acceleration

a. The Trading Strategy will be executed through a prime brokerage account, for which the $2,000m will serve as collateral. As a result, the Trading Strategy will be subject to the risk parameters approved for the Prime Brokerage group[1] (similar but slightly more restrictive). BCSL's risk to the Trading Strategy will be managed in the following ways:

- De-leveraging:
    - Description in Original Approvals Paper - Suppose that the $200m of collateral provided through the Call Premium supports $4,000m gross positions (i.e., 20 times multiple), which would allow $2,000m of long positions and $2,000m of short positions in the Trading Strategy. If the Trading Strategy loses $10m, only $190m of collateral would remain. Since $190m would only support $3,800m of gross positions, the Trading Manager would be forced to liquidate enough of its positions to meet those parameters. (This is because the only structural way to obtain more collateral would be through increasing the Call Premium and this significantly weakens the Fund's tax analysis). Although more labour intensive, the deleveraging process should manage risk as effectively as requesting more collateral.
    - Change due to increased collateral – The result would be precisely the same in the new version, but the formula would be slightly different (because the initial collateral would be $2000m instead of $200m). In this version, gross trading level would be calculated as 20 times (collateral less $1,800m). Therefore, on a loss of $10m, the gross trading level would be $3,800m, calculated as 20 times ($1,990m less $1,800m).

[1] Prime Brokerage clears trades for hedge funds and provides leverage with respect to trading levels, based upon i) collateral received from the hedge fund, ii) ongoing risk analysis of the strategies employed, and iii) the market environment. As losses reduce collateral on hand, Prime Brokerage manages risk of loss in two ways: i) it can request increased collateral to rationalize the same trading level, or ii) it can force a reduction of positions to conform the trading level to an acceptable risk profile.

	• Removal of Manager: ultimately if the collateral dropped sufficiently, the Trading Manager could be fired and the positions could be liquidated. • Also in the Investment Management Agreement Palomino has the ability to exit the transaction for whatever reason by giving 10 business days' notice. b. The Trading Strategy will allow the Trading Manager to execute trades with other broker-dealers that are cleared with Prime Brokerage. That ability to "trade away" must be controlled to ensure that the Trading Manager does not exceed daily trading limits during the course of the day. A side agreement will be entered into between the Trading Manager and the BCSL and BCI whereby any trades which exceed the parameters under the Investment Guidelines will be passed into another account for the account of Renaissance. In addition, the executing brokers that could be used by the Trading Manager will be limited and pre-approved before trading. The agreement and limited executing brokers will be used to control the execution risk for the structure. *Targeted Funds* Transacting with hedge funds can be risky (a notable example is LTCM), but careful selection of a hedge fund and appropriate ongoing risk analysis can make it both safe and profitable. Hedge funds range from aggressive growth funds to the more conservative market neutral funds. For COLT, we intend to target the more conservative market neutral funds, which focus on obtaining returns that have a low correlation to the market.[2] Generally, these strategies involve paired positions (*i.e.*, long and short positions) designed to take advantage of market inefficiencies. In fact, most will be "relative value/arbitrage" strategies, which rely on the expected convergence of a long and short strategy. This approval is confined to Funds that trade equities (long and/or short). In the current case, Renaissance employs a strategy or portfolio construction general known as "Statistical Arbitrage" or equity relative value trading. They have a proprietary (and closely guarded) trading model which generates short, medium, and long term buy and sell signals based on statistically significant historical indicators. While the trading crosses many asset classes for the fund, it is only their equity specific models that we are considering for the initial COLT product.
3. Strategic overview	This product is part of the strategy to build significant presence in the hedge fund market through the trading of structured products with high added value yielding strong P/L.
4. Financial Projections	SCM's fee for the structuring of this transaction has been agreed at $9.5 million. In addition, BCSL would earn i) increased revenue from additional volume in Prime Brokerage, which has been estimated at between $7m p.a. and $10m p.a. ii) increased revenue from volumes of trades executed with Barclays' traders, and iii) increased exposure for our hedge fund sales team. Further, this trade with Renaissance has the added benefit that it would

[2] Initial targets are Funds that already utilize BB PLC's Prime Brokerage, but new Funds will also be targeted in this process.

	prevent Prime Brokerage from losing their account, which accounts for approximately $6m p.a. **Estimated Costs** Legal fees for documentation of each trade. Initial cost of establishing the companies set up in respect of Project COLT and any annual cost of maintaining books and records.
5. **Projected Trade volumes, Clients and Markets**	*Trade Volume* It is anticipated that 1 to 3 transactions would be completed in 2002, with an investment from each client equal to approximately $100 million to $200 million (USD). *Clients* Initial targets are Funds that already utilize Prime Brokerage, but new Funds will also be targeted in this process. *Markets* Publicly traded equities long and short, including synthetic shorts utilizing a cash settled forward
INFRASTRUCTURE AREAS All the relevant infrastructure areas have been contacted to ensure that there are comfortable with the product proposal as it now stands. Attached is a grid with all the relevant infrastructure areas sign-off subject to a number of outstanding matters that will need resolution before the transaction commences	

Project COLT

Renaissance Technologies Corp

USER GUIDE

Closing Date	30th September 2002
Trade date for option	1st October 2002
Effective Date	4th October 2002

SCM Deal Team
Jonathan Zenios
Steve Ullman
Jerry Smith
Sadat Mannan

Prime Brokerage Deal Team
Mark D'Andrea
Marty Malloy
James Sixsmith
Maureen Horn

Deal Management
Carried out by Prime Brokerage Group

Project Colt

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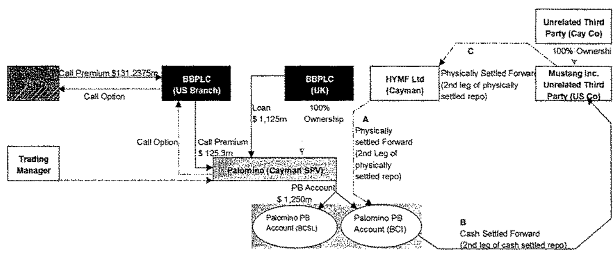
Project Colt

1. Transaction Summary

1.1 Brief Transaction Overview

Colt is a transaction that allows Renaissance to achieve an enhanced return on its investments, through the substitution of the direct execution of its trading strategy with a cash settled American style call option over a trading subsidiary of Barclays' proprietary account ('the Call Option') whose performance *substantially* replicates Renaissance's trading strategy. A Bermudan Fund (Bass Equities Limited) under the management of Renaissance will purchase the Call Option, whose term is 3 years, for a premium of $131.2375m. Any gain on the call option, which is reflected by an increase in value of the assets within the proprietary account would be deemed to be a long-term gain if the call option is not exercised for at least 12 months. This would then provide for an after-tax benefit for investors through the conversion of their return from Bass from short-term capital gains (taxed at 39.6%) to long term capital gains (taxed at 20%).

1.1.1 Structure Diagram:



1.1.2 Key Entities

Palomino Limited	('Palomino')	100% owned Cayman trading subsidiary of Barclays Bank PLC
Barclays Bank PLC	('BBPLC')	
Renaissance Technologies Corp	('Renaissance')	US hedge fund affiliated with Bass
Bass Equities Limited	('Bass')	Bermudan Bass established by Renaissance. Owned by another fund – Medallion Holdings Limited
Medallion Holdings Limited	('Medallion')	Parent of Bass and large fund managed by Renaissance
Barclays Capital Inc	('BCI')	Indirect wholly subsidiary of BBPLC and BBPLC's US Prime Broker
Barclays Capital Securities	('BCSL')	Wholly owned subsidiary of

Project Colt

Limited		BBPLC and Non-US Prime Broker of BBPLC
HYMF (Cayman) Limited	('HYMF')	Cayman subsidiary of HYMF Inc, a Barclays US subsidiary. Directors are neither UK nor US resident
Mestengo Inc	('Mestengo')	A newly formed Delaware corporation established by Walkers SPV Limited (a Cayman third party). Quasi-subsidiary of BBPLC. This company is run by Entity Services Group LLC a specialist firm in Delaware

1.2 Initial Steps

- *Establishment of Palomino (Cayman) Ltd and HYMF (Cayman) Ltd; Transaction with Mestengo Inc.*

BB PLC established two entities: Palomino Ltd, a Cayman Island company ("Palomino"), and HYMF, a Cayman Island Company ("HYMF"). Further, Walkers SPV Limited a Cayman Island company outside of the Barclays Group holds the shares in a newly incorporated Delaware corporation, Mestengo, Inc, on charitable trust, subject to a declaration of Trust.

Palomino is established and utilized to 1) eliminate trade reporting obligations that would be required if BB PLC participated in the transaction directly, and 2) to create a US tax resident entity that is not confined by US regulatory rules that apply to US-formed entities.

HYMF and Mestengo are used as part of a cost-efficient structure that enables Palomino to sell US securities without being subject to the "up tick" rules that restrict short sales of US securities. *(This is described in greater detail below)*

- *Loan from BBPLC (UK)*

Palomino would borrow $1,125m from BBPLC (UK) on an unsecured basis.

- *Establishment of PB Account*

Palomino established prime brokerage trading accounts with both BCSL and BCI (collectively referred to as the '**PB Account**').

Palomino placed $1,250m into the PB Account to be used as collateral for a strategy identical to that utilized by Bass ('**Trading Strategy**'). To replicate the Bass's strategy, Palomino would hired the Renaissance as investment manager ('**Trading Manager**') to manage the investments. The Trading Strategy would be confined to sales and purchases of equity securities.

- *Back-to-Back Call Options*

a. Simultaneous with the establishment of the PB Account, the US branch of BB PLC wrote an American-style call option to Bass with respect to the value of the PB Account (the '**Call Option**'), for which Bass would pay a premium ('**Call Premium**') of $131.2375m comprising:

- $125.3m representing the collateral for the Trading Strategy; and
- an amount representing SCM's fee from the transaction ($5.9375m in the diagram).

Project Colt

b. The Call Option has a term of 3 years and is cash settled. The effective strike price of the Call Option would be $1,250m ('**Call Strike**').

c. Simultaneous with its writing of the Call Option, BB PLC purchases an identical option from Palomino. The only difference being that the call premium would be $125.3m, as opposed to $131.2375m.

1. Arrangement between Palomino, Mestengo, and HYMF to address "up tick" restriction

Absent the arrangement between Palomino, Mestengo and HYMF, short sales of US securities by Palomino (i.e., borrow stock from BCI or BCSL and sell it on the open market) would be restricted by the "up tick" rule, which generally prevents short sales of a US security at the current market price if the share price has been declining. To manage this restriction, Palomino would create identical amounts of physically long and synthetically short positions in a large number of US securities so that where Palomino makes sales of securities they will always be from the pool of long equity positions. As a result, for NYSE purposes they will be treated as sales of long positions (not affected by up tick rules), not short sales. [redacted]

As a result of a series of simultaneous transactions, each of Palomino, Mestengo and HYMF would have equal long and short positions (interests in cash or equity settled forward contracts) in the same basket of US equity securities. A reduction by Palomino of its long position in certain US equity securities would create the synthetic short position discussed above.

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1.3 Ongoing Flows

The ongoing flows within Colt will be managed by the Prime Brokerage Group and Operations in New York, as equities will be traded in and out of the Prime Brokerage Accounts in the name of Palomino held at BCSL and BCI. There are no specific annual flows.

Key contacts will be:

Prime Brokerage

2. James Sixsmith (BCSL – ext [redacted]
3. Marty Malloy (BCI – 212 412 2180)
4. Maureen Horn (BCI – 212 412 2242)

Operations

- Andrew West (BCSL London – ext [redacted]
- Fraser Mackenzie (BCSL London – ext [redacted]
- Bill Arnold (BCI New York – 212 412 2471)

[redacted] = Redacted by the Permanent Subcommittee on Investigations

1.4 Accounting Overview

London Finance (Pritesh Pankhania) has provided advice, which has been agreed by PWC.

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- Palomino (Cayman), HYMF (Cayman) Ltd and Mestengo Inc, as a quasi-subsidiary, will be consolidated with BB PLC.
- Palomino (Cayman) will be accounted for on trading book.
- Fee income of $5.9375m is recognizable immediately as it is non-refundable.
- The Call Option and the PB Account would be marked to market and should offset in the income statement (i.e., there is no intrinsic value to the Call Option).
- On the balance sheet, the mark-to-market value of the option and the Call Premium would be reported as "Amounts Arising from Off-Balance Sheet Derivatives", and the positions in Palomino would be reported as "Equity Securities" or other, depending upon the nature of the investments.

1.5 Unwind arrangements

General

The maturity of the transaction is 30 September 2005.

An unwind can occur in a number of circumstances:

(i) the call option is exercised in the way anticipated under the documents – the payment flows under this occurrence are detailed in the ***Call Option Confirmation.***
(ii) the Investment Manager breaches the Investment Guidelines.
(iii) Early Termination Event under the Prime Brokerage Agreement.
(iv) Change in US Tax Law or change in regulatory treatment of the Call option for Barclays.
(v) Early Termination Event under the Investment Management Agreement – this would then force Renaissance to exercise the call option.

Normal Unwind

Under a normal unwind arrangement the option would be exercised by Bass and then the valuation of the Call Option and the determination of the settlement amount will be calculated after 4 business days, during which period the assets within the PB Accounts will be liquidated in an orderly and commercial fashion under the terms of the Investment Management Agreement (approx 25% of the positions per day in equal amounts of longs and shorts).

The value of the Call Option is then calculated as follows:

Cash Settlement Amount = An amount equal to the greater of (i) zero, and (ii) the sum of (A) the Settlement Price, minus (B) the Strike Price, plus (C) the Premium Settlement Amount.

Where:

Settlement Price means the Initial Funds put in (i.e. $1250m) plus Basket Gains (i.e. realised and unrealised profits less Total Amortised Premium) less Basket Losses (i.e. realised and unrealised losses) less Basket Costs (which is primarily the implied interest cost on the Initial Funds and any fees and commissions paid) – All terms are defined in the ***Call Option Confirmation.***

Strike Price is $1125m

Premium Settlement Amount means $125m less the proportion of the $50m which has amortised over the term of the transaction ('the Total Amortised Premium')

Project Colt

Early Termination Events under Investment Management Agreement

The following events lead to a termination of the Investment Management Agreement, which would then lead to either (i) Bass exercising their call option OR (ii) Barclays taking control of the account which will then force Bass to exercise if the call option has some value:

- 10 business days notice by either party
- Change in US Tax Law – immediate termination
- Exercise or deemed exercise of the Call Option – immediate termination
- Cause (as defined below) – immediate termination
- Triggering Violation – 5th business day after the Triggering Violation – i.e. series of non-material breaches of the Investment Guidelines

Cause is defined as:

(i) Material violation of any law or regulation by Renaissance
(ii) Material breach of the Investment Management Agreement (other than Investment Guidelines)
(iii) Material breach of the Investment Guidelines
(iv) Intentional misconduct or gross negligence
(v) The Initial Equity of the Account falls below $1125m (i.e. 90% of $1250bn)
(vi) Termination Event as defined under the Prime Brokerage Agreement
(vii) Removal of any material regulatory licence
(viii) None of Jim Simons, Henry Laufer, Peter Brown and Bob Mercer are employed by Renaissance
(ix) Liquidation or bankruptcy of Renaissance

Early Termination Events under Prime Brokerage Agreement

The following events lead to an 'Event of Default' within the Prime Brokerage Agreement and thus all Loans will be due and payable immediately, and the Prime Broker will be authorised to enforce his security by selling the collateral (i.e. the equity securities):

- Non-delivery of Collateral into account – immediate event of default
- Failure to perform under any of Transaction Agreements – 10 business day grace period
- Agreement not deemed to be fully enforceable – 10 business day grace period
- Bankruptcy or liquidation of customer – 30 business day grace period
- Material adverse change in financial position, business and prospects of Palomino at the sole determination of the Prime Broker (which would mean that Renaissance's Trading Strategy was becoming loss-making or more risk aggressive) – 10 business days grace period

Project Colt

2. Documentation List

2.1. Transaction Documents

	Document	Parties	Summary
1.	**Call Option confirmation**	Bass and BBPLC	Details the terms of exercise of the call option as well as the calculation of the settlement amount due on exercise. The settlement amount is determined with reference to the Prime Brokerage Accounts opened in the name of Palomino at BCI and BCSL as well as the inclusion of the Initial Funds (i.e. $1250m)
2.	**Schedule to ISDA Master Agreement**	Bass and BBPLC	As per title.
3.	**Investment Management Agreement**	Renaissance and Palomino	Outlines the role and responsibility of the Investment Manager and the circumstances in which the agreement can be terminated Details the Investment Guidelines as well as the fees schedule that the client is charged – i.e. shows the permitted amount of leverage available to the Investment Manager.
4.	**Prime Brokerage Agreement**	BCSL and Palomino	Prime Brokerage Account for the non-US equities traded by the Investment Manager, which will form part of the valuation of the Call Option. Standard Prime Brokerage Agreement although amended for a number of factors: ❑ availability of the credit facility and interest to be charged ❑ specific transfer of risk to the Prime Broker with regard to security arrangements (i.e. BCSL will pay off the portion of the Initial Equity provided by Barclays that has been allocated to the BCSL PB Account) In general the PB Agreement details the settlement services to be provided by BCSL as well as the credit facility available to the client subject to margin requirements necessary in order for the client to purchase equity securities

5.	**Prime Broker Margin Agreement**	BCI and Palomino	Prime Brokerage Account for the US equities traded by the Investment Manager, which will form part of the valuation of the Call Option. Standard Prime Brokerage Agreement although amended for a number of factors: □ availability of the credit facility and interest to be charged □ specific transfer of risk to the Prime Broker with regard to security arrangements (i.e. BCI will pay off the portion of the Initial Equity provided by Barclays that has been allocated to the BCI PB Account) In general the PB Agreement details the settlement services to be provided by BCI as well as the credit facility available to the client subject to margin requirements necessary in order for the client to purchase equity securities
6.	**Prime Brokerage Agreement**	BCSL and Renaissance	Agreement with respect to a Prime Brokerage Account opened specifically for all Non-US equity trades that fall outside of the Investment Guidelines and thus do not form part of the call option valuation. These trades are then moved into this account for the account of the Investment Manager.
7.	**Prime Broker Margin Account**	BCI and Renaissance	Agreement with respect to a Prime Brokerage Account opened specifically for all US equity trades that fall outside of the Investment Guidelines and thus do not form part of the call option valuation. These trades are then moved into this account for the account of the Investment Manager.
8.	**Indemnity Agreement**	BBPLC, Palomino, Bass and Medallion	Information reporting: Palomino is the beneficial and sole owner of the assets and positions of the Accounts. If this is not the case (i.e. Bass through the call option is deemed to be owner) then Barclays/Palomino is indemnified by Medallion and Bass for any penalties imposed for failing to properly report.

NB – Highlighted cells indicate those agreements to which Barclays/Barclays entity is a party.

2.2. Internal Documents

	Document	Parties	Summary
	Call Option Confirmation	Palomino and BBPLC	Details the terms of exercise of the call option as well as the calculation of the settlement amount due on exercise. The settlement amount is determined with reference to the Prime Brokerage Accounts opened in the name of Palomino at BCI and BCSL as well as the inclusion of the Initial Funds (i.e.

			$1250m)
	Master Repurchase Agreement	BCI and HYMF	Agreement detailing the terms of the purchase of an initial basket of securities of US equities ('Initial Basket') by HYMF
	Paying Agency Agreement	BCI, HYMF and BBPLC	BCI and HYMF appoint BBPLC as paying agent payment to be made between themselves under the Master Repurchase Agreement and for payments HYMF has to make to Mestengo
	Sale and Repurchase Agreement ('HYMF Agreement')	HYMF and Mestengo	Details the terms of the sale of the Initial Basket by HYMF to Mestngo and any sale of further US equities to Mestengo (in total the 'Basket'). The repurchase of the Basket by HYMF will be for the physical securities or a cash value equivalent amount – this is at the option of Mestengo.
	Paying Agency Agreement	HYMF, Mestengo and BBPLC	HYMF and Mestengo appointed BBPLC to make payment due from HYMF to Mestengo and further then make ongoing payments due from Mestengo to Palomino
	Sale and Cash Value Repurchase Agreement ('Palomino Agreement')	Palomino and Mestengo	Details the terms of the sale of the Initial Basket by Mestengo to Palomino. The repurchase of the Initial Basket by Mestengo will be for a cash value equivalent amount. This agreement creates the 'short' position within Palomino's accounts
	Paying Agency Agreement	Mestengo, Palomino and BBPLC	Mestengo and Palomino appointed BBPLC to make any payments due from Palomino to Mestengo under the Sale and Cash Value Repurchase Agreement
	Sale and Repurchase Agreement	Palomino and HYMF	Details the terms of the sale of the Initial Basket by Palomino to HYMF and any sale of further US equities to HYMF (in total the 'Basket'). The repurchase of the Basket by HYMF will be for the physical US equity securities.
	Security Agreement	HYMF and Mestengo	Mestengo grants to HYMF, a security interest in the payments it expects to receive from Palomino under the obligations of the Palomino Agreement
	Security Agreement	Palomino and Mestengo	Mestengo grants to Palomino, a security interest in the payments it expects to receive from HYMF under the obligations of the HYMF Agreement

NB:

- These lists include the main documents in the transaction (included in the transaction mini-bibles). The Memorandum and Articles of Association of Palomino, HYMF and Mestengo are standard and are not included in this list. Miscellaneous documents such as receipts, certificates of incorporation, opinions etc are excluded.

2.3. Executing Broker Documentation

As Renaissance executes its US and Non-US equity trades through systems with third party brokers (ECNs or Executing Brokers) additional documentation had to be completed with the Executing Brokers/ECNs. In most cases this documentation was solely agreements that detailed the settlement and clearing arrangements between the ECN and BCI or BCSL. However due to internal compliance issues two of the ECNs preferred Palomino rather than Renaissance to be the principal party to the Customer Subscription Agreement.

US Domestic ECNs

User Subscription Agreement	Palomino and Helfant Inc	Details the duties and responsibilities of the executing broker
Form 9A/9B	BCI and Helfant Inc	
Form 9A/9B	BCI and Island	
Form 9A/9B	BCI and Instinet	
Form 9A/9B	BCI and B-Trade	
Form 9A/9B	BCI and Brut	
Form 9A/9B	BCI and Wave Archipelago	

Foreign (i.e. NON-US) ECNs

Electronic Trading Agreement	Credit Agricole Indosuez Securities (Japan) Limited and Palomino	Details the duties and responsibilities of the executing broker
Clearing Agreement	BCSL and G-Trade	Details the clearing arrangements by BCSL
Clearing Agreement	BCSL and Virt-X	Details the clearing arrangements by BCSL

3. Guidelines

3.1. Accounting Implications

General

- The consolidated and solus accounting treatment of Colt is discussed in the Accounting Overview section (1.4 above)
- The detailed UK GAAP accounting treatment for Colt is explained by entity below:

BBPLC US Branch

- The call option written to the fund will be reported on the balance sheet on a marked to market basis within 'Other Liabilities – Credit Balances arising from off balance sheet instruments'.

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- The corresponding call option purchased from Palomino will be reported on the balance sheet on a marked to market basis within 'Other Assets – Debit Balances arising from off balance sheet instruments'.

- The market value of the call option written to the fund and the market value of the call option purchased from Palomino will at all times be equal and opposite, and will net to zero in the P&L within 'Dealing Profits'.

- The call premium paid and received under the two call options will be recorded on the balance sheet against the MTM values of the two derivatives.

Palomino

- *Call option written to BBPLC US Branch:* - this will be reported on the balance sheet on a marked to market basis within 'Other Liabilities – Credit Balances arising from off balance sheet instruments'. The value of the call will be based on the value of the PB accounts of Palomino. The value of the PB accounts will comprise of the following:

    - MTM of net equity securities, plus
    - Net mtm of Sale and Cash Value Repurchase Agreement with Mestengo, plus
    - Surplus cash balances within PB a/cs, less
    - Funding provided through leveraging within PB a/cs, less
    - Repo liability payable to HYMF, less
    - Interest payable on funding provided, less
    - Call premium received (i.e. $1250m).

- *$1125m loan provided by BBPLC:* -this will be reported on the balances sheet as funding provided by a Group company and will be classified as 'Intercompany Funding Liabilities'. The funding cost will be accrued to P&L as 'Interest Payable' over the term on the loan.

- *PB account with BCSL* - This will typically comprise of three items:

    Net equities purchased – These will be reported within 'Equity Long' and 'Equity Short' securities in the balance sheet and will be held on a MTM basis. Once purchased, if the securities are then lent out for cash, the positions will continue to be reported on the balance sheet and a stock lending balance will be reported as a 'Repo / SBL Liability'. On the opposite side, if security is borrowed (and cash margin is placed), then the security will not appear on the balance sheet, instead a 'Reverse Repo / SBL' asset balance will be reported.

    Additional funding provided (via PB a/c) to enable leveraging – This will be reported as funding provided by BCSL and will be classified as 'Intercompany Funding Liabilities'. The funding cost will be accrued to P&L as 'Interest Payable' over the term on the loan.

    Surplus cash balances – This will be reported as 'Loans & Advances to Banks'.

- *Purchase and forward sale (cash settled) of US securities with Mestengo* - The net effect of this is that Palomino has purchased US securities and entered into a TRS with Mestengo and so its Balance Sheet should reflect this. Hence securities purchased will be reported gross on Palomino's balance sheet as 'Equity Securities' on a MTM basis. The forward sale should be reported as a TRS with Mestengo and the MTM of this should be classified as 'Debit/Credit Balances arising from off balance sheet instruments'. Under the TRS, Palomino would receive interest from Mestengo and pay dividends to Mestengo Co.

- *Sale of securities with HYMF and forward purchase (physically settled* - This is in substance a repo so Palomino's balance sheet should reflect this. Hence it would show a 'Repo Liability' against HYMF. Under the repo, Palomino would pay interest to HYMF and receive dividends from HYMF.

- *Net P&L of Palomino* – this will only reflect the initial fees earned from structuring the transaction. The P&L impact of the underlying trading assets and liabilities will be offset by the call option written over the PB accounts. Hence, after inception the net P&L of Palomino should be flat.

Mestengo

- *Sale and Cash Value Repurchase Agreement* - The net effect of this is that Mestengo has sold US securities and entered into a TRS with Palomino and so its Balance Sheet should reflect this. Hence securities sold will be reported as ' Short Equity Securities' on a MTM basis. The forward purchase should be reported as a TRS with Palomino and the MTM of this should be classified as 'Debit/Credit Balances arising from off balance sheet instruments'. Under the TRS, Mestengo would pay interest to Palomino and receive dividends from Palomino.

- *Purchase and forward sale (physically settled) of US securities with HYMF* - This is in substance a reverse repo so Mestengo's balance sheet should reflect this. Hence it would show a 'Reverse Repo asset' against HYMF. Under the reverse repo, Mestengo would receive interest from HYMF and pay dividends to HYMF.

- The Net P&L of Mestengo should be flat since the mtm movements on the short securities should offset the mtm movement on the TRS. In addition the interest and dividend flows from the TRS and reverse repo should also net off.

HYMF (Cayman) Limited

- *Sale of securities to Mestengo and forward purchase (physically settled)* - This is in substance a repo so HYMF's balance sheet should reflect this. Hence it would show a 'Repo Liability' against Mestengo. Under the repo, HYMF would pay interest to Mestengo and receive dividends from Mestengo.

- *Purchase and forward sale (physically settled) of US securities with Palomino* - This is in substance a reverse repo so HYMF's balance sheet should reflect this. Hence it would show a 'Reverse Repo asset' against Palomino. Under the reverse repo, HYMF would receive interest from Palomino and pay dividends to Palomino.

- The net P&L of HYMF should be flat since the interest and dividend flows from the reverse repo and repo should net off.

Task List:

Time	Task	Responsibility
Before 31 October	• Prepare Final Palomino accounts in accordance with UK GAAP	Helen MacGregor/Pritesh Pankhania
Monthly	• Prepare ongoing management accounts and financial records of Palomino	Helen MacGregor/Pritesh Pankhania
Before 31 October	• Prepare final HYMF and Mestengo accounts in accordance with US GAAP	Mike Montgomery/Mike Cairo

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Time	Task	Responsibility
Before 31 October	• Prepare Final Palomino accounts in accordance with UK GAAP	Helen MacGregor/Pritesh Pankhania
Monthly	• Prepare ongoing management accounts and financial records of Mestengo and HYMF	Mike Montgomery/Mike Cairo

Prime Contacts:

London

Pritesh Pankhania ext [redacted]
Helen MacGregor ext [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

New York

Mike Montgomery 212 412 5903
Mike Cairo 212 412 6927

3.2. Tax Compliance

All the tax compliance for Palomino to be done by Barry Berlin as Palomino forms part of BBPLC US tax return.

- Group Tax
  David Williams (020 7699 2856)
  Barry Berlin – New York (212 412 6727)

- Product Control/Finance
  Pritesh Pankhania [redacted]
  Helen MacGregor [redacted]
- Business Management
  Matt Purcell [redacted]
  Graham Wade [redacted]

3.3. Internal Borrowings

General

- The only internal borrowings necessary with respect to this transaction are the amounts borrowed to finance the Prime Brokerage Accounts as well as the Initial Loan of $1125m. Both these borrowings are carried out in the normal course of the Prime Brokerage business and should not involve any personnel from SCM.

Contacts

Marty Malloy – Prime Brokerage (212 412 2180)

3.4. Regulatory Treatment

UK

Project Colt

The below treatment that has been confirmed with the FSA:

- Palomino is included within the consolidated Barclays Bank trading book
- *Call Option between Bass and Barclays*
    - No PRR (i.e. market risk) although counterparty risk as position risk is transferred through the call option between Barclays and Palomino
    - Although there will be an exposure to Bass which will attract WRAs
- *Call Option between Barclays and Palomino*
    - No PRR, as Palomino has effectively transferred the risk of the assets through the operation of the PB Accounts, and barring gap risk the option should always be in the money. There are controls in place over the prime brokerage accounts to ensure that leverage is managed and that the call option does not go out of the money
    - There will be a CRR requirement for Barclays on the call it has with Palomino on which being an intra group exposure is subject to the Treasury Concession Limit.
- The above call options are booked and valued in SOPHIS, due to the economic substance the Palomino call option is treated as having a zero strike price from the Net Asset Value ('NAV') of the fund, being the NAV less the loan from BBPLC (i.e. $1125m initial funding)
- *Prime Brokerage Account (BCSL)* – treated as a normal third party prime brokerage account. This is therefore treated as a Reverse Repurchase Agreement for regulatory purposes, which means that there will be CRR arising where the amount paid for the securities exceeds the mark to market of the securities held in the PB Account.
- *Loan from BBPLC to Palomino* – Specific Treasury Concession limit has been transferred from BSCSL to Palomino to accommodate this lending. Other financing will be carried out under the normal intra-group limits used by Prime Brokerage.

US

Uptick Rule – Under US Securities Law (Securities Exchange Act 1934, Rule 10-a), a person is prohibited from selling US listed securities 'short' unless it is on an uptick (i.e. when the last quoted price was going up)

- [redacted]
- [redacted]

3.5. <u>Security Arrangements</u>

The security arrangements are detailed in the Prime Brokerage Agreements

3.6. <u>Risk Mitigation</u>

Risk is mitigated through the following means:

Project Colt

- Strict Investment Guidelines – ability to terminate Investment Management Agreement if non adherence
- Monitoring of trading by Risk to ensure adherence to Investment Guidelines
- Trades outside of the Investment Guidelines are transferred out of Palomino's PB Accounts to Renaissance's own account.
- Ability to reduce leverage if Trading Strategy or risk profile changes – Section 9.4 of PB Agreement
- Can terminate at anytime on 10 business days notice

3.7. Custody Arrangements

General

These are as per the standard arrangements in Prime Brokerage – responsibility of Prime Brokerage

Contacts

Marty Malloy (212 412 2180)
James Sixsmith [redacted]
Maureen Horn (212 412 2242)

[redacted] = Redacted by the Permanent Subcommittee on Investigations

4. Payment Flow Model

Not necessary as ongoing payment flows are the responsibility of Prime Brokerage

Project Colt

Appendices

1. **List of Bank Accounts**

Cash accounts are held at BBPLC New York branch and are all USD accounts

Barclays Bank Account

ABA: 026-002-574
Barclays Bank NY Branch
Account No: [redacted]
A/c name: Barclays Swaps & Options Group, New York

Mestengo Bank Account

ABA: 026-002-574
Barclays Bank NY Branch
Account No: [redacted]
A/c name: Barclays Capital Securities Ltd
FFC: [redacted]
Mestengo Inc

— = Redacted by the Permanent Subcommittee on Investigations

Palomino Bank Accounts

- Palomino Limited BCSL PB Account (Cash)

ABA: 026-002-574
Barclays Bank PLC London
Account No: [redacted]
A/c name: Barclays Capital Securities Ltd
FFC: [redacted]
Palomino Limited Funding Account or,
[redacted]
Palomino Limited Account

- Palomino BCI PB Account

ABA: 021-000-018
BANK OF NEW YORK
Account No: GLA111569/BZM
A/c name: Barclays Capital Inc
FFC: [redacted]
Palomino Limited Account

Prime Brokerage Account Details at Barclays Capital Securities Limited

[redacted] Palomino Limited	[redacted] (MSD id)
[redacted] Palomino Limited - Funding A/C	[redacted] (MSD id)
[redacted] Mestengo	[redacted] (MSD id)

Project Colt

= Redacted by the Permanent Subcommittee on Investigations

2. **Contact List**

PROJECT COLT (Renaissance Technologies)

Working Group List

Thu 14-November-2002

Renaissance Technologies	Name	Phone	Fax	Mobile	E-mail
800 Third Avenue	Mark Silber	1 (212) 829-4490 (w)	1 (212) 758-7136		silber@rentec.com
New York		[redacted]			
NY 10022-7604	Bruce Yablon	1 (212) 829-4496 (w)	1 (212) 758-7136		bruce@rentec.com
Switchboard: 1 (212) 486 6780	Carla Porter	[redacted]			carla@rentec.com

Barclays Capital	Name	Phone	Fax	Mobile	E-mail
200 Park Avenue	Mark D'Andrea	1 (212) 412 7673	1 (212) 412 1775	[redacted]	mark.d'andrea@barcap.com
New York	Marty Malloy	1 (212) 412 2180	1 (212) 412 1704		marty.malloy@barcap.com
New York 10166	James Sixsmith (UK)	44 (0) 20 7773 9191	44 (0) 207 516 9866		james.sixsmith@barcap.com
	Maureen Horn	1 (212) 412 2242			maureen.horn@barclayscapital.com
5 North Colonnade					
Canary Wharf	Sadat Mannan	44 (0) 20 7773 1392	44 (0) 20 7773 1868		sadat.mannan@barcap.com
London, E14 4BB	Jerry Smith	44 (0) 20 7773 4067	44 (0) 20 7773 1868		jerry.smith@barcap.com
Switchboard: (44) 20 7623 2323	Steve Ullman	44 (0) 20 7773 1405	44 (0) 20 7773 1868		steve.ullman@barcap.com
	Jonathan Zenios	44 (0) 20 7773 1923	44 (0) 20 7773 1868		jonathan.zenios@barcap.com

Walkers	Name	Phone	Fax	Mobile	E-mail
Walker House, Mary Street	Julian Black	1 345 914 4219	1 345 949 7886	[redacted]	jblack@walkers.com.ky
P. O. Box 265, George Town	Loren Correia	1 345 914 4219	1 345 949 7886		lcorreia@walkers.com.ky
Grand Cayman, Cayman Islands					

Akin & Gump SHF LLP	Name	Phone	Fax	Mobile	E-mail
590 Madison Avenue	Ron Adee (Corp partner)				radee@AkinGump.com
New York NY 10022	Stephen Jordan (Tax)				SJordan@AkinGump.com
Switchboard: 1 (212) 872 1000	Stuart Leblang (Tax partner)	1 (212) 872 1017	1 (212) 407 3217		sleblang@akingump.com
	Roman V. Troitsky (Corp)	1 (212) 872-8052	1 (212) 872 8202		rtroitsky@AkinGump.com

Coudert Brothers LLP	Name	Phone	Fax	Mobile	E-mail
1114 Avenue of the Americas	Marilyn Okoshi (Corp)	1 (212) 626 4756	1 (212) 646 4120		okoshim@coudert.com
New York, NY 10036	Ed Cohen (Tax Partner)		1 (212) 646 4120		
Switchboard: 1 (212) 626-4400	Zvi Hahn (Tax)	1 (212) 626 4653	1 (212) 646 4120		hahnz@coudert.com
Fax: 1 (212) 626-4120					

Entity Services Group LLC	Name	Phone	Fax	Mobile	E-mail
(provides directors for Mestengo)					
103 Foulk Road, Suite 202	Beth Peoples	1 (302) 654-7584	1 (302) 656-4269		blp@entityservices.com
Wilmington, DE 19803					

BARCLAYS CAPITAL

745 Seventh Ave
New York NY 10019
USA

Tel: (212) 526-7000

January 5, 2010

Kenneth J. Burke
Securities Compliance Examiner
U.S. Securities and Exchange Commission
3 World Financial Center
Suite 4300
New York, NY 10281

Re: Follow-up to meeting regarding Colt Transaction Summary

Dear Mr. Burke:

This letter is being provided on behalf of Barclays Capital Inc. ("Barclays" or the "Firm") in response to the meeting held on December 18, 2009, which covered the Colt Transaction Summary. The Commission requested that Barclays provide additional details relating to the following: **(a)** fees paid to Renaissance Technologies ("RenTec"), **(b)** information barriers within the Firm, **(c)** monitoring of the transaction on a day-to-day basis, and **(d)** certain Bluesheets activity.

Please find the Firm's response below and in the attached exhibits.

(a) The Commission requested that Barclays confirm the basis of the fees paid to RenTec under the investment management agreement. Per the agreement, the fee is a fixed annual fee of $615,000.

(b) The Commission requested that Barclays provide a summary regarding information barriers and a description of the Quantitative Prime Brokerage ("QPB") Service Desk. The QPB Service Desk is a component of the Prime Services Division within Barclays. The primary product offering of the QPB Service Desk is to provide low-latency electronic access to U.S. equity and options markets via the SubM trading system, which offers sub-millisecond internal latency for execution. Clients enter orders electronically via third-party front end trading applications or via proprietary trading engines. The desk then routes those orders to exchanges, Alternative Trading Systems (ATSs) and Electronic Communications Networks (ECNs).

Barclays employs several methods to maintain the information barriers between the QPB Service Desk and the Equities Division, which includes the Firm's market making desks and proprietary trading desks. The methods used to implement and maintain these information barriers include physical, technological, and organizational separation.

Physical Separation:
Barclays physically separates the QPB Service Desk, market making traders, and proprietary trading desks. To this end, the Firm's QPB Service Desk, customer facilitation desks, and proprietary trading desks are all located on separate floors.

Technological Segregation:
As mentioned above, Barclays maintains a discrete trading system for QPB customers; SubM is completely segregated from the Equities Division and is targeted at a small subset of clients that require a low latency solution. SubM is separate and distinct from systems used by the market making desk and proprietary trading desks, which use a variety of other systems, both in-house and third-party.

Furthermore, the SubM client execution data is stored in databases only accessible to authorized support personnel. While Barclays does use some common tools for support, risk management, and regulatory reporting that are shared across divisions, data access is strictly controlled by a robust entitlement management system from GUI perspective. The underlining database is accessible only by IT support and control personnel (e.g. Compliance).

Organizational Structure:
To further reinforce information barriers between trading units, the QPB Service Desk maintains an independent organizational structure from the customer facilitation and proprietary trading desks. There are separate management reporting lines, profit and loss attributions, performance reviews, COOs, product controllers, and operational support for each group.

Generally, the Firm's employees are required to read and acknowledge the Global Code of Conduct policy and the Global Confidential Information and Chinese Walls Policy which specifically address, among other matters, information barriers and the handling of confidential client information. Employees are regularly educated on the above policies and employees who do not abide by all of the foregoing policies may face disciplinary action, up to and including termination.

[APG]

(c) The Commission requested that Barclays provide a brief description of the monitoring of the Colt transaction on a day-to-day basis. On a daily basis, the QPB Service Desk reviews the "Palomino Risk Report", which is a multifaceted review that incorporates the following:

(A) Displays an exception if there are any trades in prohibited countries
(B) Shows concentrations in a specific ticker
(C) Shows the overall percentage of the account equity in any one ticker
(D) Shows any concentration in a ticker over a number of trading days
(E) Highlights any breaches of sector limits
(F) Confirms that there is no activity in Barclays-related securities
(G) Confirms that there is no activity in securities on Barclays restricted list
(H) Displays the ratio of Long Market Value versus Short Market Value

In addition, Equities Compliance performs several daily reviews which cover all SubM flow, including that of RenTec. Please see attached **Exhibit A** which provides a brief description of each report.

(d) The Commission requested that Barclays provide an explanation for certain Bluesheets activity highlighted on a report provided by the Commission at the meeting. The relevant pages of the report have been reproduced in attached **Exhibit** B and numbered 1 through 5 for ease of reference.

1) **[redacted] – PB Stat Arb Offset Account**
This account is a street side average price account for all QPB clients. All client trades executed via SubM will be average priced via this account prior to allocation.

2) **[redacted] – Renaissance Technologies Flip Account**
This account is RenTec's execution account that "flips" executions from DTC box 0229 (legacy Lehman) to 5101 (legacy Barclays) for clearing purposes. All RenTec trades executed via SubM will be allocated via this account.

3) **[redacted] – Palomino Limited**
This account is RenTec's clearing account in DTC box 5101. All trades from the flip account will ultimately be booked to this account to facilitate settlement.

4) **[redacted] – B/D Retail Wash**
This account is an average price account for Broker-Dealer clients that trade with the Equities Division. This flow is unrelated to any QPB client flow, is traded on a separate system, and any trades in the same ticker are purely coincidental.

[redacted] = Redacted by the Permanent Subcommittee on Investigations

[APG]

5) [redacted] – **Quants 7**
This account is a principal trading account for the Algorithmic trading desk ("nQuant"), a proprietary trading desk within the Equities Division. This flow is unrelated to any QPB client flow, is traded on a separate system, and any trades in the same ticker are purely coincidental.

We hope this letter is responsive to your queries. Should you have any questions or require additional information, please do not hesitate to contact me at (212) 526-1088.

Very truly yours,

Thomas McManus
Managing Director

cc: Marty Malloy, Managing Director
Graham Wade, Managing Director
Abhinav Shah, Director
Nicholas Sahadi, Vice President

▬ = **Redacted by the Permanent Subcommittee on Investigations**

[APG]

From: Ul Islam, Noor: Market Risk (LDN) </o=bzw/ou=europe/cn=recipients/cn=ulnoor>
Sent: Fri Nov 23 2012 14:30:54 EST
To: Kim, Eugene: Structuring (NYK) </o=bzw/ou=exchange administrative group (fydibohf23spdlt)/cn=recipients/cn=kimeuge1>
CC: Mammola, Paolo: Risk (LDN) </o=bzw/ou=europe/cn=recipients/cn=mammolap>;Gargano, Cindy: Credit Risk (NYK) </o=bzw/ou=usa/cn=recipients/cn=new york/cn=1garganoc>;Brown, Gerry: Risk (NYK) </o=bzw/ou=usa/cn=recipients/cn=browgerr>;Winter, Daniel: Risk (NYK) </o=bzw/ou=usa/cn=recipients/cn=wintedan>;Dyer, Lansford: Risk (NYK) </o=bzw/ou=usa/cn=nyk ad users/cn=users/cn=dyerlan>;Levy, Chris: Structuring (NYK) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=levyc>;Asaf, Lydia: Structuring (NYK) </o=bzw/ou=exchange administrative group (fydibohf23spdlt)/cn=recipients/cn=asaflydi>;Ul Islam, Noor: Market Risk (LDN) </o=bzw/ou=europe/cn=recipients/cn=ulnoor>
Subject: RE: Colt - Market Risk / Credit Risk
Attachments: image002.png;image001.png

Importance: Normal
Priority: Normal
Sensitivity: None

Hi Eugene

Further to our conversation, I can confirm the notification of the two new options totalling $400,000,000 are approved for Risk. The three options of the six outstanding that may be exercised in December will likely not cause a breach (as per Lansford's analysis below), but this will need to be confirmed closer to the time and approval given for them then.

Kind regards

Noor

From: Kim, Eugene: Structuring (NYK)
Sent: Friday, November 23, 2012 1:57 PM
To: Ul Islam, Noor: Market Risk (LDN)
Cc: Mammola, Paolo: Risk (LDN); Gargano, Cindy: Credit Risk (NYK); Brown, Gerry: Risk (NYK); Winter, Daniel: Risk (NYK); Dyer, Lansford: Risk (NYK); Levy, Chris: Structuring (NYK); Asaf, Lydia: Structuring (NYK)
Subject: Colt - Market Risk / Credit Risk
Importance: High

Noor,

Please let us know if you have any comments, if you would like to have a call, or if you are okay proceeding with the transaction from a Market Risk and a Credit Risk perspective.

Best regards,

Eugene

From: Dyer, Lansford: Risk (NYK)
Sent: Wednesday, November 21, 2012 11:34 AM
To: Kim, Eugene: Structuring (NYK)
Cc: Mammola, Paolo: Risk (LDN); Gargano, Cindy: Credit Risk (NYK); Brown, Gerry: Risk (NYK); Winter, Daniel: Risk (NYK); Levy, Chris: Structuring (NYK); Asaf, Lydia: Structuring (NYK); Ul Islam, Noor: Market Risk (LDN)
Subject: RE: Colt - Market Risk / Credit Risk

Hi Eugene, I recommend approving the addition of the new option in November and exercise of the three options in December, as based on the pro forma analysis outlined in the following table, the proposed transactions will not breach any of the Trading Limits outlined in the IMA and summarized in the attached One Sheet.

Lansford Dyer • Barclays • Risk • Work: 212 412 3576 • Mobile: [redacted] Email: lansford.dyer@barclays.com

From: Ul Islam, Noor: Market Risk (LDN)
Sent: Tuesday, November 20, 2012 5:06 PM
To: Kim, Eugene: Structuring (NYK)
Cc: Mammola, Paolo: Risk (LDN); Gargano, Cindy: Credit Risk (NYK); Brown, Gerry: Risk (NYK); Winter, Daniel: Risk (NYK); Levy, Chris: Structuring (NYK); Asaf, Lydia: Structuring (NYK); Dyer, Lansford: Risk (NYK); Ul Islam, Noor: Market Risk (LDN)
Subject: RE: Colt - Market Risk / Credit Risk

[redacted] = Redacted by the Permanent Subcommittee on Investigations

I'll be in touch too.

Noor

From: Dyer, Lansford: Risk (NYK)
Sent: Tuesday, November 20, 2012 10:05 PM
To: Kim, Eugene: Structuring (NYK); Ul Islam, Noor: Market Risk (LDN)
Cc: Mammola, Paolo: Risk (LDN); Gargano, Cindy: Credit Risk (NYK); Brown, Gerry: Risk (NYK); Winter, Daniel: Risk (NYK); Levy, Chris: Structuring (NYK); Asaf, Lydia: Structuring (NYK)
Subject: RE: Colt - Market Risk / Credit Risk

Eugene, I'll send you the credit risk opinion in the morning after I summarize the outstanding options, pro forma for the new option and the proposed exercises.

Lansford Dyer • Barclays • Risk • Work: 212 412 3576 • Mobile: [redacted] • Email: lansford.dyer@barclays.com

From: Kim, Eugene: Structuring (NYK)
Sent: Tuesday, November 20, 2012 2:10 PM
To: Ul Islam, Noor: Market Risk (LDN)
Cc: Dyer, Lansford: Risk (NYK); Mammola, Paolo: Risk (LDN); Gargano, Cindy: Credit Risk (NYK); Brown, Gerry: Risk (NYK); Winter, Daniel: Risk (NYK); Levy, Chris: Structuring (NYK); Asaf, Lydia: Structuring (NYK)
Subject: Colt - Market Risk / Credit Risk

Noor,

Please find attached a revised Approvals Notification (and a redline) reflecting the following:

· We were informed yesterday that Renaissance would like to enter into an additional option (i.e., two options rather than one) on November 27 for a combined premium of $400m. There are no other changes to the options. (There are six options currently outstanding with an aggregate value of $3.1bn. The expected exercise of three options in December and the addition of the two new options will, on net, decrease the aggregate value to $1.5bn.)

· We will be notifying the Tax Review Committee (Matt Hammerstein, Mark Harding, Robert Le Blanc, and Chris Lucas) prior to execution.

▬ = Redacted by the Permanent Subcommittee on Investigations

Please let us know by Friday morning (NY time) if you have any comments, if you would like to have a call, or if you are okay proceeding with the transaction from a Market Risk and a Credit Risk perspective.

Best regards,

Eugene Kim

Barclays | New York

Office: +1.212.526.0275 | Mobile: [redacted] eugene.kim@barclays.com

From: Asaf, Lydia: Structuring (NYK)
Sent: Thursday, November 15, 2012 6:21 PM
To: Ul Islam, Noor: Market Risk (LDN); Dyer, Lansford: Risk (NYK)
Cc: Mammola, Paolo: Risk (LDN); Gargano, Cindy: Credit Risk (NYK); Brown, Gerry: Risk (NYK); Winter, Daniel: Risk (NYK); Levy, Chris: Structuring (NYK); Kim, Eugene: Structuring (NYK)
Subject: Colt - Market Risk / Credit Risk

Noor,

Renaissance plans to enter into a new Colt option transaction on November 27, 2012.

This is a repeat transaction and will have substantially the same terms as the prior Colt option transaction.

Please find attached a draft Approvals Notification for the transaction. Please let me know if you have any comments, if you would like to have a call, or if you are okay proceeding with the transaction from a Market Risk and a Credit Risk perspective.

Please also note that Renaissance plans to exercise options AAA, BBB and CCC in December 2012.

Best regards,

Lydia Asaf

Barclays | New York

Office: +1.212.526.6115 | Mobile: [redacted] | lydia.asaf@barclays.com
<mailto:eugene.kim@barclays.com>

From: McPherson, Hamish: Structuring (LDN) </o=bzw/ou=usa/cn=nyk ad users/cn=users/cn=mcphersh>
Sent: Wed Jul 02 2008 10:29:07 EDT
To: Medak, Rafal: Financial Control (LDN) </o=bzw/ou=europe/cn=recipients/cn=exchange recipients/cn=medakr>
CC:
Subject: FW: Palomino's PB accounts
Attachments:

Importance: Normal
Priority: Normal
Sensitivity: None

Rafal

Please see below.

Hamish

Legal Ring-fencing
Palomino Limited has two prime brokerage accounts (one with BCI and one with BCSL), which are managed on a day to day basis by Renaissance.
In H1 2008, both prime brokerage accounts were legally ring-fenced such that Palomino's exposure to such accounts became limited to the equity invested in such accounts at any time (similar to an investment in a limited liability corporation).
This ring-fencing is documented directly in the prime brokerage agreements by restricting BCI/BCSL's recourse to the Pledged Assets only (i.e. the long positions in the PB accounts). As a result in the event that the value of the PB Accounts falls below $0 (i.e. any debt plus short positions exceeds the cash plus long positions), then Palomino will not be exposed to such loss because the provider of the leverage (i.e. BCI/BCSL) only has recourse against the assets in the accounts.

PB Agreement:
"Notwithstanding anything to the contrary contained in this Agreement or the agreement related to the Related Accounts or any schedule, annex or exhibit hereto or thereto, or any other document or agreement issued or delivered in connection herewith or therewith, BCI's recourse against Customer arising out of Customer's liabilities or other obligations incurred under or otherwise arising out of the transactions contemplated by this Agreement or the agreement related to the Related Accounts (including, without limitation, the obligation to repay Loans, deliver margin, pay interest and other amounts, and indemnify BCI under Clause 7.9 and otherwise), shall be limited to the value of the Pledged Assets maintained on balance in or otherwise credited to the Accounts; provided, that BCI shall be entitled to name Customer in any action or proceeding so long as the relief sought or obtained therein is restricted to recourse against such Pledged Assets."

Conclusion
The PB Accounts should now be accounted for as a new entity/silo and its consolidation determined on the basis of control in accordance with IAS27 or SIC-12.

Options
Badger Holdings L.P. (part of the Renaissance Medallion group) holds a series of cash-settled options, written by BBPLC, referenced directly to the value of PB Accounts (i.e. the value of the equity held by Palomino).
BBPLC in turn holds identical options written by Palomino and Palomino uses the cash proceeds from the

premium to invest equity in the PB Accounts.
Therefore any gain or loss in the value of Palomino's investment in the PB Accounts is passed-on 100% to Badger under the Options (via BBPLC).
Note that the Options expire unexercised to the extent that the value of the PB Accounts falls to below 10% of the initial equity (i.e. premium of the option).

Option Confirm :
"Calculation Period Return" means, in respect of each Calculation Period, the sum of the corresponding (i) Basket Gains, minus (ii) Basket Losses, minus (iii) Basket Cost.

"Basket Gains" means, in respect of each Calculation Period, the sum of all (i) gains realized in respect of Designated Positions at any time during the Calculation Period, (ii) unrealized gains in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the close of the Calculation Period (where the unrealized gain in respect of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on the last day of the Calculation Period), (iii) dividends accrued (based on ex-dividend dates) at any time during the Calculation Period in respect of long Designated Positions, adjusted as set forth in Section 5 below, and (iv) interest and other income received or accrued on or in respect of Designated Positions at any time during the Calculation Period.

"Basket Losses" means, in respect of each Calculation Period, the sum of all (i) losses realized in respect of Designated Positions at any time during the Calculation Period, (ii) unrealized losses in respect of Designated Positions credited to, included or deemed included in the Reference Accounts at the close of the Calculation Period (where the unrealized loss in respect of each such Designated Position is determined at the Valuation Time applicable to such Designated Position on the last day of the Calculation Period), and (iii) dividend and interest equivalent amounts paid or accrued (based on ex-dividend and ex-interest dates, as applicable) at any time during the Calculation Period in respect of short Designated Positions, adjusted as set forth in Section 5 below.

"Basket Cost" means, in respect of each Calculation Period, the (positive or negative) sum of (i) all commissions and fees in connection with the execution of transactions to acquire, create, dispose of or otherwise terminate Designated Positions, to the extent authorized under the Investment Management Agreement (excluding any fees paid to the Advisor and any interest and other financing charges), paid or accrued in connection with the trading of Designated Positions in accordance with the Investment Management Agreement during the Calculation Period and any expenses reimbursed by Client to the Advisor in accordance with the Investment Management Agreement, plus (ii) the Debit Amount, plus (iii) the Stock Borrow Fee Amount, minus (iv) any realized and unrealized gains (determined at the close of the Calculation Period), interest and other income received or accrued in respect of cash, property or other financial positions credited to, included or deemed included in the Reference Accounts or otherwise credited to the Reference Accounts (excluding gain and income items included in Basket Gains) at any time during the Calculation Period.

Conclusions

Generally, Palomino and Barclays do not share in any gains in the value of the account, because any such gains are paid away to Badger under the Options.
Palomino is not exposed to any losses in the value of the account because (i) the amount it is required to pay under the options reduces in line with the reduction in value of the PB Accounts and (ii) the accounts are legally ring-fenced so Palomino is not exposed to losses in the accounts below the value of its investment.
Barclays does obtain a benefit from the strcuture in the form of standard prime brokerage fees, which would exist even if the client held the accounts directly.
Barclays (BCI/BCSL) is exposed to GAP risk in the accounts to the extent that the value of the accounts falls below $0, because its recourse is legally restricted only to the assets in the account. Note a similar situation would arise in a standard prime brokerage arrangement where the client had invested through an LLC.
Palomino has some potential to benefit to the extent that the value of the PB Accounts reduces to between 0-

10% of the initial value, because in this case the Options expire unexercised, but the equity in the PB Accounts still has some value.

Example Numbers
The table below shows the premium of previous options and the exercise amount as a % of the premium. Note that Barclays (as prime broker) only loses money if the value of the accounts falls below $0, and Palomino only gains if the accounts are between 0-10% of the premium.

TRADE DATE EXERCISE DATE PREMIUM EXERCISE VALUE
October 1, 2002 January 13, 2004 125 418%
May 9, 2003 May 28, 2004 250 295%
January 14, 2004 September 30, 2004 40 135%
January 14, 2004 September 30, 2004 40 135%
June 1, 2004 September 30, 2004 125 100%
June 1, 2004 September 30, 2004 125 100%
June 1, 2004 September 30, 2004 125 100%
June 1, 2004 September 30, 2004 125 100%
October 1, 2004 December 19, 2005 125 294%
October 1, 2004 December 19, 2005 125 294%
October 1, 2004 August 16, 2006 125 558%
October 1, 2004 November 30, 2006 125 770%
December 21, 2005 March 7, 2007 30 353%
December 21, 2005 March 7, 2007 40 353%
December 21, 2005 June 26, 2007 30 480%
December 21, 2005 June 26, 2007 70 480%
December 6, 2006 December 19, 2007 125 337%
December 6, 2006 December 19, 2007 160 337%
December 6, 2006 April 24, 2008 205 482%
December 6, 2006 December 19, 2007 410 337%
June 22, 2007 August 22, 2007 275 101%

Accounting Analysis
The PB Accounts should be accounted for as a new entity/silo with consolidation determined on the basis of control.
The PB Accounts are managed by Renaissance and neither Barclays nor Palomino benefits from gains in the accounts or is exposed to losses in the accounts, other than in the circumstances outlined above.
As a result, Renaissance (via Badger) and not Barclays should consolidate the PB Accounts.

———

From: nidhi.bajaj@uk.pwc.com [mailto:nidhi.bajaj@uk.pwc.com]
Sent: 01 July 2008 21:35

To: Medak, Rafal: Financial Control (LDN)
Cc: McPherson, Hamish: Structuring (LDN); mat.falconer@uk.pwc.com
Subject: Re: Palomino's PB accounts

Rafal

As per our earlier conversation, the key points we would like to discuss on Thursday are :
- What steps have been taken to ensure that there is no cross-contamination ie how is the legal ringfencing implemented, especially with respect to the option?
- Is the internal option with BB with Palomino or the PB accounts? If the former, then how does it form part of the ringfencing?
- Could you pull out some of the numbers relating to the amounts paid to RenTec over the last few years ie how close have you come to option strikeout?

Mat and I are meeting Paul and Hugh at 9am on Thursday, so will come over for a catchup with you when that ends, if that's ok with you. If not, please do suggest another time that works for you.

Kind Regards
Nidhi.

Deutsche Bank
Deutsche Bank AG London[1]
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Telephone: 1-212-250-2500

December 16, 2007

[redacted] = Redacted by the Permanent Subcommittee on Investigations

MOSEL EQUITIES L.P.
c/o Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022
Attn: Mark Silber / Carla Volpe Porter
Tel: (212) 486-6780
Fax: (212) 758-7136

"OUTPERFORMANCE" BARRIER OPTION TRANSACTION – Cash Settled, Linear Amortizing Premium – DBSI Reference No. [redacted]

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the Transaction entered into between **DEUTSCHE BANK AG, LONDON BRANCH** ("Party A") and **MOSEL EQUITIES L.P.** ("Party B") on the Trade Date specified below (the "Transaction"). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below. This Confirmation constitutes the entire agreement and understanding of the parties with respect to the subject matter and terms of the Transaction and supersedes all prior or contemporaneous written or oral communications with respect thereto.

DEUTSCHE BANK AG IS NOT REGISTERED AS A BROKER DEALER UNDER THE U.S. SECURITIES EXCHANGE ACT OF 1934. DEUTSCHE BANK SECURITIES INC. ("DBSI" or "DESIGNATED AGENT") HAS ACTED SOLELY AS AGENT IN CONNECTION WITH THIS TRANSACTION AND HAS NO OBLIGATION, BY WAY OF ISSUANCE, ENDORSEMENT, GUARANTEE OR OTHERWISE WITH RESPECT TO THE PERFORMANCE OF EITHER PARTY UNDER THE TRANSACTION. DEUTSCHE BANK AG, LONDON BRANCH IS NOT A MEMBER OF THE SECURITIES INVESTOR PROTECTION CORPORATION (SIPC).

The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 1996 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc. are incorporated into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern. In the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern. For purposes of the Equity Definitions, the Transaction shall constitute an "Index Option Transaction".

[1] Deutsche Bank AG is regulated by the FSA for the conduct of designated investment business in the UK, is a member of the London Stock Exchange and is a limited liability company incorporated in the Federal Republic of Germany HRB No. 30 000 District Court of Frankfurt am Main; Branch Registration No. in England and Wales BR000005, Registered address: Winchester House, 1 Great Winchester Street, London EC2N 2DB, Telephone: +44 20 7545 8000.

This Confirmation constitutes a "Confirmation" as referred to in, and supplements, forms a part of and is subject to, the ISDA Master Agreement, including the Schedule and Credit Support Annex thereto dated as of November 15, 2007 as amended and supplemented from time to time (the "Agreement"), between you and Deutsche Bank AG. All provisions contained in the Agreement govern this Confirmation except as expressly modified below.

"Loss" payment measure and "Second Method" payment method shall apply to this Transaction.

The terms of the particular Transaction to which the Confirmation relates are as follows:

General Terms

Trade Date:	December 17, 2007
Effective Date:	December 18, 2007
Option Type:	Call
Option Style:	American
Buyer:	Party B
Seller:	Party A
Index:	The NAV Index Level
Basket:	A record maintained by the Calculation Agent and entitled "Basket A", identifying, at all times, all of the positions that result or that would result from transactions (whether or not actually executed) designated by the Investment Advisor (as defined below) to be included in such record in accordance with the Investment Guidelines and Restrictions in the Advisor Agreement (as defined below), as they may be amended from time to time ("Basket Positions"). The Basket may be divided, at any time, into sub-records, each constituting either a Trading Basket or a Term Basket, as defined below. Each Term Basket shall have a corresponding Trading Basket in which the country and currency are the same as those of the relevant Term Basket, provided that a Trading Basket may or may not have a corresponding Term Basket.
Trading Basket:	A record maintained by the Calculation Agent in respect of which all of the following characteristics have been specified: (i) a country and (ii) a currency, and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record.
Term Basket:	A record maintained by the Calculation Agent in respect

	of which all of the following characteristics have been specified: (i) a country, (ii) a currency, (iii) the date on which such record is established (the "Start Date"), (iv) the relevant LIBOR Rate (as defined in Section 2 herein and (v) the date on which all of the Basket Positions included in such record are scheduled to be liquidated (the "End Date"), and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record.
Term Basket Duration:	In respect of each Term Basket, the number of calendar days included in the period commencing on, but excluding, the Start Date corresponding to such Term Basket, and ending on, and including, the earlier of (i) the End Date corresponding to such Term Basket, or (ii) the Expiration Date.
Exchange:	In respect of each Basket Position or underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which such Basket Position or underlying security, as applicable, is actively traded or quoted.
Related Exchange(s):	In respect of each Basket Position or underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which futures and/or options contracts with respect to such Basket Position or underlying security are actively traded or quoted.
Business Day:	New York
Business Day Convention:	Following Business Day.

Transaction Details

Number of Options:	One
Notional Amount:	USD1,170,000,000
Strike Price:	100
Premium:	USD130,000,000, of which USD53,950,000constitutes and is referred to herein as "Amortizable Premium" and USD76,050,000 constitutes and is referred to herein as "Fixed Premium".
Premium Payment Date:	The third (3rd) Business Day immediately following the Trade Date.
Calculation Agent:	Designated Agent

Procedure for Exercise

Commencement Date:	The Trade Date
Exercise Period:	The period commencing on, and including, the

	Commencement Date and ending at the Expiration Time on the Expiration Date.
Latest Exercise Time:	5 p.m. (local time in New York City).
Exercise Date:	The Exchange Business Day immediately following the date on which Buyer delivers to Seller's Agent a written notice of exercise.
Expiration Time:	5 p.m. (local time in New York City).
Expiration Date:	The date which is the earliest of: (i) June 16, 2011, (the "Scheduled Expiration Date"), (ii) the first date on which the Barrier NAV Index Level is at or below the Expiration Price, and (iii) the date on which a valid Early Expiration Notice, which is not subsequently revoked in accordance with the provisions set forth below, is promptly delivered to the Buyer by the Seller. (Each of the events and dates described in subsections (ii) and (iii) above shall be referred to herein as an "Early Termination Event" and an "Early Termination Date", respectively).
Automatic Exercise:	Applicable. This Transaction shall be deemed to be automatically exercised on the Expiration Date to the extent that the Option hereunder has not been previously exercised or terminated.
Seller's Agent's Telephone Number and Facsimile Number and Contact Details for Purpose of Giving Notice:	Seller's Agent's Name: Satish Ramakrishna Specified Location: 60 Wall Street, 4th Floor, New York, NY 10005 Tel: (212) 250-4928 Fax: (212) 797-9358

Valuation

Valuation Time:	5 p.m. (local time in New York City).
Valuation Date(s):	Any Exchange Business Day on each relevant Exchange during the Exercise Period.
Final Valuation Date:	The last Pricing Day in the Pricing Period.
Pricing Period:	The period commencing on, and including, the Exercise Date and ending on, and including, the earlier of (i) the third (3rd) Pricing Day immediately following the Exercise Date, and (ii) the 14th Business Day immediately following the Exercise Date; provided that if an Early Termination Event has occurred and the Seller has delivered to the Buyer an Early Expiration Notice and the Seller has not received a Buyer Termination Notice (as defined in Section 1 herein) from the Buyer, the commencement of the Pricing Period will be as determined by the Calculation Agent at such time, but in no event later than the Business Day immediately

	Buyer Termination Notice.
Valuation Method:	All Basket Positions shall be valued as set forth on Annex I hereto.
Pricing Day:	An Exchange Business Day on which a Market Disruption Event has not occurred.
Settlement Terms:	
Cash Settlement:	Applicable
NAV Amount:	As of the relevant Valuation Date, an amount (which may be a positive or negative number) equal to the product of (i) the Notional Amount, and (ii) the quotient obtained by dividing (A) the NAV Index Level **minus** 100, by (B) 100.
NAV Index Level:	As of the Trade Date, the Strike Price; and as of any Valuation Date during the Exercise Period, an amount (which may be a positive or negative number) determined as follows: (i) Strike Price, **plus** (ii) Basket Base Performance **divided by** the Notional Amount and **multiplied by one hundred (100).**
Barrier NAV Amount:	As of each Exchange Business Day during the Term of this Transaction, an amount (which may be a positive or negative number) equal to the NAV Amount **minus** the Total Amortized Premium.
Barrier NAV Index Level:	As of the Trade Date, the Strike Price; and as of any Valuation Date during the Exercise Period, an amount (which may be a positive or negative number) determined as follows: (i) Strike Price, **plus** (ii) Barrier NAV Amount **divided by** the Notional Amount and **multiplied by one hundred (100)**
Expiration Price:	93.5
Cash Settlement Amount:	The **greater of** (i) zero, and (ii) an amount, as calculated by the Calculation Agent, equal to the **sum of** (A) the product of (1) NAV Index Level **minus** 100, **divided by** (2) 100, and **multiplied by** (3) the Notional Amount, **plus** (B) the Premium Settlement Amount (defined below).
Cash Settlement Payment Date:	The third (3rd) Exchange Business Day immediately following the Final Valuation Date.
Adjustments For Potential Adjustment Events:	Calculation Agent Adjustment (as defined below)
Consequences of Merger Events:	Calculation Agent Adjustment (as defined below)

Nationalization or Insolvency:	Calculation Agent Adjustment (as defined below)
Calculation Agent Adjustment:	For purposes of Adjustments for Potential Adjustment Events, Consequences of Merger Events and Nationalization or Insolvency, all with respect to the relevant Basket Positions which comprise the Basket from time to time, the Calculation Agent will make such adjustments to the Share price, the then applicable Basket Base Performance, the NAV Index Level and any other variable relevant to the exercise, settlement or payment terms of the Transaction, as the Calculation Agent, acting in good faith and commercially reasonable manner, determines appropriate, with reference (as deemed appropriate) to any relevant adjustment rules and precedents in effect for any primary options exchange for exchange-traded options contracts on the relevant affected Basket Positions and in consultation with Party B.

Additional Terms – Early Expiration Event / Early Termination Event

The following additional terms shall apply to this Transaction.

1. "Early Expiration Event". Notwithstanding anything set forth herein to the contrary, if, at any time during the term of this Transaction, the Calculation Agent reasonably determines that the Barrier NAV Index Level is less than or equal to 97.7 (the "Expiration Threshold Price") but above the Expiration Price, an "Early Expiration Event" shall be deemed to have occurred, and the Seller shall have the right to deliver to the Buyer an Early Expiration Notice (defined below) pursuant to the terms and conditions set forth herein.

Upon the occurrence of an Early Expiration Event, the Seller shall have the right, but not the obligation, to deliver to the Buyer, promptly after the occurrence of such Early Expiration Event, an Early Expiration Notice (defined below).

"Early Expiration Notice" shall mean a notice in the form of Annex II hereto, or other communication of the details included in the form attached hereto as Annex II, delivered by the Seller to the Buyer by telephone or facsimile communication as determined appropriate under the circumstances by Seller, whereby Seller has made its best efforts (i) to place such telephone call to Buyer and (ii) to transmit such Notice by facsimile communication and (iii) by e-mail, in all cases between the hours of 9 a.m. and 5 p.m. (New York time) on any Exchange Business Day and irrespective of whether such notice or communication is actually received by Buyer. **The Early Expiration Notice may be delivered prior to (but in immediate anticipation of) an Early Expiration Event and the Seller reserves the right to revoke such Early Expiration Notice (including any Buyer Termination Notice delivered in connection therewith) if the Calculation Agent determines that the Barrier NAV Index Level is above the Expiration Threshold Price; unless the Buyer has notified the Seller of its intention not to deliver the Buyer Termination Notice, in which case the Early Expiration Notice will remain in effect.**

If the Seller has delivered an Early Expiration Notice to the Buyer, the Buyer shall immediately (i) provide the Seller with a notice in the form specified in Annex III (the "Buyer Termination Notice") or (ii) inform the Seller of its intention not to provide the Seller with the Buyer Termination Notice.

If an Early Termination Event has occurred and the Buyer either fails immediately to act in accordance with the preceding paragraph or informs the Seller of its intention not to provide the Seller with the Buyer Termination Notice, the Seller shall, on the applicable Cash Settlement Payment Date, pay to the Buyer the Cash Settlement Amount, if any, in accordance with the Valuation and Settlement Terms set forth above for this Transaction.

If the Buyer delivers to the Seller the Buyer Termination Notice and such notice is not subsequently revoked in accordance with the provisions set forth above, the Buyer (or an affiliate of the Buyer reasonably acceptable to the Seller) shall promptly trade with the Seller all of the Basket Positions such that after the transfer there are no long or short Basket Positions remaining. The consideration for such transfer shall be based on the then current market values of the Basket Positions; provided that in the event that the such market values result in a Barrier NAV Index Level lower than the Expiration Price, the Calculation Agent shall have the right to assign such other values to the Basket Positions in order, and to the extent necessary, to cause the Barrier NAV Index Level immediately following such trade of all the Basket Positions to equal the Expiration Price.

2. Further Definitions:

"Premium Settlement Amount" means the original Premium **minus** the Total Amortized Premium **minus** **USD650,000**

"Total Amortized Premium" means the sum of the Amortized Daily Premium for each calendar day from but excluding the Trade Date to and including the **earliest of** any date of determination, the Exercise Date the Scheduled Expiration Date and/or the Early Termination Date.

"Amortized Daily Premium" means Amortizable Premium **divided** by the total number of days in the Exercise Period (assuming the Exercise Period ends on the Scheduled Expiration Date).

The Basket--

"Basket Base Performance" means the sum (expressed in USD) of (i) Basket Gains and Losses **plus** (ii) Basket Income and Expenses.

"Basket Gains and Losses" means the sum (expressed in USD) of (i) realized and unrealized gains in respect of the Basket Positions **minus** (ii) realized and unrealized losses in respect of the Basket Positions.

"Basket Income and Expenses" means (i) the sum, expressed in USD, of (A) dividend income (determined based on ex-dividend dates which have occurred within the Exercise Period) net of non-U.S. withholding taxes (as determined in good faith by Party A) and any U.S. withholding tax imposed as a result of the occurrence of any of the events described in the "Additional Tax Event" provisions set forth below (as determined in good faith by Party A), **plus** (B) interest income (on an accrual basis), **plus** (C) the product of (x) the Rebate Share Value **multiplied** by (y) either the relevant Debit Rate (as defined below) or, in the case of any Hard-to-Borrow Shares, the actual rebate rate received, **plus** (D) Total Amortized Premium (as of any date of determination) **plus** (E) total interest income received and receivable at the relevant Debit Rate (as defined below)on the Basket Credit Balance (as defined below), **plus** (F) all other income enumerated in the Basket Performance Report, **minus** (ii) the sum of (A) total accrued and paid interest expense at the Debit Rate (as defined below) on the Basket Debit Balance (defined below), **plus** (B) payments in lieu of dividends (determined based on ex-dividend dates which have then occurred within the Exercise Period), grossed up for non-U.S. withholding taxes, if any (as determined in good faith by Party A), and any U.S. withholding tax imposed as a result of the occurrence of any of the events described in the "Additional Tax Event" provisions set forth below (as determined in good faith by Party A), **plus** (C) interest expenses excluding accrued interest expenses on Basket Debit Balance, **plus** (D) other expenses enumerated in the Basket Performance Report.

"Basket Performance Report" means a periodic transaction report prepared and compiled by the Calculation Agent and agreed by the Investment Advisor setting forth (among other things) the Basket Base Performance for the relevant Valuation Date. The most current Basket Performance Report as of any date shall be available to Buyer upon request.

"Debit Rate" means the sum of (i) the Overnight Rate (as defined below) for any Trading Basket or the LIBOR Rate (as defined below) for any Term Basket, as the case may be and (ii) for U.S. equity securities, the Spread (as listed in the U.S. Spread Schedule below) or for non-U.S. equity securities, as may be agreed by the parties.

"Overnight Rate" for any Trading Basket means, for USD, as of any day the **FEDOPEN Rate** for such day (or if such day is not a Business Day as of the preceding Business Day) determined by reference to the **FEDOPEN Index** as published by the Federal Reserve and as disseminated via Bloomberg or for any other currency, the recognized overnight rate for such currency as determined by the Calculation Agent, in good faith, or if such overnight rate is not available, the one (1) week rate for such currency as determined by the Calculation Agent, in good faith.

"LIBOR Rate" means, in respect of each Term Basket, the LIBOR interest rate on the Start Date for a Designated Maturity equal to the period that is closest in length to the Term Basket Duration.

U.S. SPREAD SCHEDULE

Type	Spread	Applies to:
Rebate Share Value	Minus 23 basis points (0.23%)	Each Trading Basket and Term Basket
Total interest income received and receivable	Minus 25 basis points (0.25%)	Each Trading Basket and Term Basket
Total accrued and paid interest expense	Plus 23 basis points (0.23%)	
Total accrued and paid interest expense	Plus 0 basis points (0.00%)	

"Hard-to-Borrow Shares" means, as determined by the Calculation Agent, any Shares comprising the Basket from time to time for which the market rebate rate is lower than the normal rebate rate received on "general collateral" shares in connection with a theoretical stock borrow arrangement.

Funding Costs (All Funding Cost determinations shall be made on a Share "settlement date" basis) --

"Basket Debit Balance" means, at any time, the excess, if any, of (A) the aggregate of (i) the "cost basis" of all open Basket Positions, **plus** (ii) the cumulative realized losses on all Basket Positions, **minus**

(iii) the cumulative realized gains on all Basket Positions, **plus** (iv) the absolute value of the Rebate Share Value, **minus** (v) the absolute value of the actual sale price(s) received for all Basket Positions that represent open short sales of equity securities, **and** (vi) all adjustments for any other income or expense allocable to the Basket, **over** (B) the Premium.

"Basket Credit Balance" means, at any time, the excess, if any, of (A) the Premium, **over** (B) the aggregate of (i) the "cost basis" of all open Basket Positions, **plus** (ii) the cumulative realized losses on any Basket Positions, **minus** (iii) the cumulative realized gains on any Basket Positions, **plus** (iv) the absolute value of the Rebate Share Value, **minus** (v) the absolute value of the actual sale price(s) received for all Basket Positions that represent open short sales of equity securities, **and** (vi) all adjustments for any other income or expense allocable to the Basket.

"Rebate Share Value" means, at any time, the market value from time to time of all Basket Positions that represent open short sales of equity securities.

Additional Representations:

Buyer and Seller each make (and as indicated, Buyer makes) the following additional representations:

(i) it is entering into the Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise and no other person has an interest herein.

(ii) it has, in connection with the Transaction (a) the knowledge and sophistication to independently appraise and understand the financial and legal terms and conditions of the Transaction and to assume the economic consequences and risks thereof and has, in fact, done so as a result of arm's length dealings with the other party; (b) to the extent necessary, consulted with its own independent financial, legal or other advisors and has made its own investment, hedging and trading decisions in connection with the Transaction based upon its own judgment and the advice of such advisors and not upon any view expressed by the other party; (c) not relied upon any representation (whether written or oral) of the other party, other than the representations expressly set forth hereunder and is not in any fiduciary relationship with the other party; (d) not obtained from the other party (directly or indirectly through any other person) any advice, counsel or assurances as to the expected or projected success, profitability, performance, results or benefits of the Transaction; and (e) determined to its satisfaction whether or not the rates, prices or amounts and other economic terms of the Transaction and the indicative quotations (if any) provided by the other party reflect those in the relevant market for similar transactions.

(iii) it is not a private customer (as defined in the Rules of The Securities and Futures Authority).

(iv) it understands that the offer and sale of the Options(s) constituting the Transaction is intended to be exempt from registration under the US Securities Act of 1933, as amended (the "Securities Act"), by virtue of Section 4(2) thereof. In furtherance thereof, it represents and warrants that (a) it is experienced in investing in or otherwise entering into options and other financial instruments similar to the Transaction and has determined that the Transaction is a suitable investment for it, and (b) it is an institution which qualifies as an "accredited investor" or "qualified institutional buyer" as such terms are defined under relevant regulations promulgated under the Securities Act.

(v) Buyer understands and specifically acknowledges and agrees that the composition of the Basket as well as the Basket Base Performance shall be under the sole discretionary trading authority of **Renaissance Technologies LLC (f/k/a Renaissance Technologies Corp.)** (the "Investment Advisor"), an investment advisor independent of Seller, which Investment Advisor will manage the composition of the Basket for the account of Seller from time to time pursuant to the Investment Objectives, Guidelines and Restrictions set forth in (and the further terms of) an Amended and Restated Investment Advisory Agreement dated as of **November 16, 2007** between Seller (or its specified affiliate) and the Investment

Advisor, as amended by the parties thereto from time to time (the "Advisor Agreement"). A copy of such Advisor Agreement has been previously made available to, and has been reviewed by, Buyer. Buyer has obtained all the information it desires regarding the Investment Advisor. Buyer agrees and acknowledges that neither Seller nor the Designated Agent take any responsibility for such information. The Buyer has made an independent judgment of the experience and expertise of the Investment Advisor.

(vi) Buyer represents to Seller, that Buyer has sufficient experience with derivative transactions or similar securities or instruments to make a determination to enter into a Transaction linked to the security underlying or referred to in such derivative transactions, and has the capacity and authority to invest directly in the security underlying or referred to in such derivative transactions. This representation shall be deemed to be true and accurate on each day that this Confirmation remains in force and effect.

Additional Provisions:

Investment Advisor: Buyer acknowledges that the Investment Advisor has been engaged by Seller to manage the Basket on a discretionary basis for the account of Seller. While Seller shall in the normal course of its business review Investment Advisor's compliance with the Investment Objectives, Guidelines and Restrictions, Seller shall have no liability to Buyer – and Buyer hereby waives any rights of action against Seller – in connection with Investment Advisor's non-compliance with said Investment Objectives, Guidelines and Restrictions – or any other terms of the Advisor Agreement. Other than as provided above, Buyer agrees that it shall not contact directly the Investment Advisor regarding the terms or subject matter of this Transaction.

Tax Conditions

Change in Definition of Indemnifiable Tax: Solely for the purposes of this Transaction, the term Indemnifiable Tax will be defined to exclude any tax imposed on, any payment under this Transaction that is based on, related to, in respect of, or measured by, in whole or in part, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket.

Additional Tax Event: If during the term of the Transaction (and solely with respect to this Transaction), as a result of any event described in clauses (x) or (y) of Section 5(b)(ii) of the Agreement, which clause (x) will include, for the avoidance of doubt, the commencement of a tax audit of Party A, Party A makes its own reasonable determination, after consultation with Party B) that it is substantially likely that it is under an obligation to withhold or remit any tax on account of, or relating to, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket (and in such circumstance will withhold or remit such tax as required), or otherwise receives dividends on such Shares net of withholding tax, due to the relationship between Party A and Party B as the respective Seller and Buyer under this Transaction, where such withholding or remittance would impact, directly or indirectly, the NAV Index Level, then Party B shall be the sole Affected Party.

Taxes: For purposes of determining Basket Base Performance, Basket Gains and Losses, Basket Income and Expenses, Basket Credit Balance, Basket Debit Balance and any other item used to calculate or affecting any of such amounts, gain, loss and any other income or expense items will be computed and taken into account without giving effect to any Tax that might be imposed in respect or by reason thereof (except for withholding taxes in respect of dividends and payments in lieu of dividends that have actually, or which Seller has determined in good faith will be, imposed on it).

Non-Confidentiality. Except as otherwise hereinafter set forth in this paragraph, the parties hereto agree and acknowledge that the structure and tax aspects of the Transaction and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Transaction and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with the Transaction, including, without limitation, that such party has entered into the Transaction with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of the Transaction hereunder. Notwithstanding the foregoing, either party may disclose any such Confidential Information if required by law or any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

Reporting. Party A represents that for tax purposes, it and any Affiliate thereof will report the Transaction, to the extent such reporting by Party A to Party B is required under the Internal Revenue Code of 1986, as amended, and regulations thereunder, as a derivative financial instrument, and, for accounting, regulatory, tax and all other purposes, it and any Affiliate thereof will treat and report the Basket Positions and any other assets or positions that may be credited to or included within the Baskets as assets and positions of which Party A is the sole legal and beneficial owner and to which Party A is the party as the case may be; provided, however, that if any party hereto reasonably determines that due to a Change in U.S. Tax Law, as defined in below, the Transaction or the Basket Positions and any other assets or positions included within the Baskets are required to be treated and reported for U.S. federal income tax purposes as assets and positions of which Party B (or any Affiliate thereof) is the beneficial owner, Party A and Party B shall consult with each other and agree, in good faith, within the letter as well as the spirit of any such Change in U.S. Tax Law, and with the objective of preserving, to the maximum extent possible, the objectives of the Transaction and the tax and economic implications that would have resulted to each party had such a Change in U.S. Tax Law not occurred, regarding the appropriate treatment and reporting of such assets and positions; further provided, that in the event of a dispute between the parties as to the proper characterization of the Transaction and related assets subsequent to such a Change in U.S. Tax Law, Party A will in good faith make its own determination of such characterization and treat and report the Transaction and related assets in accordance with its good faith determination. Party A represents that for U.S. federal income tax purposes all payments received under the Transaction will be treated as effectively connected with the conduct of a trade or business within the United States and as attributable to a trade or business carried on by it through a permanent establishment in the United States. (For purposes of this section the term "Change in U.S. Tax Law" means the enactment, promulgation, execution or ratification of, or any change in or amendment to, the U.S. Internal Revenue Code of 1986, as amended, or the Treasury Regulations promulgated thereunder (or in the application or official interpretation thereof by the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires), or any event described in clause (x) of Section 5b(ii) of the Agreement (which clause (x) will include, for the avoidance of doubt, the commencement of a tax audit of Party A), that occurs on or after the date on which the Transaction is entered into.)

Filings. Party B represents that it will file all required partnership and other tax returns related to payments received under the Agreement, consistent with the treatment of the Transaction as a derivative financial instrument.

Party B represents that it will remain a US limited partnership throughout the term of the Transaction.

GOVERNING LAW: THIS CONFIRMATION WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS ENTERED INTO AND TO BE PERFORMED ENTIRELY WITHIN THE STATE.

The time of dealing will be confirmed by Party A upon written request.

Deutsche Bank AG London is regulated by the Securities and Futures Authority.

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Account Details:

Payment to **Party A**: The Bank of NY
ABA 021-000-018
Account # [redacted]
Account Deutsche Bank

Payment to **Party B**: To be, and as, provided by Party B.

Contact Particulars for Party A:

Confirmations:	Adam Tolchinsky
Telephone:	(212) 250-2537
Fax No.:	(212) 797-4562
E-mail:	adam.tolchinsky@db.com
Payments/Fixings:	Vincent Capone
Telephone:	(212) 250-7221
Fax No.:	(212) 797-4932
E-mail:	vincent.j.capone@db.com
Basket Base Performance; NAV Index Levels; Basket Performance Reports:	Peter Brophy
Telephone:	(212) 250-4928
Fax No.:	(212) 797-8733
E-mail:	Peter.Brophy@db.com
Early Expiration Event/Notice:	Satish Ramakrishna
Telephone:	(212) 250-4928
Fax No.:	(212) 797-9358
E-mail:	satish.ramakrishna@db.com

Contact Particulars for Party B:

Early Expiration Event/Notice:	Peter Brown Bob Mercer	Thomas Kerns Mark Silber Carla Volpe Porter Stephen Daffron
Telephone:	(631) 444-7000	(212) 486 -6780
Fax:	(631) 689-4495	(212) 758-7136
Email:	Peter@rentec.com Mercer@rentec.com TKerns@rentec.com Silber@rentec.com Carla@rentec.com SDaffron@rentec.com	
Basket Base Performance; NAV Index Levels; Basket Performance Reports:	Thomas Kerns	

	Scott Chinsky
Telephone:	(212) 486-6780
Fax No.:	(212) 486-7291
Email:	TKerns@rentec.com Scott@rentec.com
Confirmations:	Mark Silber / Carla Volpe Porter
Telephone:	(212) 486-6780
Fax No.:	(212)758-7136
Email:	Silber@rentec.com Carla@rentec.com

Each Party has agreed to make payments to the other in accordance with this Confirmation. Please confirm that the foregoing correctly sets forth the terms of our agreement by sending a return executed acknowledgment hereof to such effect to the attention of Adam Tolchinsky, Legal Division (Fax No. (212) 797-4562).

[Signature Page Follows]

We a e very pleased to have concluded this Transaction with you.

Rega ds,

DEUTSCHE BANK AG LONDON

By: Satish Ramakrishna
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By: D. Oliver Stewart
Name:
Title: Attorney-in-Fact

DEUTSCHE BANK SECURITIES INC.,
acting solely as Agent in connection with this Transaction

By: Satish Ramakrishna
Name: Satish Ramakrishna
Title: Managing Director

By: D. Oliver Stewart
Name:
Title:

Confirmed and Acknowledged as of the date first above written:

MOSEL EQUITIES L.P.

By:
Name: Mark Silber
Title: Director

ANNEX I

Basket Composition: Any equity securities in a company and listed on a recognized exchange, depositary receipts listed on a securities exchange in the United States of America, equity linked securities, OTC derivatives, index futures, exchange-traded funds, other equity linked securities (besides OTC derivatives, index futures, and exchange-traded funds), interest rate and currency transactions, or any other financial instruments that may be agreed to between the parties together with such other securities and assets arising by reason of any Potential Adjustment Events or Merger Events in respect of shares comprising the Basket from time to time (in each case, a "Share" and collectively, "Shares").

Share Pricing Method: Shares which are traded on a U.S. national securities exchange or the NASDAQ National Market System shall be valued at any time at the last sale price quoted for Shares on the Consolidated Tape on the date and at the time for which value is being determined, or, if no sale occurred on such date, then at the mean between the "bid" and the "asked" prices on such date as reported in any recognized interdealer quotation system. Other Shares traded over-the-counter shall be valued at the mean between the "bid" and the "asked" prices quoted for such Shares. Shares not so traded as described herein shall be valued at their fair market price, as determined in a commercially reasonable manner by the Calculation Agent.[1] With respect to any position not described above, the Calculation Agent in valuing stocks, securities or other investments, may select such other methods of valuation as it in good faith shall deem appropriate under the circumstances and, once determined, all such valuations shall be final and conclusive in the absence of bad faith. The Calculation Agent shall in all cases use the actual trade execution pricing for selling and/or acquiring the Shares (the "Share Execution Price") in connection with (i) any Buyer exercise of the Transaction, (ii) any option expiration (including any Early Termination Event), and (iii) determinations of any Basket Debit Balances or Basket Credit Balances. The Calculation Agent's valuation of the Basket or its valuation methodology may differ from the valuation methodology it uses for its own books and records or other internal purposes.

Notwithstanding anything to the contrary herein, unless a Buyer Termination Notice is timely delivered by Buyer to Seller, upon the occurrence of an Early Termination Event, all of the Basket Positions included within the Basket at the beginning of the relevant Pricing Period shall be treated as sold or otherwise terminated or disposed of in an "equal dollar weighted" manner in approximately equal proportions over such period (i.e., approximately 25% of the affected Basket Positions per Exchange Business Day included in the Pricing Period), giving due regard to effecting proportionate reductions of economic long and short positions or in such other commercially reasonable manner as the Buyer and Seller may agree.

Notwithstanding anything to the contrary herein, in the event that a Buyer Termination Notice is timely delivered by Buyer to Seller, upon the occurrence of an Early Termination Event, all of the Basket Positions traded to the Buyer in connection with such Buyer Termination Notice shall be treated for purposes of this Confirmation (including for purposes of determining Basket Gains and Losses) as sold or otherwise terminated or disposed of at the beginning of the relevant Pricing Period for the consideration paid or received therefor by the Buyer.

---

[1] The Calculation Agent shall perform valuation of Shares on other Exchanges in accordance with criteria regarding valuation times and share pricing methods communicated by Seller in writing to Buyer in Basket Performance Report or otherwise.

ANNEX II

[DATE]

MOSEL EQUITIES L.P.
[FULL ADDRESS]
Attn: [ ]
Tel: [ ]
Fax: [ ]

EARLY EXPIRATION NOTICE

Dear Sirs:

The purpose of this notice is to inform the Buyer that pursuant to the original terms of the "Outperformance" Barrier Option Transaction, entered into between the Buyer and the Seller, and identified by the Confirmation bearing DBSI Reference Number [ ] (the "Confirmation"), at the close of business on [ ], the Barrier NAV Index Level is at [ ] (which level is less than or equal to the Expiration Threshold Price).

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

Very truly yours,

DEUTSCHE BANK SECURITIES INC.

By:______________________
Name:
Title:

By:______________________
Name:
Title:

ANNEX III

[DATE]

DEUTSCHE BANK AG LONDON
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Attn: Satish Ramakrishna/[Kam Singh]
Tel: (212) 250-4928

BUYER TERMINATION NOTICE

Dear Sirs:

Reference is made to the "Outperformance" Barrier Option Transaction (the "Subject Transaction"), entered into between Mosel Equities L.P. (the "Buyer") and Deutsche Bank AG, London Branch (the "Seller"), and identified by the Confirmation bearing DBSI Reference Number [ ] (the "Confirmation").

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

The purpose of this notice is to inform the Seller of the Buyer's intention to promptly trade with the Seller all of the Basket Positions such that after the transfer there are no long or short Basket Positions remaining. The consideration for such transfer shall be as set forth in the Confirmation.

The obligations of the Buyer herein may be assumed by an affiliate of the Buyer reasonably acceptable to the Seller.

It is a requirement of this Buyer Termination Notice that Medallion USA L.P., a Delaware limited partnership, Medallion International Ltd., a Bermuda company, Medallion Associates LP, a Delaware limited partnership, Medallion Capital Investments Ltd., a Bermuda company, Medallion RMP Fund LP, a Delaware limited partnership and Medallion Fund, a Delaware limited partnership, jointly and severally (each, a "Party" and, collectively, the "Medallion Funds") unconditionally guaranty to the Seller the due and punctual payment of all amounts payable, or that may become payable, by the Buyer in connection with this Buyer Termination Notice. The obligations of the Medallion Funds shall be governed by the Guaranty delivered by each Party to the Seller on [__________].

Very truly yours,

MOSEL EQUITIES L.P.

By:____________________________
Name:
Title:

From: Axel Niemann <axel.niemann@db.com>
To: Satish Ramakrishna <satish.ramakrishna@db.com>
cn=satish ramakrishna/ou=db/o=dbcom@dbamericas
Date: Aug 24 2009 14:28:40
Subject: Fw: Renaissance Technologies

Looks ok to me. I think what needs to be clarified though in order for this trade ever to look sensible is that the internalization on the shorts is quite high and that we are using a large part of the long inventory to net off other clients shorts (hopefully). This means that removing this trade from DB would considerably lower efficiencies and ROA for other clients.
I think Matt Brady/Olga could give us how much of the longs we use to internalize other shorts and how much of the shorts is internalized.
thanks

Axel Niemann
Deutsche Bank AG
Global Markets Equity
Global Prime Finance Risk & Complex Prime
+1 212 250 7743 (NY office)
[redacted](cell)
----- Forwarded by Axel Niemann/db/dbcom on 08/24/2009 02:23 PM -----

Satish Ramakrishna/db/dbcom
To: Axel Niemann/db/dbcom
cc:
08/24/2009 02:16 PM
Subject: Fw: Renaissance Technologies

▬ = Redacted by the Permanent Subcommittee on Investigations

Best Regards,
Satish Ramakrishna
Deutsche Bank AG, London
Global Markets Equity
Global Prime Finance Risk & Complex Prime Finance
Rm. 1342, 60 Wall Street, New York
+ 1 212 250 4928 New York Office
[redacted] Blackberry
+ 1 646 461 2661 Fax
+ 1 212 250 4051 Asst: Magdalena Pisarczyk

----- Forwarded by Satish Ramakrishna/db/dbcom on 08/24/2009 02:16 PM -----

Bill
Broeksmit/db/dbcom
@DBEMEA
Satish Ramakrishna/db/dbcom
08/24/2009 02:09
PM
Subject
Renaissance Technologies

To

cc

DRAFT. Please comment

The Renaissance MAPS trade is a synthetic, non-recourse PB facility. We carry the equity longs and shorts, as directed by Renaissance, on our BS and pass the performance of portfolio to Renaissance via swap. Equity longs we carry on behalf of Renaissance show up as trading assets for DB and shorts appear as securities borrowed (asset) and securities sold but not yet purchased (liability).

This trade format is much less BS efficient than a traditional PB account because in a PB account I can net receivables and payables with same customer. So if an equity long/short account has equal amount of longs (financed by us) and shorts (borrowed from us versus posting of cash collateral), PB receivable wrt that account nets to zero.

Renaissance trade is only different from a straight synthetic PB facility in that it is non-recourse. Facility allows client maximum of 18X NAV in gross value of longs plus shorts, or a 9X9 long versus short portfolio. Diversification requirements and other sub-limits are same as for more traditional equity long/short PB facilities. If client started the day with maximum leverage (it doesn't), longs would have to underperform shorts by 11% to burn through capital and put us into non-recourse loss territory. We have triggers in place that allow us to sieze control of the portfolio at any point during the day if half of the capital is depleted (ie, 5.5% long underperformance of shorts). Biggest risk is an August 2007 event when equity long/short trades got too crowded and there was a sudden shake-out.

This structure (long option on underlying portfolio) is a capital asset if held by the partners for more than one year. Size of portfolio tends to be between $8 and 12 billion long and same amount of short. Maximum allowed usage is $16 billion X $16 billion, though this has never been approached.

Pricing is: we lend to finance longs at FF+50 bps and borrow cash pledged against securities borrowed at FF-20 bps.

▬ = Redacted by the Permanent Subcommittee on Investigations

Bill Broeksmit
Office: +44 (0)20 7545 7899
Mobile: [redacted]
US Mobile: [redacted]

From: Axel Niemann <axel.niemann@db.com>
To: Giovanni D Favretti <giovanni.d.favretti@db.com>
CC: Satish Ramakrishna <satish.ramakrishna@db.com>
Date: Jan 6 2010 10:45:48
Subject: Re: MAPS

Giovanni,
these are all outstanding MAP trades. Nevertheless, there is a 30d right of termination for DB embedded in all these contracts and we do not think they should be considered to have a tenor of 90 days and more.
thanks

Axel Niemann
Deutsche Bank AG
Global Markets Equity
Global Prime Finance Risk
+1 212 250 7743 (NY office)
[redacted] (cell)

— = Redacted by the Permanent Subcommittee on Investigations

Giovanni D
Favretti/db/dbcom
To
01/06/2010 10:35 AM
Axel Niemann/db/dbcom@DBAMERICAS
cc

Subject
MAPS

Here's the list I have from BAC's of MAPS accounts with a tenor of 90 days or longer. Does it look right to you?:
(Embedded image moved to file: pic24972.pcx)

Giovanni Favretti, CFA
Managing Director
Deutsche Bank Securities, Inc.
Global Markets
Prime Finance
60 Wall St., 13th Floor
New York, NY 10005-2858
Tel: +1-212-250-5619
E-mail: giovanni.d.favretti@db.com

GLOBAL MARKETS | GLOBAL MARKETS STRUCTURING - STRATEGIC TRANSACTIONS

[TBD] c/o Renaissance Technologies

Draft: 29 November 2011

European CPPI Call Option – cash settled

Indicative Terms and Conditions

Prepared by Deutsche Bank AG

I. Term Sheet Disclaimer

Deutsche Bank AG is pleased to present the preliminary terms and conditions of the proposed investment described below. Please note that this presentation contains a summary of the investment only, is indicative only and is being delivered to you solely for the purposes of promoting discussion and negotiation. In delivering this presentation, we have assumed that 1) you have received or will be obtaining independent accounting, tax, legal, and regulatory advice in all relevant jurisdictions and have sufficient knowledge and experience to make your own evaluation of the merits and risks involved in making an investment of this type and 2) you are not relying and have not relied on Deutsche Bank AG or any of its subsidiaries, affiliates or any of their respective employees for information, advice or recommendations of any nature other than the information contained in this presentation. Deutsche Bank AG is not acting as your financial adviser or in any fiduciary capacity with respect to the proposed investment.

This presentation constitutes neither an offer to sell nor the solicitation of an offer to buy any security and is not intended to set forth a final expression of the terms and conditions of any security. This presentation is provided for discussion purposes only and may be amended, superseded or replaced in its entirety by subsequent presentations or other summaries of terms and conditions. This presentation does not purport to identify or suggest any or all of the risks (direct and indirect) which may be associated with the proposed transaction.

Deutsche Bank AG does not provide accounting, tax or legal advice. This presentation was prepared solely in connection with the promotion or marketing, to the extent permitted by applicable law, of the transaction or matter addressed herein, and was not intended or written to be used, and cannot be used or relied upon, by any taxpayer for purposes of avoiding any U.S. federal, income tax penalties. The recipient of the presentation should seek advice from an independent tax advisor regarding any tax matters addressed herein based on its particular circumstances.

Notwithstanding anything provided in this presentation or in any other document, agreement or understanding relating to this transaction, each of Deutsche Bank AG and Renaissance Technologies confirms that neither party has placed, or will place, any limitation (whether legally binding or not) on disclosure by the other of the U.S. federal, state and local tax treatment or tax structure of the transaction. For these purposes, "tax treatment" means the purported or claimed tax treatment, and "structure" means any fact that may be relevant to understanding such "tax treatment." This paragraph is intended to reflect the understanding of Deutsche Bank AG and Renaissance Technologies that the transaction contemplated by this presentation has not been offered under "conditions of confidentiality," as that phrase is used in U.S. Treasury Regulations section 1.6011-4(b)(3) and in any state or local law or regulation incorporating all or part of such section, and shall be interpreted in a manner consistent therewith.

II. Participants	
Party A	Deutsche Bank AG, London Branch
Party B	[tbd]
III. General Terms	
Trade Date:	[tbd]
Effective Date	Trade Date
Term	The period from and including the Trade Date to but excluding the Final Valuation Date
Option Type	Call
Option Style	European
Buyer	Party B
Seller	Party A
Business Day	New York
Business Day Convention	Modified following Business Day
Calculation Agent	Party A
IV. Transaction Details	
Number of Options:	[tbd]
Notional Amount:	USD [tbd]
Total Premium:	USD [(100 – Strike + x) * Number of Options], payable by Buyer
Expiration Date:	[tbd]
Observation Date (t)	Daily Observation Dates (t=1 to [T]), commencing Trade Date +1, up to and including Expiration Date. Modified following Business Days
Basket	Effected and Designated Position as defined in the Master Investment Agreement
Basket Intrinsic Value (t)	As of Trade Date an amount equal to 0 As of any other day during the Term of this transaction, an amount (which may be positive or negative) equal to the sum of (a) Basket Intrinsic Value calculated for the previous day plus (b) the Basket Base Performance for such day (t)
Basket Base Performance	Basket Gains and Losses plus Basket Income and Expenses during such a period
NAV Basket Index Level (t)	100 + 100 * Basket Intrinsic Value as of such date (t) whereby NAV Basket Index Level (1) = 100
Basket Index Performance (t)	NAV Basket Index Level (t) / NAV Basket Index Level (t-1) – 1
Index 1	The S&P 500 Index, Bloomberg : SPX Index

Deleted: change in

Deleted: (

Deleted: / Notional Amount)

Initial Index 1 Price	The Closing Price of Index 1 at Trade Date
Index 1 Price (t)	The Closing Price of Index 1 at Observation Date(t)
Index 1 Performance (t)	Index 1 Price (t) / Index 1 Price (t-1) – 1, whereby Index 1 Performance (1) is Index 1 Price(1) / Initial Index 1 Price -1
Risky Index (t)	As of Trade Date the Risky Index (0) is equal to 100 At each Observation Date during the Term of this transaction, Risky Index (t-1) + Basket Index Performance (t) * Basket Leverage (t) – Index 1 Performance (t) * Index 1 Leverage – Fee adjustment (t)
Fee adjustment	[Financing and future roll cost]
Index 1 Leverage	[100]
Initial Basket Leverage	[100]
Deleverage Start Point	[98]
Basket Leverage(t)	As of Trade Date it is equal to 100 At any Observation Date during the Term of this transaction If the Risky Index (t-1) > [Deleverage Start Point] , then Basket Leverage(t) = Initial Basket Leverage, i.e., 100 If the [Deleverage Start Point] >= Risky Index (t-1) > Floor Initial Basket Leverage * (Risky Index (t-1) – [Floor]) / ([Deleverage Start Point] – [Floor]) *(1+ (Risky Index (t-1) – [Deleverage Start Point]) / ([Deleverage Start Point] – [Floor])) (linear plus quadratic deleveraging) If the Risky Index (t-1) <= Floor it is equal to 0 If the Theoretical Intrinsic Value of the Option is equal to 0 the Basket Leverage (t) for the remaining Observation Dates (t) is identically 0
Floor	[92]
Strike	[92]
Theoretical Intrinsic Value of the Option	The greater of (i) zero and (ii) and amount equal to Risky Index (t) – Strike
Cash Settlement Amount	The greater of (i) zero and (ii) and amount equal to (Risky Index (T) - Strike) * Number of Options

Deleted: (1 +
Deleted: Deleverage Start Point]
Deleted:)

 DB-PSI 00009730

From: CN=Jonathan Hitchon/OU=db/O=dbcom
To: CN=Bill Broeksmit/OU=db/O=dbcom@DBEMEA
CN=Satish Ramakrishna/OU=db/O=dbcom@DBAMERICAS
CN=Barry Bausano/OU=db/O=dbcom@DBAmericas
cn=bill broeksmit/ou=db/o=dbcom@dbamericas
cn=noreddine sebti/ou=db/o=dbcom@dbamericas
CC: CN=Jeffrey Dorman/OU=db/O=dbcom@DBAmericas
CN=Kevin Harrison/OU=db/O=dbcom@DBAmericas
CN=Noreddine Sebti/OU=db/O=dbcom@DBAPAC
Date: Nov 11 2008 07:36:06
Subject: Re: RenTec

Bill
We are working through this account in terms of repricing with Jim Rowen their COO. We have three separate pools of business with Rentec two of which produce an ROA of in excess of 110bp and the MAPS account which needs to be repriced and we are in the middle of restriking pricing.
If they decide to move their business to Barcap, JPM or CS the impact on GME in North America will be significant seen they provide in excess of 40 percent internalisation and their marginal trade volume has a significant benefir to the rest of equities in terms of transactional charges from adp based on volume thresholds. You should also note this couterpart is up 40 percent this year and has an average annual return of 20 percent over the last 10 years. Based on oir book of clients at the right price this is a counterpart we should be hanging onto in terms of sticky easy equity like business
Will arrange a call with you to go through where we are
Thanks
Jon

----- Original Message -----
From: Bill Broeksmit
Sent: 11/11/2008 10:03 AM GMT
To: Satish Ramakrishna; Barry Bausano; Jonathan Hitchon
Cc: Jeffrey Dorman; Kevin Harrison; Noreddine Sebti
Subject: RenTec
The RenTec MAPS trade uses $16 billion of BS and generates a 27 bp ROA. Worse, the balance sheet categories it occupies-- Equity Inventory and Securities Sold but Not Yet Purchased--are the least leveragable ones, compared with Sec Borrowed or Repo. Finally, this trade is low risk but far from risk-free.

Satish has been trying to re-negotiate aspects of the trade (pricing and risk), but no matter what, I think we are giving this client way too much of our BS.

Can we agree on how to proceed here and then push for prompt execution of plan.

Existing deal has one-year trigger, I think.

My recommendation would be for us to ask client to shift 3/4 of trade off our platform and re-price remainder to yield at least 150 bps ROA if one year trigger is retained.

Bill Broeksmit
Office: +44 (0)20 7545 7899
Mobile: +4[redacted]
US Mobile: [redacted]

[redacted] = Redacted by the Permanent Subcommittee on Investigations

From: Satish Ramakrishna <satish.ramakrishna@db.com>
To: Greg Bunn <greg.bunn@db.com>
Date: Sep 19 2011 13:13:36
Subject: RE: Fund Option [I]

Classification: For internal use only

The question really is, can you get a tax opinion on this structure as it stands
now. Also, does Rentec really want a vol capped structure where the underlying might deviate from their performance. Also they would pay financing costs over the 14% premium sounds expensive.

Best Regards,

Satish Ramakrishna

Managing Director | Head, Prime Services Risk and Complex Financing

Deutsche Bank Securities Inc. & Deutsche Bank AG London

Global Markets

60 Wall Street, 10005-2836 New York, NY, USA

Tel. +1(212)250-4928

Fax +1(646) 461 2661

Mobile [redacted]

Email satish.ramakrishna@db.com

▬ = Redacted by the Permanent Subcommittee on Investigations

cid:image003.png@01CC76CD.F0790CE0

From: Greg Bunn
Sent: Monday, September 19, 2011 1:06 PM
To: Satish Ramakrishna
Subject: Re: Fund Option [I]

Just in a meeting...will call in 10m

From: Satish Ramakrishna
To: Greg Bunn
Sent: Mon Sep 19 18:43:49 2011
Subject: RE: Fund Option [I]

Classification: For internal use only

Are you around? Tried to reach you..

Best Regards,

Satish Ramakrishna

Managing Director | Head, Prime Services Risk and Complex Financing

Deutsche Bank Securities Inc. & Deutsche Bank AG London

Global Markets

60 Wall Street, 10005-2836 New York, NY, USA

Tel. +1(212)250-4928

Fax +1(646) 461 2661

Mobile [redacted]

Email satish.ramakrishna@db.com

[redacted] = Redacted by the Permanent Subcommittee on Investigations

cid:image002.png@01CC76C9.C7150790

From: Greg Bunn
Sent: Monday, September 19, 2011 12:09 PM
To: Satish Ramakrishna
Subject: Fund Option

Satish,

Back in London. I have sketched out the structure of how a call option would be look in the fund derivatives world in this case outright on the fund rather than the relative outperformance version but this could be added.

Ive based the pricing off a trade we recently concluded over an equity long short which has historic vol of around 11% - the premium for a 3yr atm call is around 14%.

Can we have a chat about this I believe this a route we should at least consider it will not have a material change on the PB revenues but will separate the client financing and the gap risk management and, to some degree change the participation profile (for example, in this construct, deleveraging occurs when the vol of the index rises, but will relever when the vol falls at any time in the life of the option. Anyway, worth considering.

Greg

From: Anthony Tuths <anthony.tuths@db.com>
To: Mark Meachen <mark.meachen@db.com>
CC: Diana Nott <diana.nott@db.com>
Manuel J Schnaidman <manuel.j.schnaidman@db.com>
Satish Ramakrishna <satish.ramakrishna@db.com>
Date: Oct 26 2011 17:12:21
Subject: Re: Rentec [I]

Classification: For internal use only

Mark - I've added Satish to this email as I do not want to misstate anything surrounding the p&l and Satish would know best. Given the way this trade is being booked the upfront p&l is de minimis but accrues over 13 month term. This is due to DB's need to stand ready to make market on the option. I would expect first option to be on by year end and other 3 to go on over 2012. The probability of this moving forward is very high as we have historic options with them rolling off.

From: Mark Meachen
To: Anthony Tuths
Cc: Diana Nott; Manuel J Schnaidman
Sent: Wed Oct 26 15:46:23 2011
Subject: Re: Rentec [I]

Classification: For internal use only

Thats great, many thanks.

Garth will have this information and may present it to Anshu so I want to make sure that I understand P&L profile,

Are we saying that P&L is all accrual with no upfront P&L
When do you think the trade is likely to execute
What percentage likellhood would give the trade happening

The meeting is tomorrow morning UK time, so if you could get back to me tonight it would be much appreciated.

Many thanks
Mark

Anthony Tuths/db/dbcom@DBCOEX

Anthony Tuths/db/dbcom@DBCOEX

26/10/2011 20:52

To
Mark Meachen/db/dbcom@DBEMEA

cc
Manuel J Schnaidman/db/dbcom, Diana Nott/db/dbcom@DBAmericas

Subject
Rentec [I]

Classification: For internal use only

Mark

At Mannys request, below is a description of the Rentec transaction.

Renaissance Technologies (Rentec) is an asset manager located in the U.S. They currently manage more than $20bb with their primary strategy being a form of equity long/short. Rentec has requested that DB offer call options based on
its trading strategies to Mosel Equities L.P., an entity owned primarily by Rentec principals and significant investors. Options with similar general characteristics (i.e., call options over a trading strategy written to owners of
the investment manager), were the subject of IRS scrutiny in 2010. On November
12, 2010, the IRS released a General Legal Advice Memorandum or GLAM stating that, under a particular set of facts, such a contract was not an option for U.S. tax purposes but rather provided the option holder with leveraged ownership of the underlying assets. The facts of the GLAM were particularly egregious and a GLAM is not of precedential value, rather it merely represents the current view of the IRS chief counsel office of a particular set of facts. Nevertheless, the GLAM is important because the tax result under its view (leveraged ownership taxed currently at 35%) vs. the intended treatment (deferral and conversion of gain to long-term capital gain taxed at 15%), is substantially different. While the leverage provided by the option is of primary significance to both the option buyer and the investment manager, the buyer also values the tax benefit.

Deutsche Bank is preparing to offer Rentec call options based on the outperformance of their investment strategy over the S&P 500. The options would
be 13 month tenor, 20% in-the-money, European style, cash settled only and provide exposure to the Rentec trading strategy (at 18x leverage) minus the S&P
500. The option notional would be subject to a constant proportion portfolio insurance (CPPI) mechanic such that the embedded leverage would increase and decrease as the performance of the underlying assets increase or decrease. The option will begin on a fully leveraged basis.

Each option (or set of options) is envisioned to have a premium of $300mm. On a
fully leveraged basis DB would have the investment manager (Rentec) managing an
equity long/short strategy of $2.7bb x $2.7bb, as its hedge. It is envisioned that Mosel Equities will ultimately have four options outstanding at one time (each with a different start date and expiry date). Thus, the ultimate size of
DBs long/short hedge position will be $10.8bb x $10.8bb. Each option should generate approximately EUR 15mm per year. If all four options are running simultaneously, the p&l should approximate EUR 60mm per year. It is the

stated
purpose of Rentec and Mosel to roll the options each year and thus this would
be
a multi-year transaction.

If you have any questions please contact me. Thank you.

Tony

Anthony Tuths
Global Structuring, Strategic Transactions
Deutsche Bank AG
60 Wall Street, 10005-2836 New York, NY, USA
Tel. +1(212) 250-4997
Mobile [redacted]
Email anthony.tuths@db.com

[redacted] = Redacted by the Permanent Subcommittee on Investigations

Draft: 27 October 11

DRAFT

Project Dawn

Approval paper

I. Executive summary

A. Background / Facts

The proposal is jointly sponsored by Global Markets Structuring – Strategic Transactions ("**ST**") and Global Markets Equities – Prime Services ("**GME**")

Deutsche Bank ("**DB**") has been approached by an alternative asset management company, Renaissance Technologies ("**Rentec**"), to write options partly based on one or more of its trading strategies.

In the transaction DB would write call options to Mosel Equities L.P. ("**Mosel**"). The owners of Mosel include Rentec principals, employees, significant investors and other related persons.

Rentec manages more than $20 billion in assets within several different hedge funds and separately managed accounts ("**SMAs**"). Rentec employs proprietary technical trading strategies around liquid markets. One of their more successful strategies involves long / short equities (the "**Strategy**").

Each call option will be an outperformance option providing the holder with the right to receive a cash amount at expiry equal to the outperformance, if any, of the Strategy minus the S&P 500 performance. Each option (expected to be four total) will have the following characteristics:

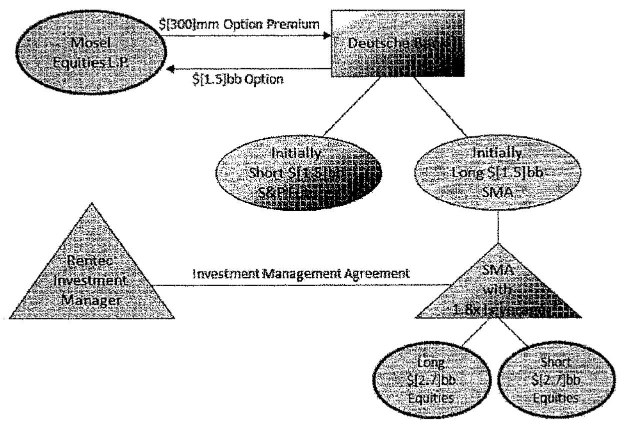
- A term of [13] months;
- Cash settled only;
- European style (i.e., it cannot be exercised prior to maturity);
- Operate under a constant proportion portfolio insurance mechanic;
- Notional amount of $[1.5]bb per option (expected total of four options); and
- Written in-the-money by [20]%

From DB's perspective, the transaction will result in:

- P&L of approximately EUR [15]mm per option;
- Market risk to both the Strategy and the S&P;
- Balance sheet assets;
- Risk weighted assets (based on VAR model); and

DB will hedge its exposure to the call options by (i) selling short S&P futures contracts; and (ii) investing cash into an SMA running the Strategy. Each SMA will be managed by an entity related to Rentec (the "**Manager**"). The Manager will earn a management fee equal to [2]% of the SMA assets. The cash invested into the SMA will be leveraged [1.8] times. This leverage inside the SMA will remain constant.

Each option will automatically adjust the option leverage amount according to a constant proportion portfolio insurance ("**CPPI**") mechanic. CPPI operates to gradually reduce leverage as the assets underlying the option depreciate and increases leverage (up to a cap) as the underlying assets appreciate. The leverage cap for each option will be [five] times. Each option will begin fully leveraged (i.e., [5]x). Thus, at inception a typical option would look as follows:



It is expected that Mosel will seek to enter into four separate options having different start dates and different expiry dates. Thus, the total notional of all the options may reach $[6]bb, which will cause DB to run the Strategy in the SMA at a magnitude of $[10.8]bb long x [$10.8]bb short, while fully leveraged.

The Manager is able to trade the assets within the SMA as it sees fit provided the SMA assets do not violate the Investment Management Agreement guidelines (the "**Investment Guidelines**"). The Investment Guidelines are set forth in detail within the Investment Management Agreement, but in summary contain:

- The SMA assets must at all times consist of cash, long and short equity positions, equity index positions, ETFs and OTC derivatives based on such positions.

- The SMA may not at any time hold a security appearing on DB's restricted list
- All positions within the SMA must meet minimum liquidity measures
- Individual position limits
- Sector limits
- Geographic exchange limitations
- The SMA in general must be balanced long short (i.e., SMA cannot be more than [X]% more long than short or vice versa)
- **NOTE: Need IMA document to complete**

Each option will de-lever according to the CPPI mechanic as the underlying assets depreciate. In this case, as an outperformance option, the notion of depreciate connotes a narrowing of the spread between the S&P performance and the Strategy performance. A deleveraging of the option will cause DB to liquidate (i) short S&P futures positions; and (ii) Strategy positions. As a consequence, cash will be withdrawn from the SMA. If the CPPI mechanic causes a 100% deleveraging then all positions will be liquidated. The Strategy will continue to trade notionally and the option may come back into the money. If such a rebound occurs, DB will reinvest cash into the SMA and again short S&P futures. However, such a reinvestment would initially be on a non-levered basis until the Strategy begins to outpace the S&P. Only then will the CPPI mechanic begin to re-leverage the Strategy.

At expiry, DB will liquidate its hedge positions (if not already liquidated via the CPPI mechanic) and settle any payout due on the option in cash. If the option is in the money, DB will make a cash payment to the option holder equal to the fair value of the option. If the option is out of the money, it will expire worthless and no payment will be due in either direction.

B. Salient Benefits for Option Purchaser and Rentec

- The option purchaser is able to capture the alpha produced by the Strategy with 18x leverage, while only risking the option premium amount. That is, by isolating the <u>outperformance</u> of the Strategy above the S&P (the beta), the option provides a payoff attributable to the alpha portion only of the Strategy.
- As an outperformance option the premium amount is less than a pure call option on the Strategy alone. Thus, the option purchaser is able to risk less premium to achieve the benefits of the Strategy.
- The option purchaser obtains the levered alpha return while only risking the premium amount. Thus the option provides a method of limiting downside exposure for the purchaser while providing levered upside performance.
- The option allows a maximum 18x leverage which is substantially greater than the option purchaser could achieve via a cash investment into the Strategy.
- As an asset manager, Rentec profits by earning fees based on its amount of assets under management or AUM. The delta of the options written by DB in these transactions which is invested in the Strategy will count as AUM for Rentec. The Manager will earn a fee of [2]% of the AUM.

- The AUM in the SMA portion of the option is initially leveraged 18x (9x long and 9x short). The AUM fee is paid on the full leveraged notional.

C. Salient benefits for DB

- DB will earn the option premium.
- DB will earn fees from the activities within the SMA (e.g., commissions, funding, borrow fees, etc...).
- Increase in long and short equity flow within DB, both from the SMA activity as well as the equity index position.

D. Key risks/issues

Market: As counterparty to the option DB will be exposed to price risk with respect to the S&P 500 and the Strategy. Additionally, there is correlation risk. The option provides DB with short exposure to the Strategy and long exposure to the S&P 500. As an outperformance option it also provides DB with exposure to the negative correlation of the two risks. All market risk will be hedged.

With respect to the S&P 500 risk DB will short S&P 500 futures contracts as a hedge. The futures contracts must be rolled and thus will create roll risk. ***[Explain roll frequency and mechanic].***

With respect to the Strategy risk DB will be long the Strategy through the SMA. That is, DB will invest cash into the SMA and hire the Manager to run the Strategy within the SMA.

By being short the S&P 500 and long the Strategy in the correct proportions, DB will be fully hedged to the correlation risk embedded in the option.

Due to the existence of the leverage embedded in the option, DB will be exposed to gap risk with respect to both the S&P 500 and the Strategy. Gap risk exists in every dynamically hedged derivative such as this option and will not be specifically hedged. The CPPI mechanic will reduce this risk to some degree but cannot eliminate it. ***[any more description necessary?]***

Redacted

Balance Sheet: The option itself will be a trading book position and any positive mark-to-market will be a balance sheet item. Likewise, the hedge to the option (i.e., the SMA and S&P futures positions), will be balance sheet items. The total amount of balance sheet usage per option will be approximately $[6.9]bb. ***[is this gross number netted down in any fashion]***

Redacted

E. Entities involved

Deutsche Bank entities involved

DBAG London Branch	Deutsche Bank AG acting through its London branch.
DB [ ]	***[What DB entity holds the S&P positions and SMA positions?]***

Rentec entities involved

Mosel	Mosel Equities L.P., an existing U.S. limited partnership which will be the option purchaser.
Rentec	Renaissance Technologies LLC, an existing U.S. limited liability company. Rentec will be the Manager.

II. Technical analysis

A. **Accounting** *[Matt Brady]*

Significant accounting issues to consider:

Redacted

Redacted

Treasury *[Joe Rice]*

DB's participation in the transaction will require unsecured funding of US$[XXX]mm.

Finance *[Matthew Brady]*

The option will be booked as a derivative trade providing leverage

External credit *[Jonathan Hummel]*

There are no external credit exposures but structure does create non-recourse derivative leverage

Internal credit

A credit matrix will be prepared setting out all internal credit exposures arising from the transaction. The credit matrix will be subject to review by BAC.

Market Risk *[Deepak Agrawal]*

All market risks will be discussed with Market Risk Management and all necessary hedging will be executed as required.

Operations *[Eamon Mccooey]*

1. TBD.

Redacted

Documents

The main transactions documents involving DB entities will include the following.

Agreement	Governing law
Option Confirmation	New York
Prime Brokerage Agreement	New York
Investment Management Agreement	New York

Compliance *[John Juul]*

John Juul will review any compliance issues arising from this transaction.

Approval matrix

[Matrix will be posted on NPA system, subject to review and adjustment]

Global Markets Structuring – Strategic Transactions
[ ] October 2011

Anthony Tuths
(212) 250-4997

Satish Ramakrishna
(212) 250-4928

From: CN=Michael Ginelli/OU=db/O=dbcom
To: CN=Eamon McCooey/OU=db/O=dbcom@DBAmericascn=eamon mccooey/ou=db/o=dbcom@lan
Received(Date): Jun 25 2008 09:02:47
Subject: Re: Tentative: MAPS Working Group - Wednesday Sessions @ 3 PM - JuneMeetings

I had a similar concern. We would have to be spot-on in figuring out the notional per option (if we went that route). The other option seems to be Satish / Parag sitting down with Market Risk and explaining that while the notional exposure with RenTec may look like 56 bn (26 + 33), the handshake agreement (and intention) with RenTec is to have total notional exposure of 33 bn. Parag explained that he will speak to Satish today about all this....

Eamon McCooey/db/dbcom
To
06/25/2008 12:39 PM
Michael Ginelli/db/dbcom@DBAmericas
cc

Subject
Re: Tentative: MAPS Working Group - Wednesday Sessions @ 3 PM - June Meetings(Document link: Michael Ginelli)

Mike,

I just don't think that will fly with Renaissance I will speak to Frank and Satish today to garner their opinions. The reason is what happens if one option is near breaching the barrier and they want to reallocate trades from that options to others that are at capacity while still being under the 33bn GMV threshold. Based on prior conversations they want to keep their flexibility around allocations.

Regards,
Eamon McCooey
Deutsche Bank Securities Inc.
Global Markets
Global Prime Finance
(212) 250-6856 - Office
[redacted] Mobile
(212) 250-6852 - Group Line

▬ = Redacted by the Permanent Subcommittee on Investigations

Michael
Ginelli/db/dbcom
To
06/25/2008 07:31 Eamon McCooey/db/dbcom@DBAmericas
AM
cc

Subject
Re: Tentative: MAPS Working Group - Wednesday Sessions @ 3 PM - June Meetings

Ok. I have asked Parag to dial in. He and I spoke this morning. He suggested capping the notional limit at the option level rather than across the maps account. So rather than 33 bn for RenTec maps, you would have 6 bn for option 1, 7 bn for option 2, etc... It would be referenced in the Inv Mgmt agreement as being set per options. I am not sure that suggestion works, what do you think?

From: Eamon McCooey
Sent: 06/25/2008 07:25 AM EDT
To: Michael Ginelli
Subject: Tentative: MAPS Working Group - Wednesday Sessions @ 3 PM - June Meetings

From: CN=Richard Carson/OU=db/O=dbcom
To: jonathan.hitchon@db.com
CN=Barry Bausano/OU=db/O=dbcom@DBAmericas
CN=Bernard Abdo/OU=db/O=dbcom@DBAmericas
CN=Frank X Nelson/OU=db/O=dbcom@DBAMERICAS
cn=barry bausano/ou=db/o=dbcom@dbamericas
cn=bernard abdo/ou=db/o=dbcom@dbamericas
cn=frank x nelson/ou=db/o=dbcom@dbamericas
Date: Aug 18 2008 05:31:45
Subject: Fw: MAPS negotiation status

Jon
Seems they are looking for around 1bn USD which we will not be able to do.
I shall call Jim later in the day to inform him.
Pls give me a shout by 3pm Ldn if you have any thoughts to accompany this,
Rich

Richard Carson

Deutsche Bank AG London
Global Markets Equity
Global Equity Derivatives

▬ = Redacted by the Permanent Subcommittee on Investigations

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[redacted]
----- Forwarded by Richard Carson/db/dbcom on 18/08/2008 10:29 -----

Jim Rowen
<jrowen@rentec.com
> To
Richard Carson/db/dbcom@DBEMEA,
13/08/2008 20:02 Jonathan Hitchon/DMGEQ/DMG
UK/DeuBa@DBEMEA
cc

Subject
MAPS negotiation status

Hey Rich and Jon

I wanted to give you a brief update on the MAPS negotiation process.

It seems that we are almost done and have completed an internal page turning exercise which yielded only a few word smithing issues that are being resolved. There is another page turning review tomorrow with Deutsche Bank, McKee Nelson (your external tax attorneys) and a few folks from Rentec in order to resolve remaining issues. There are only three remaining issue that I am aware of so with any luck we will be reaching conclusion shortly.

As you can appreciate the negotiation process has taken longer than expected solely for the fact that so many cooks needed to be involved (as an example for DB there is your internal tax, McKee Nelson, DB legal, the DB product specialist and the DB point person- all for one decision). That being said, the relationship with Satish has never been better and he has not been a hold-up on any risk or trading topic since our meeting. Thanks for greasing the skids.

I would ask some help on the following topic; Renaissance Management Company is looking for a three week bridge loan to pay bonuses in December however our fees are realized in January so there is a small timing difference (bonuses paid verse fees received). This facilitation loan seems to be preferable transaction for Deutsche Bank because you can monitor the assets that the fees are based on from your PB account, the loan is securitized by fees, if there is no performance then there are no fees; ie. no reason for the three week loan.

Rebecca Parehk tried to help navigate this request but decided to involved a fellow from your team New York team David Mann. Rebecca promised that David was fully briefed on the trade and would contact me immediately to make an introduction, review the transaction profile or at least provide update on the loan. It has been about 10 days since that promise from Rebecca. I have not heard from David which is somewhat irritating especially since I believe I once opened up SAC's Multi-Strat fund for a tiny investment as a favor for his group just so he could offer a DB multi-fund product to a Portuguese Bank.

That being said, I appreciate that we are all busy; could you give the name of somebody senior on your structuring team in London that I could discuss this relatively straight-forward transaction with?

Thanks again for the support and hope to see you both when you are next in town for a beer (ssss)(my treat)
All the best.
Jim

--
James S. Rowen
Chief Operating Officer
Renaissance Technologies
800 Third Avenue, 35 Fl
New York, N.Y. 10022-7604
212-829-4492 (direct)

Deutsche Bank
Deutsche Bank AG London[1]
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Telephone: 1-212-250-2500

MOSEL EQUITIES L.P.
c/o Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022
Attn: Mark Silber / Carla Volpe Porter
Tel: (212) 486-6780
Fax: (212) 758-7136

▬ = Redacted by the Permanent Subcommittee on Investigations

BARRIER OPTION TRANSACTION – Cash Settled –
DBSI Reference [redacted]

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the transaction entered into between **DEUTSCHE BANK AG, LONDON BRANCH** ("Party A" or "Seller") and **MOSEL EQUITIES L.P.** ("Party B" or "Buyer," and together with Party A, the "Parties") on the Trade Date specified below (the "Transaction"). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below. This Confirmation constitutes the entire agreement and understanding of the parties with respect to the subject matter and terms of the Transaction and supersedes all prior or contemporaneous written or oral communications with respect thereto.

DEUTSCHE BANK AG IS NOT REGISTERED AS A BROKER DEALER UNDER THE U.S. SECURITIES EXCHANGE ACT OF 1934. DEUTSCHE BANK SECURITIES INC. ("DBSI" or "DESIGNATED AGENT") HAS ACTED SOLELY AS AGENT IN CONNECTION WITH THIS TRANSACTION AND HAS NO OBLIGATION, BY WAY OF ISSUANCE, ENDORSEMENT, GUARANTEE OR OTHERWISE WITH RESPECT TO THE PERFORMANCE OF EITHER PARTY UNDER THE TRANSACTION. DEUTSCHE BANK AG, LONDON BRANCH IS NOT A MEMBER OF THE SECURITIES INVESTOR PROTECTION CORPORATION (SIPC).

1. The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 2002 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc. are incorporated into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern. In the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern. For purposes of the Equity Definitions, the Transaction shall constitute an "Index Option Transaction".

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[1] Deutsche Bank AG is regulated by the FSA for the conduct of designated investment business in the UK, is a member of the London Stock Exchange and is a joint stock corporation with limited liability incorporated in the Federal Republic of Germany HRB No. 30 000 District Court of Frankfurt am Main; Branch Registration No. in England and Wales BR000005, Registered address: Winchester House, 1 Great Winchester Street, London EC2N 2DB, Telephone: +44 20 7545 8000.

This Confirmation constitutes a "Confirmation" as referred to in, and supplements, forms a part of and is subject to, the 1992 ISDA Master Agreement, including the Schedule thereto dated as of December 15, 2008, as amended and supplemented from time to time (the "Agreement"), between Party A and Party B. For the avoidance of doubt, the Transaction shall not be subject to the provisions of any other agreement between Party A and Party B, including any other ISDA Master Agreement and any Credit Support Annex thereto. All provisions contained in the Agreement govern this Confirmation except as expressly modified below. All provisions contained or incorporated by reference in the Agreement will govern this Confirmation, except that, without limiting the foregoing, in the event of any inconsistency between this Confirmation and any provisions contained or incorporated by reference in the Agreement with respect to any payment obligations of Party A or Party B, the terms of this Confirmation shall govern. For the avoidance of doubt, notwithstanding anything in Section 6(d) or Section 6(e) of the Agreement to the contrary, any payment or delivery required to be made in connection with the termination of the Transaction shall be calculated and paid in accordance with the provisions contained in this Confirmation.

2. The terms of the particular Transaction to which the Confirmation relates are as follows:

General Terms

Trade Date:	June 7, 2012, which is the first date on which trading in the Basket (as defined below) can occur.
Effective Date:	The Trade Date
Term:	The period from and including the Trade Date to but excluding the Final Valuation Date.
Tenor:	The number of days in the period from and including the Premium Payment Date to but excluding the Scheduled Expiration Date.
Option Type:	Call
Option Style:	European
Buyer:	Party B
Seller:	Party A
Index:	The NAV Index Level
Business Day:	New York
Business Day Convention:	Following Business Day
Exchange Business Day:	For each Exchange (as defined below), any Scheduled Trading Day on which such Exchange is open for trading during its regular trading session, notwithstanding such Exchange closing prior to its Scheduled Closing Time.

Transaction Details

Number of Options:	One

Strike Price:	100
Notional Amount:	USD1,800,000,000
Initial Leverage:	USD1,150,000,000
Premium:	USD200,000,000
Premium Payment Date:	The third (3rd) Business Day immediately following the Trade Date
Calculation Agent:	Designated Agent

Procedure for Exercise

Expiration Time:	5 p.m. (local time in New York City)
Expiration Date:	The date which is the earliest of: (i) May 6, 2013, (the "Scheduled Expiration Date"), (ii) the first date on which the NAV Index Level is at or below the Barrier NAV Index Level (such event and date described in this clause (ii) shall be referred to herein as an "Early Expiration Event" and an "Early Expiration Date", respectively) and (iii) any other date on which the Transaction is terminated or expires in accordance with the Confirmation or the Agreement.
Automatic Exercise:	Applicable
Seller's Agent's Telephone Number and Facsimile Number and Contact Details for Purpose of Giving Notice:	Seller's Agent's Name: Satish Ramakrishna Specified Location: 60 Wall Street, 4th Floor, New York, NY 10005 Tel: (212) 250-4928 Fax: (212) 797-9358 Email: satish.ramakrishna@db.com

Valuation

Final Valuation Date:	The last Pricing Day in the Pricing Period.
Pricing Period:	The period commencing on, and including, the Expiration Date and ending on, and including, the earlier of (i) the Expiration Date, or if such day is not a Pricing Day, then the first (1st) Pricing Day immediately following the Expiration Date, and (ii) the 14th Business Day immediately following the Expiration Date, provided, however, that the Pricing Period shall not be deemed to commence until the earlier of (a) the Advisor (as defined in Master Investment Advisory Agreement (as defined below)) commencing a Liquidation (as defined therein) of the Sub-Account (as defined therein) relating to the Basket and (b) the Seller having the right, under the

Master Investment Advisory Agreement, to take control of the Sub-Account relating to the Basket, provided, further, that the Pricing Period may be a longer or shorter period as mutually agreed upon by the Parties, provided, further, that the Pricing Period shall be deemed to continue until such time as the Calculation Agent has determined, in accordance with customary practices, that it has ended. In the event that the Buyer disputes the Calculation Agent's determination of the Pricing Period and can reasonably demonstrate that an investment manager could have liquidated and reduced to cash a portfolio substantially similar to the Basket in a shorter period subject to the same conditions considered by the Calculation Agent in determining the Pricing Period, then Buyer and Seller shall mutually determine in good faith any adjustment to the Pricing Period and the Pricing Period shall end on the last day of such adjusted period. Notwithstanding the foregoing, if an Early Expiration Event has occurred, the commencement and termination of the Pricing Period will be as determined by the Calculation Agent at such time.

Valuation Method: Upon the expiration or termination of the Transaction, for purposes of establishing the NAV Index Level used to calculate the Cash Settlement Amount, it shall be assumed that (i) all Effected Positions shall be liquidated during the Pricing Period and (ii) each Designated Position shall be deemed liquidated at such time and price as the Investment Advisor, the Seller or any manager chosen by the Seller would have liquidated in conformity with the liquidation provisions of the Master Investment Advisory Agreement (as defined below). It also shall be assumed that Seller, or any manager chosen by Seller to exercise control over the Basket, shall, commencing on the Expiration Date or as soon as is practicable thereafter, conduct an orderly liquidation and reduction to cash of all Effected Positions contained in the Basket, in a commercially reasonable manner and in accordance with the provisions of the Master Investment Advisory Agreement relating to effecting a liquidation, with the objective of minimizing market impact and preserving the remaining equity value of the Basket. Except in the case of an Early Expiration Event, it shall be assumed, in conducting the liquidation, Seller or any manager chosen by Seller to exercise control over the Basket (if applicable) shall give due regard to effecting proportionate reductions of any economic long positions and economic short positions. Notwithstanding the foregoing, if Section 9(b) of the Master Investment Advisory Agreement applies and the Investment Advisor has advised the Seller in a timely fashion to accept the bid that established the Market Bid Level (as defined therein), then for purposes of establishing the NAV Index Level used to calculate the Cash Settlement Amount, the Basket shall be deemed to have been liquidated at the

	Market Value (as defined in the Master Investment Advisory Agreement).
Pricing Day:	For each Trading Basket, an Exchange Business Day on which a Market Disruption Event has not occurred.

Settlement Terms:

Cash Settlement:	Applicable
Settlement Currency	USD
Term Rate:	2.07070%
Debit Spread:	The Spread applied to the Basket Debit Balance in accordance with the U.S. Spread Schedule (as outlined below).
Remaining Tenor	As of any day during the period from and including the Premium Payment Date to but excluding the Scheduled Expiration Date, the number of days remaining in the Tenor, from and including the day on which such determination is being made to but excluding the Scheduled Expiration Date.
Optionality Value	As of any day during the period from and including the Trade Date to but excluding the Premium Payment Date, an amount equal to: $$\frac{Initial\ Leverage \times (Term\ Rate + Debit\ Spread) \times Tenor}{365 + (Term\ Rate \times Tenor)}$$; and as of any other day during the Term of this Transaction, the **greater of** (i) zero and (ii) an amount determined by the difference of (a) the Optionality Value calculated for the previous day **minus** (b) the quotient of (x) the Optionality Value as of the Trade Date **divided** by (y) Tenor.
Intrinsic Value:	As of the Trade Date, an amount equal to (i) the Premium **minus** (ii) the Optionality Value as of the Trade Date (the "Initial Intrinsic Value"); and as of any other day during the Term of this Transaction, an amount (which may be positive or negative) equal to the sum of (a) the Intrinsic Value calculated for the previous day **plus** (b) the change in Basket Base Performance for such day (which may be a positive or negative number).

NAV Index Level: As of each day during the Term of this Transaction, an amount determined as follows:

$$100 + \left(100 \times \frac{\textit{Intrinsic Value as of such date}}{\textit{Notional Amount}} \right)$$

Barrier NAV Index Level: As of the Trade Date, 107.452724; and as of each day during the Term of this Transaction, an amount determined as follows:

$$100 \times \left(.977 + \frac{\textit{Premium} - \textit{Optionality Value}}{\textit{Notional Amount}} \right)$$

Cash Settlement Amount: Cash Settlement Scenario "A" or Cash Settlement Scenario "B" (each, a "Cash Settlement Scenario"), as specified herein, determined as of the Final Valuation Date. Except as otherwise stated herein, if for any reason this Transaction is terminated or expires prior to the Scheduled Expiration Date, the measure for any payment owed shall be Cash Settlement Amount Scenario "A". For the avoidance of doubt, if a Party delivers a notice specifying an Expiration Date and the grounds on which such termination notice is being delivered, the Cash Settlement Scenario associated with such grounds shall be the Cash Settlement Amount, notwithstanding the occurrence, between the delivery of the termination notice and the Expiration Date specified therein, of circumstances or events giving rise to the alternative Cash Settlement Scenario.

(i) For the avoidance of doubt, without limitation, the following events will result in the Cash Settlement Amount being Cash Settlement Scenario "A:"

(a) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(d)(i), Paragraph 4(d)(iii) or Paragraph 4(d)(iv) of this Confirmation;

(b) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(e) of this Confirmation;

(c) a termination of the Transaction resulting from the occurrence of an Event of Default other than one described in paragraph (ii)(c) below;

(d) a termination of the Transaction resulting from the occurrence of a Termination Event other than one described in paragraph (ii)(d) below; and

(e) all other events that result in the Transaction being terminated, either automatically under the terms of this Agreement, or by action of one of the Parties, where the Cash Settlement Amount is not otherwise specified.

(ii) For the avoidance of doubt, without limitation, the following events will result in the Cash Settlement Amount being Cash Settlement Scenario "B":

(a) a termination of the Transaction effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(d)(ii) of this Confirmation;

(b) a termination of the Transaction effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(f) of this Confirmation;

(c) a termination of the Transaction effected by Buyer as the result of the occurrence of one of the following Events of Default:

(1) a breach by Seller of an agreement in accordance with Section 5(a)(ii) of the Agreement;

(2) a misrepresentation by Seller in accordance with Section 5(a)(iv) of the Agreement;

(3) a default by Seller under Section 5(a)(v)(2) of the Agreement;

(4) a default by Seller under Section 5(a)(vi) of the Agreement;

(5) the occurrence of an event described in Section 5(a)(vii) of the Agreement in respect of the Seller; and

(6) a "merger without assumption" in respect of the Seller as described in Section 5(a)(viii) of the Agreement;

and

(d) a termination of the Transaction resulting from the occurrence of one of the following Termination Events:

(1) an Illegality in accordance with Section 5(b)(i) of the Agreement in respect of which the Seller is the sole Affected Party;

(2) a Tax Event in accordance with Section 5(b)(ii)(y) of the Agreement in respect of which

the effective date of the Change in Law has not yet occurred and Seller has delivered notice to terminate the Transaction;

(3) (X) an Additional Termination Event described in the second paragraph of Paragraph 4(l) of this Confirmation or (Y) the designation by Seller of an Early Termination Date in accordance with Paragraph 4(n) of this Confirmation, provided that in the case of (X) or (Y) above, such Termination Event occurs in respect of any change in applicable law or Change in U.S. Tax Law, as applicable, that has not become effective; and

(4) a Tax Event Upon Merger in accordance with Section 5(b)(iii) of the Agreement in respect of which Seller is the sole Affected Party;

(for the avoidance of doubt, each reference to provisions in the Agreement are as amended by the Schedule thereto).

Cash Settlement Scenario "A":	The **greater of** (i) zero, and (ii) an amount determined as follows: $$(NAV\ Index\ Level - Strike\ Price) \times \frac{Notional\ Amount}{100}$$
Cash Settlement Scenario "B":	The **greater of** (i) zero, and (ii) an amount determined as follows: the sum of (a): $$(NAV\ Index\ Level - Strike\ Price) \times \frac{Notional\ Amount}{100}$$ **plus** (b) the Optionality Value.
Cash Settlement Payment Date:	The third (3rd) Exchange Business Day immediately following the Final Valuation Date.
Early Settlement Amount:	Without altering the foregoing or the final determination of the Cash Settlement Amount or the Seller's obligations in respect thereof, from time to time on any day during the Pricing Period, Buyer may request, and upon such request Seller shall make, a payment to Buyer (all such payments less all repayments of such payments by Buyer to Seller being, the "Early Settlement Payment") in an amount equal to the Available Early Settlement Amount (as defined below). If such request is made by Buyer on or prior to 5:00 p.m., New York time, on a Business Day then Seller shall make such payment to Buyer prior to 2:00 p.m. New York time on

the next Business Day. If such request is made after 5:00 p.m., New York time, on a Business Day, Seller shall make such payment to Buyer prior to noon, New York time, on the second succeeding Business Day. If the Seller determines that the Early Settlement Payment on any day during the Pricing Period exceeds the Early Settlement Amount for such day, then the Seller shall so notify Buyer and prior to 5:00 p.m., New York time on the next Business Day, Buyer shall repay such excess to Seller. For each day in the Pricing Period, the Early Settlement Payment on such day shall bear interest at a rate equal to the overnight USD-Federal Funds – H-15 for such day. On the Cash Settlement Payment Date, Buyer shall repay to Seller an amount equal to the Early Settlement Payment together with interest accrued thereon.

For these purposes, at any time:

(i) "Available Early Settlement Amount" equals the excess, if any, of the Early Settlement Amount at such time over the Early Settlement Payment at such time;

(ii) "Early Settlement Amount" means (x) if the Net Hedge Ratio is greater than or equal to .05, zero and (y) otherwise, the amount that equals the product of .75 multiplied by (Intrinsic Value ÷ (Gross Basket Value/(Notional Amount x 1.60)/Premium));

(iii) "Gross Basket Value" means the sum of (x) the total USD market value of all Basket Positions held long plus (y) the absolute value of the total USD market value of all Basket Positions held short;

(iv) "Net Hedge Ratio" means the absolute value of the amount determined by the following formula: (x) total USD market value of all Basket Positions held long less the absolute value of the total USD market value of all Basket Positions held short divided by (y) Gross Basket Value.

Adjustments For Potential Adjustment Events:	Calculation Agent Adjustment (as defined below).
Consequences of Merger Events:	Calculation Agent Adjustment (as defined below).
Nationalization or Insolvency:	Calculation Agent Adjustment (as defined below).
Calculation Agent Adjustment:	For purposes of Adjustments for Potential Adjustment Events, Consequences of Merger Events and Nationalization or Insolvency, all with respect to the relevant Basket Positions which comprise the Basket from time to time, the Calculation Agent will make such adjustments to the Share price, the then applicable Basket Base Performance, the NAV Index Level and any other variable relevant to the exercise, settlement or

payment terms of the Transaction, as the Calculation Agent, acting in good faith and commercially reasonable manner, determines appropriate, with reference (as deemed appropriate) to any relevant adjustment rules and precedents in effect for any primary options exchange for exchange-traded options contracts on the relevant affected Basket Positions and in consultation with Buyer.

Additional Terms

The following additional terms shall apply to this Transaction.

3. **Further Definitions:**

The Basket–

"Basket" means a record maintained by the Calculation Agent for this Transaction identifying, at all times, all of the positions that (i) actually result from transactions specified by the Investment Advisor (as defined below) to be included in such record (the "Effected Positions") or (ii) are Designated Positions (as such term is defined in the Master Investment Advisory Agreement, the Designated Positions together with the Effected Positions, the "Basket Positions"). For the avoidance of doubt, any dividend, interest or any other income that would have been received or accrued on or in respect of, or any expense incurred with respect to, any Designated Position will be deemed credited or debited to the Basket as Basket Income or Basket Expenses, as the case may be. If a Designated Position would have been entered into but for the fact that the intended Designated Position violated the Investment Guidelines and Compliance Restrictions (as defined below) at the time such transaction was specified by the Investment Advisor, then such position shall be void *ab initio* and therefore not, at any time, a component of the Basket. To the extent that a Designated Position subsequently violates the Investment Guidelines and Compliance Restrictions, it shall be deemed to have been (X) in the case of a long position, sold, and (Y) in the case of a short position, covered, as of the time such Investment Guideline violation occurred. The Basket may be divided, at any time, into sub-records, each constituting either a Trading Basket or a Term Basket (each as defined below).

"Basket Base Performance" means, during a period, the sum (expressed in USD), during such period, of (i) Basket Gains and Losses **plus** (ii) Basket Income and Expenses.

"Basket Gains and Losses" means, during a period, the difference (expressed in USD), during such period, of (i) realized and unrealized gains in respect of the Basket Positions **minus** (ii) realized and unrealized losses in respect of the Basket Positions.

"Basket Income and Expenses" during a period means (i) Basket Income **minus** (ii) Basket Expenses.

"Basket Income" during a period means: the sum, expressed in USD, of (i) dividend income (determined based on ex-dividend dates that have occurred during such period), net of the non-U.S. and U.S. withholding taxes, if any, that would be imposed on a holder of the relevant position that (a) is a resident of the Federal Republic of Germany, (b) is entitled to the benefits of income tax treaties between the Federal Republic of Germany and other countries, (c) properly treats such dividend income as effectively connected with its U.S. trade or business and (d) has provided properly completed and executed certifications claiming such treaty or effectively connected income status; provided, however, in the case of Effected Positions, dividend income will be further reduced by any additional taxes (and penalties and interest associated therewith) incurred by Seller that would not have been incurred by the Seller in the absence of the relationship between Seller and Buyer under this Transaction, **plus** (ii) interest income, receivable and received, on any USD Basket Credit Balance, such interest calculated at the relevant Benchmark Rate minus the Spread applicable to the USD Basket Credit Balance (as stated below) **plus** (iii) the product of (a) the Rebate Share Value (as defined below) on the USD Trading Basket

multiplied by (b) the difference of (1) the relevant Short Benchmark Rate (as defined below) **minus** (2) (A) to the extent such Rebate Share Value is not composed of Hard-To-Borrow Shares (as defined below), the relevant Spread on such Rebate Share Value (stated in the U.S. Spread Schedule below) and (B) to the extent such Rebate Share Value is composed of Hard-to-Borrow Shares, a short spread reflective of the Hard-To-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (iv) interest income receivable on any Non-USD Basket Credit Balance, in each case such interest calculated at the relevant Benchmark Rate minus the Spread applicable to such Non-USD Basket Credit balance, **plus** (v) the product of the Rebate Share Value for each Non-USD Trading Basket **multiplied** in each case by the relevant Benchmark Rate, **plus** (vi) total accrued and paid interest income on Term Basket realized gains and dividend income, that have been realized or paid respectively between Term Basket Reset Dates, calculated at the LIBOR Rate, **plus** (vii) all other income enumerated in the Basket Performance Report. Each interest calculation under this definition shall be performed using the currency associated with the specified Trading Basket for such Trading Basket and all non-USD amounts shall be converted to USD at the spot rate for such currency at the time the Basket Income calculation is performed. As relates to Basket Income, with respect to any Basket Position, "withholding taxes" shall include stamp and excise taxes whether or not collected by withholding.

"Basket Expenses" during a period means the sum, expressed in USD, of (i) payments in lieu of dividends (including any U.S. or non-U.S. withholding taxes required to be withheld by Seller with respect to such payments in lieu of dividends), provided, however, that in the case of Effected Positions, Basket Expenses will be increased by any additional taxes (and penalties and interest associated therewith) incurred by Seller that would not have been incurred by Seller in the absence of the relationship between Buyer and Seller under this Transaction, **plus** (ii) any interest expenses, excluding accrued interest expenses on any USD Basket Debit Balance, **plus** (iii) total accrued and paid interest expense on the USD Basket Debit Balance, calculated at the Debit Rate on the USD Basket Debit Balance (using the applicable Spread from the U.S. Spread Schedule below), **plus** (iv) total accrued and paid interest expense on any Non-USD Basket Debit Balance, in each case calculated at the Debit Rate on such Non-USD Basket Debit Balance (using the applicable Spread from the Non-U.S. Spread Schedule below), **plus** (v) total accrued and paid interest expense on any Term Basket open long position, in each case calculated at the Debit Rate on such Term Basket open long position's notional amount (using the applicable Spread from the Non-U.S. Spread Schedule below), **plus** (vi) the stock borrow fee payable on any Non-USD Trading Basket, in each case such fee calculated as the product of the Rebate Share Value for such Non-USD Trading Basket **multiplied** by (a) to the extent such Rebate Share Value is not composed of Hard-To-Borrow Shares, the relevant Spread on such Rebate Share Value (as stated in the Non-U.S. Spread Schedule below) and (b) in the case of Hard-to-Borrow Shares composing such Rebate Share Value, a short spread reflective of the Hard-To-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (vii) the stock borrow fee payable on any Term Basket open short position, in each case such fee calculated as the product of the Term Basket open short position's notional amount **multiplied** by (a) to the extent such Term Basket open short position's notional amount is not composed of Hard-to-Borrow Shares, the relevant Spread on such Term Basket open short position's notional amount (as stated in the Non-U.S. Spread Schedule below) and (b) in the case of Hard-to-Borrow Shares composing such Term Basket open short position's notional amount, a short spread reflective of the Hard-to-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (viii) total accrued and paid interest expense on Term Basket realized losses and payments in lieu of dividends, that have been realized or paid respectively between Term Basket Reset Dates, calculated at the LIBOR Rate, **plus** (ix) all other expenses enumerated in the Basket Performance Report, **plus** (x) any investment advisor fees accrued during such period, whether or not actually paid by Seller. Each interest calculation under this definition shall be performed using the currency associated with the specified Trading Basket for such Trading Basket and all non-USD amounts shall be converted to USD at the spot rate for such currency at the time the Basket Expenses calculation is performed. As relates to Basket Expenses, with respect to any Basket Position, "withholding taxes" shall include stamp and excise taxes whether or not collected by withholding.

"Basket Performance Report" means a periodic report prepared and compiled by the Calculation Agent in its sole discretion (but after consultation with the Investment Advisor), setting forth (among other things) the Basket Base Performance, as well as such other items the Calculation Agent determines, in its

sole discretion, affects the performance of the option. The most current Basket Performance Report as of any date shall be available to Buyer on a daily basis.

"Benchmark Rate" means, (i) for the USD Trading Basket as of any day, the **FEDSOPEN Rate** for such day (or if such day is not a Business Day as of the preceding Business Day) determined by reference to the **FEDSOPEN Index** as published by the Federal Reserve and as disseminated via Bloomberg and (ii) for each Non-USD Trading Basket, the applicable rate specified in the Non-USD Benchmark Rate Schedule on Schedule II hereto, or if no rate is so specified, the recognized overnight rate for the applicable currency as determined by the Calculation Agent, in good faith, or if such overnight rate is not available, the one week rate for such currency as determined by the Calculation Agent, in good faith.

"Debit Rate" means the sum of (i) the Benchmark Rate for any Trading Basket or the LIBOR Rate (as defined below) for any Term Basket, as the case may be **plus** (ii) for both USD Basket Positions and Non-USD Basket Positions, the Spread for the Basket Debit Balance as listed in the applicable Spread Schedule below.

"Exchange" means, in respect of each Basket Position or the related underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which such underlying security is actively traded or quoted.

"Hard-to-Borrow Shares" means, as determined by the Calculation Agent (i) in respect of Basket Positions recorded under the USD Trading Basket, any Shares that are components of the USD Trading Basket from time to time for which the market rebate rate is lower than the normal rebate rate received on "general collateral" shares in connection with a theoretical stock borrow arrangement, and (ii) in respect of Basket Positions recorded under a Non-USD Trading Basket, any Shares that are components of such Non-USD Trading Basket from time to time for which the market fee rate is higher than the normal fee rate paid on "general collateral" shares in connection with a theoretical stock borrow arrangement.

"LIBOR Rate" means, in respect of each Term Basket, the one-month LIBOR interest rate on the Start Date (as defined below), and on each Term Basket Reset Date.

"Non-USD Basket Credit Balance" means, for each Non-USD Trading Basket, at any time, the excess, if any, of (i) the sum of (a) the cumulative realized gains on all former Basket Positions in such Non-USD Trading Basket, **plus** (b) the Short Proceeds Amount for such Non-USD Trading Basket, **over** (ii) the sum of (a) the aggregate of the initial "cost basis" of all open long Basket Positions in such Non-USD Trading Basket, **plus** (b) the cumulative realized losses on all former Basket Positions in such Non-USD Trading Basket, **and** (c) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in a currency other than USD to the Basket, but excluding accrued and unpaid income and expense items. Non-USD Basket Credit Balance determinations shall be made on a Share "settlement date" basis and shall be denominated in the currency associated with such Non-USD Trading Basket.

"Non-USD Basket Debit Balance" means, with respect to each Non-USD Trading Basket, at any time, the excess, if any, of (i) the sum of (a) the aggregate of the initial "cost basis" of all open long Basket Positions in such Non-USD Trading Basket, **plus** (b) the cumulative realized losses on all former Basket Positions in such Non-USD Trading Basket, over (ii) the sum of (a) the cumulative realized gains on all former Non-USD Basket Positions in such Trading Basket, **plus** (b) the Short Proceeds Amount for such Non-USD Trading Basket, **and** (c) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in a currency other than USD to the Basket, but excluding accrued and unpaid income and expense items; provided, that, for all Non-USD Basket Debit Balances greater than zero, solely for purposes of determining Basket Expenses, the Calculation Agent shall reduce any such Non-USD Basket Debit Balances by subtracting from the aggregate of such amounts the Unused Initial Leverage (any portion of the Unused Initial Leverage not so subtracted, the "**Remaining Unused Initial Leverage**"). The specific Non-USD Basket Debit Balances from which any Unused Initial Leverage is subtracted shall be determined by the Calculation Agent in its sole discretion but in no event shall any Non-USD Basket Debit Balance be reduced below zero. Non-USD Basket Debit Balance determinations shall be made on a Share "settlement date" basis and shall be denominated in the currency associated with such Non-USD Trading Basket.

"Non-USD Basket Positions" means the Basket Positions recorded in a Non-USD Trading Basket.

"Non-USD Sub-Basket" means, for a given currency specified in respect of a Non-USD Trading Basket, a record maintained by the Calculation Agent identifying, at all times, all of the Non-USD Trading Baskets specifying that same currency. The Calculation Agent may elect to include in a Basket Performance Report information relating to any or all Non-USD Sub-Baskets, which information shall be reported in the currency associated with such Non-USD Sub-Basket. By way of example and not of limitation, a report relating to a Non-USD Sub-Basket for a period may state (among other things) the Basket Credit Balances or Basket Debit Balances (as the case may be) of the relevant Non-USD Trading Baskets for such period, the stock borrow fees on such Non-USD Trading Baskets payable during such period, and any other information selected by the Calculation Agent for inclusion in such report, with all amounts reported in the applicable currency.

"Non-USD Trading Basket" means each Trading Basket that shall contain all Basket Positions representing Shares in respect of which the Exchange is not located in the United States.

"Rebate Share Value" means, at any time, in respect of any Trading Basket, the market value from time to time of all Basket Positions in such Trading Basket that represent open short sales of equity securities. For the avoidance of doubt, a separate Rebate Share Value may be specified for each Trading Basket, including the USD Trading Basket and all Non-USD Trading Baskets. The Rebate Share Value for a given Trading Basket shall be specified in the currency associated with such Trading Basket.

"Related Exchange(s)" means, in respect of each Basket Position or the related underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which futures and/or options contracts with respect to such underlying security are actively traded or quoted.

"Remaining Unused Initial Leverage" is as defined above in the definition of Non-USD Basket Debit Balance.

"Short Benchmark Rate" means, in respect of the USD Trading Basket, (i) for any day prior to the Scheduled Expiration Date, (a) to the extent the Rebate Share Value of the USD Trading Basket is less than or equal to the Initial Leverage, the Term Rate, and (b) for any Rebate Share Value of the USD Trading Basket in excess of the Initial Leverage, the Benchmark Rate (which rate can be expressed as a weighted average rate for the purposes of calculation and reporting); and (ii) for any day during a Pricing Period occurring on or after the Scheduled Expiration Date, the Benchmark Rate.

"Short Proceeds Amount" means, for each Trading Basket, at any time, the sale price(s) received for the Basket Positions that represent open short sales of equity securities in such Trading Basket. A Short Proceeds Amount shall be expressed in the currency of the associated Trading Basket.

"Term Basket" means a record maintained by the Calculation Agent in respect of which all of the following characteristics have been specified: (i) a country, (ii) a currency, (iii) the date on which such record is established (the "Start Date"), (iv) the relevant LIBOR Rate and (v) the date on which all of the Basket Positions included in such record are scheduled to be liquidated (the "End Date"), and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record. Solely for purposes of calculating "Basket Expenses" the Calculation Agent shall reduce (but not below zero) the notional amount of open long positions in Term Baskets by subtracting from the aggregate of such notional amounts any Remaining Unused Initial Leverage. The specific open long positions from which any Remaining Unused Initial Leverage is subtracted shall be determined by the Calculation Agent in its sole discretion.

"Term Basket Reset Date" means, in respect of a Term Basket, the 15th day of each calendar month on a Modified Following Business Day Convention.

"Trading Basket" means a record maintained by the Calculation Agent in respect of which all of the following characteristics have been specified: (i) a country and (ii) a currency, and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record.

"Unused Initial Leverage" means, at any time of determination, (i) if USD Basket Debit Balance is a negative amount, the absolute value of such amount, otherwise (ii) zero.

"USD Basket Credit Balance" means, at any time, the excess, if any, of (i) the sum of (a) the Initial Intrinsic Value, **plus** (b) the cumulative realized gains on all former USD Basket Positions, **plus** (c) the Short Proceeds Amount for the USD Trading Basket, over (ii) the sum of (a) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (b) the cumulative realized losses on all former USD Basket Positions, **plus** (c) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (d) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items. Basket Credit Balance determinations shall be made on a Share "settlement date" basis.

"USD Basket Debit Balance" means (i) on any day prior to the Scheduled Expiration Date the difference, whether positive or negative, between (a) the sum of (1) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (2) the cumulative realized losses on all former USD Basket Positions, plus (3) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (4) all adjustments for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items, **minus** (b) the sum of (1) the Initial Intrinsic Value, **plus** (2) the Initial Leverage, **plus** (3) the cumulative realized gains on all former USD Basket Positions, **plus** (4) the Short Proceeds Amount for the USD Trading Basket, and (ii) during any period beginning on the Scheduled Expiration Date and ending on the Final Valuation Date, the difference, whether positive or negative, between (a) the sum of (1) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (2) the cumulative realized losses on all former USD Basket Positions, **plus** (3) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (4) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items, **minus** (b) the sum of (1) the Initial Intrinsic Value, **plus** (2) the Short Proceeds Amount for the USD Trading Basket, **plus** (3) the cumulative realized gains on all former USD Basket Positions provided that, in the case of (i) and (ii), if on any day such difference is negative then for purposes of calculating "Basket Expenses" for such day the "USD Basket Debit Balance" shall be deemed to be zero. Basket Debit Balance determinations shall be made on a Share "settlement date" basis.

"USD Basket Positions" means the Basket Positions recorded in the USD Trading Basket.

"USD Trading Basket" means the Trading Basket that shall contain all Basket Positions in respect of which the Exchange is located in the United States.

U.S. SPREAD SCHEDULE
Applies to the USD Trading Basket

Type	Spread
Rebate Share Value	32.5 basis points (0.325%)
Basket Credit Balance	25 basis points (0.25%)
Basket Debit Balance	32.5 basis points (0.325%)

Non-U.S. SPREAD SCHEDULE
Applies to all Non-USD Trading Baskets
and all Term Baskets

Type	Spread
Rebate Share Value in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate as set forth in Schedule II	As set forth in Schedule II
Basket Credit Balance in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate as set forth in Schedule II	As set forth in Schedule II
Basket Debit Balance in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate as set forth in Schedule II	As set forth in Schedule II
Rebate Share Value in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor
Basket Credit Balance in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor
Basket Debit Balance in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor

4. **Additional Provisions:**

(a) Basket Position Composition: A Basket Position is a record reflecting the purchase or sale of any of the following: any equity securities in a company and listed on a recognized exchange, depositary receipts listed on a securities exchange in the United States of America, equity-linked securities, OTC derivatives, index futures, exchange-traded funds, other equity linked securities (besides OTC derivatives, index futures, and exchange-traded funds), interest rate and currency transactions, or any other financial instruments that may be agreed to between the parties together with such other securities and assets arising by reason of any Potential Adjustment Events or Merger Events in respect of shares comprising the Basket from time to time (in each case, a "Share" and collectively, "Shares"). For the avoidance of doubt, Basket Positions may be records of purchase and sale transactions not actually executed.

(b) Share Pricing Method: Shares that are traded on a U.S. national securities exchange or the NASDAQ National Market System shall be valued at any time at the last sale price quoted for Shares on the Consolidated Tape on the date and at the time for which value is being determined, or, if no sale occurred on such date, then at the mean between the "bid" and the "asked" prices on such date as reported in any recognized interdealer quotation system. Other Shares traded over-the-counter shall be valued at the mean between the "bid" and the "asked" prices quoted for such Shares. Shares not so traded as described herein shall be valued at their fair market price, as determined in a commercially reasonable manner by the Calculation Agent; the Calculation Agent shall perform valuation of such Shares in accordance with criteria regarding valuation times and share pricing methods communicated by

Seller in writing to Buyer in a Basket Performance Report or otherwise. With respect to any position not described above, the Calculation Agent in valuing stocks, securities or other investments, may select such other methods of valuation as it in good faith shall deem appropriate under the circumstances and, once determined, all such valuations shall be final and conclusive in the absence of manifest bad faith. The Calculation Agent shall use the actual trade execution pricing for selling and/or acquiring the Shares (the "Share Execution Price") in connection with (i) any option expiration (including any Early Expiration Event) and (ii) determinations of any Basket Debit Balances or Basket Credit Balances. In the case of Designated Positions, except as otherwise described herein, the timing and price for the deemed selling and/or acquiring of a Designated Position shall be as determined by the Calculation Agent in good faith and a commercially reasonable manner, at such prices as would reasonably be expected to be the execution prices if the trade giving rise to the Designated Position had actually and timely been executed. The Calculation Agent's valuation of the Basket or its valuation methodology may differ from the valuation methodology it uses for its own books and records or other internal purposes.

(c) <u>Termination and Early Expiration Notices</u>. In connection with Termination Events under this Confirmation in which Buyer is an Affected Party and Seller has the right, upon delivery of notice to Buyer, to terminate this Transaction, then Seller may exercise such right to terminate by delivery of a Seller Termination Notice, substantially in the form attached hereto as Annex I. In connection with Termination Events under this Confirmation in which Seller is an Affected Party and Buyer has the right, upon delivery of notice to Seller, to terminate this Transaction, then Buyer may exercise such right to terminate by delivery of a Buyer Termination Notice, substantially in the form attached hereto as Annex II. Notwithstanding the provisions of Section 6(a) of the Agreement, the Early Termination Date in respect of this Transaction shall be the day on which the Seller Termination Notice or Buyer Termination Notice, as relevant, is effectively delivered provided that if such day is not an Exchange Business Day, the Early Termination Date shall be the first Exchange Business Day to occur after such day.

If an Early Expiration Event occurs, this Transaction will automatically expire at the time of such occurrence. In such instance, Seller may, solely as a courtesy and without obligation, give notice to Buyer of the occurrence of such Early Expiration Event. If Seller determines to provide such notice, it may do so substantially in the form attached hereto as Annex I. For the avoidance of doubt, notwithstanding the delivery or non-delivery of such a notice, an Early Expiration Event occurs automatically at the time the conditions described in clause (ii) of the definition of Expiration Date have occurred.

Except as otherwise specified herein, upon the occurrence of an event or circumstances giving Buyer the right to terminate this Transaction prior to the Scheduled Expiration Date (excluding an Event of Default in respect of Seller under Section 5(a)(vii) of the Agreement, but including, without limitation, any other Event of Default in respect of Seller or any Termination Event in respect of Seller), Buyer shall deliver a Buyer Termination Notice within 15 days of the accrual of such right to terminate this Transaction or Buyer shall be deemed to have waived such right to terminate this Transaction as the result of the occurrence of such event or circumstances, <u>provided that</u> for the purpose of determining when a Buyer's right to terminate this Transaction accrues under Section 5(a)(ii) of the Agreement or as the result of a Termination Event, Buyer shall be deemed to have delivered any notice required to be delivered by Buyer under Section 5(a)(ii) or Section 6(b)(i) of the Agreement, as the case may be, at the time Buyer learned of Seller's breach of agreement or obligation hereunder or of the facts giving rise to such Termination Event, as the case may be.

(d) <u>Investment Advisor</u>. Buyer acknowledges that **Renaissance Technologies LLC** (the "Investment Advisor") has been engaged by Seller to manage the composition of the Basket on a discretionary basis for the account of Seller, pursuant to (a) the Investment Guidelines and Compliance Restrictions (the "Master Investment Guidelines and Compliance Restrictions") set forth in the Master Investment Advisory Agreement dated as of December 15, 2008, between Seller (or its specified affiliate) and the Investment Advisor (the "Master Investment Advisory Agreement,") and (b) the Supplemental Investment Guidelines and Compliance Restrictions (the "Supplemental Investment Guidelines and Compliance Restrictions," and together with the Master Investment Guidelines and Compliance Restrictions, the "Investment Guidelines and Compliance Restrictions") set forth in the Supplemental

Investment Advisory Agreement dated June 7, 2012, as may be amended from time to time, between the parties to the Master Investment Advisory Agreement (the "Supplemental Investment Advisory Agreement," and together with the Master Investment Advisory Agreement, the "Investment Advisory Agreement"). While Seller, in the normal course of its business, shall review Investment Advisor's compliance with the Investment Guidelines and Compliance Restrictions, Seller shall have no liability to Buyer – and Buyer hereby waives any rights of action against Seller – in connection with Investment Advisor's non-compliance with said Investment Guidelines and Compliance Restrictions – or any other terms of the Investment Advisory Agreement.

If (i) the Investment Advisory Agreement or the Supplemental Investment Advisory Agreement is terminated after notice of termination by Seller for cause (as set out in the Master Investment Advisory Agreement); (ii) Seller delivers notice that it is terminating the Supplemental Investment Advisory Agreement without cause under the provisions of the Master Investment Advisory Agreement and either (x) the Investment Advisor has delivered notice, in accordance with the Master Investment Advisory Agreement, that it shall commence and manage the Liquidation or (y) three Exchange Business Days have passed without the Investment Advisor delivering such a notice, (iii) Investment Advisor delivers notice that it is terminating the Investment Advisory Agreement for cause (as set out in the Master Investment Advisory Agreement) and either (x) the Investment Advisor has delivered notice, in accordance with the Master Investment Advisory Agreement, that it shall commence and manage the Liquidation or (y) three Exchange Business Days have passed without the Investment Advisor delivering such a notice, or (iv) the Investment Advisory Agreement or the Supplemental Investment Advisory Agreement should terminate for any other reason, then for purposes of Section 5(b)(v) of the Agreement the occurrence of any of clause (i), (ii), (iii) or (iv) above shall be an Additional Termination Event with this Transaction as the sole Affected Transaction and Seller as the sole Affected Party. Upon the occurrence of such an Additional Termination Event, Seller shall timely deliver to Buyer notice of such event and Buyer shall have the right, but not the obligation, within 3 days of effective delivery of such notice (but not more than 3 days), to terminate this Transaction, by delivery of a notice to Seller substantially in the form attached hereto as Annex II. In the case of (i), (iii) or (iv), if this Transaction is terminated, the Cash Settlement Amount shall be Cash Settlement Scenario "A." In the case of (ii), if this Transaction is terminated, the Cash Settlement Amount shall be Cash Settlement Scenario "B."

(e) <u>Additional Termination Event Relating to Seller CDS Spreads</u>: The occurrence, from time to time, of a CDS Spread Event X or of a CDS Spread Event Y shall constitute an Additional Termination Event in respect of which Seller shall be the sole Affected Party and this Transaction and all other Transactions between Seller and Buyer shall be Affected Transactions. Notwithstanding the provisions of Section 6(b)(iv)(2) of the Agreement or any other provision of the Agreement to the contrary, in the event that such an Additional Termination Event occurs (the date of such occurrence being a "<u>Trigger Date</u>") and Buyer does not designate, as a result thereof, an Early Termination Date in respect of all (and not less than all) Transactions within fifteen (15) days of the related Trigger Date then Buyer shall be deemed to have waived such Additional Termination Event and no CDS Spread Event X or CDS Spread Event Y, whichever gave rise to such Additional Termination Event, may again occur during the ninety (90) day period that commenced on the related Trigger Date.

For purposes hereof the "<u>CDS Spread</u>" on any Business Day shall be the average of the mid-market (average of bid and offer for USD100,000,000 notional protection) five year senior debt credit default swap ("CDS") spreads in respect of Seller, as quoted by Barclays Capital Inc., Citigroup Global Markets Inc., Goldman, Sachs & Co., J. P. Morgan Securities Inc. and Morgan Stanley & Co. Incorporated (each, and any successor thereto, a "Reference Dealer") (quoted at Bloomberg function CDSW, although if Buyer in good faith and in a commercially reasonable manner determines such a quote available at Bloomberg function CDSW is inconsistent with market conditions, it may confirm the quote directly with such Reference Dealer and such directly confirmed quote shall be used in place of the applicable one found at Bloomberg Function CDSW, if different), measured as of 3:00 p.m. New York time on such Business Day. In the event that, at such time, any one or more of the Reference Dealers specified above has not provided a quote of the CDS spreads in respect of Seller, the CDS Spread shall be the average of the CDS spreads quoted at such time by the other Reference Dealers <u>provided</u> that if, at such time, fewer than three of such Reference Dealers have provided such a quote, Buyer and Seller shall reasonably agree to include, in the averaging calculation, the quote of another recognized dealer or dealers, so that three such quotes have been averaged, for the purpose of determining the CDS Spread; provided, however, that if one or more Reference Dealer provides such a quote and the Buyer and Seller are unable to reasonably agree as to an additional recognized dealer or dealers (as applicable), the average of the quotes obtained from available Reference Dealers (or if only one Reference Dealer is providing a quote, such quote) shall be used to determine the CDS Spread. A CDS Spread Event X will occur if the CDS Spread is 325 basis points or more on at least three (3) consecutive Business Days. A CDS Spread Event Y will occur if the CDS Spread is at least 450 basis points on any Business Day. Buyer shall not buy, sell or otherwise engage in transactions with respect to CDS of the Seller. No affiliate of Buyer may engage in transactions with respect to CDS of the Seller for the purpose or with the intent of increasing such spread in order to trigger the provisions of this Paragraph.

(f) Fundamental Change to the Investment Guidelines and Compliance Restrictions: If Seller makes a fundamental change to the Investment Guidelines and Compliance Restrictions, as determined by Seller in its reasonable discretion, then Seller shall notify Buyer of such change and Buyer shall have the right, but not the obligation, to terminate this Transaction, by delivery of a notice to Seller substantially in the form attached hereto as Annex II. If Buyer elects to terminate this Transaction pursuant to this paragraph, the Cash Settlement Amount shall be Cash Settlement Scenario "B."

(g) Post-Settlement Adjustments: Notwithstanding anything to the contrary in the Agreement, if, (i) after the Transaction has terminated and any Cash Settlement Amount has been paid, Seller or Buyer becomes aware of (a) an operational misbooking or (b) any accrued but unpaid income or expense (as of the Final Valuation Date) that, (1) differed from the amount actually paid, (2) was determined to be in error or (3) was not actually paid in accordance with the value at which it had been booked by the Seller, and (ii) the occurrence of a situation described in clauses (a) or (b) affected the calculation of the Cash Settlement Amount, then the Party that becomes aware of such fact will notify the other Party, and the Parties will negotiate in good faith to allocate any payment adjustment between them. This provision shall survive the termination of this Confirmation or the Agreement.

(h) Change in Definition of Indemnifiable Tax. Solely for the purposes of this Transaction, the term Indemnifiable Tax will be defined to exclude any tax imposed on any payment under this Transaction that is based on, related to, in respect of, or measured by, in whole or in part, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket.

(i) Taxes: For purposes of determining Basket Base Performance, Basket Gains and Losses, Basket Income and Expenses, Basket Credit Balance, Basket Debit Balance and any other item used to calculate or affecting any of such amounts, gain, loss and any other income or expense items will be computed and taken into account without giving effect to any Tax that might be imposed in respect of by reason thereof (except to the extent that withholding taxes (including any penalties and interest associated with such taxes) are expressly included in Basket Income or in Basket Expenses).

(j) Non-Confidentiality: Except as otherwise hereinafter set forth in this paragraph, the parties hereto agree and acknowledge that the structure and tax aspects of the Transaction and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Notwithstanding anything herein to the contrary, each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Transaction and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof unless and to the extent such information is necessary or helpful in understanding the tax treatment or tax structure of the transaction). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with the Transaction, including, without limitation, that such party has entered into the Transaction with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of the Transaction hereunder. Notwithstanding the foregoing, either party may disclose any such Confidential Information if required by law or required or requested by any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

(k) <u>Reporting</u>. Seller represents that for tax purposes, it and any Affiliate thereof will report the Transaction, as a derivative financial instrument, and, for accounting, regulatory, tax and all other purposes, it and any Affiliate thereof will treat and report the Effected Positions and any other assets or positions that may be credited to or included within the Baskets (other than in respect of Designated Positions) as assets and positions of which Seller or any Affiliate is the sole beneficial owner and to which either Seller or any affiliate is the party, as the case may be; provided , that in the event of a dispute between the parties as to the proper characterization of the Transaction and related assets subsequent to a Change in U.S. Tax Law, Seller will in good faith make its own determination of the characterization and applicable reporting of the Transaction based on written advice of counsel concluding that, as a result of such Change in U.S. Tax Law, a material risk of tax penalties or other adverse economic or reputational consequences to Seller exists in continuing to treat and report the Transaction in the manner set forth above, and will provide Buyer with notice of such determination, and Seller will treat and report (or cause its Affiliate to treat and report) the Transaction and related assets in accordance with its good faith determination. Buyer represents that for tax purposes, it will report the Transaction as a derivative financial instrument generating short-term capital gain or loss at exercise or maturity. Seller represents that for U.S. federal income tax purposes all payments received under the Transaction will be treated either as received by an Affiliate that is a United States person (as defined in section 7701(a)(3) of the Code) or as effectively connected with the conduct of a trade or business carried on by Seller within the United States.

For purposes of this section the term "Change in U.S. Tax Law" means (a) the enactment, promulgation, execution or ratification of, or any change in or amendment to, the U.S. Internal Revenue Code of 1986, as amended, or the Treasury Regulations promulgated thereunder (including any proposed changes that are not required under such proposal to be prospective only) or the announcement of the application or official interpretation thereof by the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires, or (b) a written notification by a taxing authority or any action brought in a court of competent jurisdiction (regardless of whether such action is taken or brought with respect to a party to the Agreement), that, as to (a) or (b) above, occurs on or after the date on which the Transaction is entered into. For the avoidance of doubt, an event described in (b) above shall be treated as a Change in U.S. Tax Law only if the event occurs with respect to the Transaction or any subsequent transaction.

<u>Additional Termination Events.</u> Notwithstanding the provisions of Section 5(a)(iv) of the Agreement, if any of the representations made by Buyer in Part 2(b) of the Schedule to the Agreement in respect of this Transaction proves to have been incorrect or misleading in any material respect when made or repeated or deemed to have been made or repeated, such incorrect or misleading representations shall constitute an Additional Termination Event under Section 5(b)(v) of the Agreement, and Buyer shall be the sole Affected Party and this Transaction shall be the sole Affected Transaction.

If during the term of the Transaction (and solely with respect to this Transaction), as a result of any event described in clauses (x) or (y) of Section 5(b)(ii) of the Agreement, (which clause (x) will include, for the avoidance of doubt, the commencement of a tax audit of Seller), Seller makes its own reasonable determination, after consultation with Buyer, that it is substantially likely that either it is under an obligation to withhold or remit any tax on account of, or relating to, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket, or it will receive dividends on such Shares net of withholding tax, in each case due to the relationship between Seller and Buyer under this Transaction, then such determination shall constitute an Additional Termination Event under

Section 5(b)(v) of the Agreement, and Buyer shall be the sole Affected Party and this Transaction shall be the sole Affected Transaction.

(m) Transferability. The option constituting the Transaction shall not be transferable by Seller without the prior written consent of Buyer which consent shall not unreasonably be withheld or delayed. The option constituting the Transaction shall be transferable by Buyer (and any transferee of the option constituting the Transaction) in whole or in part at any time to another U.S. Person (other than U.S. trusts under section 7701(a)(30) of the Code unless Seller in its sole discretion consents) with the written consent of Seller upon written notice, which consent shall not be unreasonably withheld and shall be delivered within a reasonable period of time. Without limitation to the foregoing, for purposes of this provision, it shall not be unreasonable for Seller to withhold consent if the transferee (x) is not a customer of Seller (or a related party thereto) and is unwilling or unable to meet Seller's then standards for customers (y) would otherwise violate Seller's standard operating procedures (for example, on account of know-your-customer rules or limits on exposure to any particular customer) or (z) would, in the reasonable belief of Seller, increase any risk (including, without limitation, tax risk) to Seller. Any purported transfer in violation of this provision shall be void and of no effect.

(n) Termination Following Regulatory Change. Notwithstanding anything to the contrary in this Confirmation, Seller may designate an Early Termination Date and terminate this Transaction upon not less than fifteen (15) Business Days prior written notice to Buyer, in the event that in the reasonable opinion of Seller (supported by the written opinion of nationally recognized counsel reasonably acceptable to Buyer): (i) any change after the Trade Date in applicable law (including, without limitation, any laws, treaties, ordinances, rules, regulations, rulings, interpretations and authorizations of the United States or of any political subdivision, regulatory body having authority over Seller) materially and adversely affects Seller's capital charges directly resulting from the Transaction and Buyer declines (in its sole judgment) to make any additional payments determined by Seller (in its sole judgment) that would make Seller indifferent to such change, or (ii) Seller's tax position with respect to the Transaction is affected due to any Change in U.S. Tax Law (as defined in "Reporting" above). If Seller elects to terminate the Transaction pursuant to this paragraph, the Cash Settlement Amount shall be (i) Cash Settlement Scenario "A" if the change in applicable law or Change in U.S. Tax Law has become effective or (ii) Cash Settlement Scenario "B", otherwise.

(o) Buyer Transactions in Securities. Buyer acknowledges and agrees that it will not buy or sell any securities to or from either the Seller or the Advisor if such securities are the same as securities held in the account.

5. Additional Representations:

Buyer and Seller each make (and as indicated, Buyer makes) the following additional representations:

(i) it is entering into the Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise and no other person has an interest herein.

(ii) it has, in connection with the Transaction (a) the knowledge and sophistication to independently appraise and understand the financial and legal terms and conditions of the Transaction and to assume the economic consequences and risks thereof and has, in fact, done so as a result of arm's length dealings with the other party; (b) to the extent necessary, consulted with its own independent financial, legal or other advisors and has made its own investment, hedging and trading decisions in connection with the Transaction based upon its own judgment and the advice of such advisors and not upon any view expressed by the other party; (c) not relied upon any representation (whether written or oral) of the other party, other than the representations expressly set forth hereunder and is not in any fiduciary relationship with the other party; (d) not obtained from the other party (directly or indirectly through any other person) any advice, counsel or assurances as to the expected or projected success, profitability, performance, results or benefits of the Transaction; and (e) determined to its satisfaction whether or not the rates, prices or amounts and other economic terms of the Transaction and the indicative quotations (if any) provided by the other party reflect those in the relevant market for similar transactions.

(iii) it is not a private customer (as defined in the Rules of The Securities and Futures Authority).

(iv) it understands that the offer and sale of the option constituting the Transaction is intended to be exempt from registration under the US Securities Act of 1933, as amended (the "Securities Act"), by virtue of Section 4(2) thereof. In furtherance thereof, it represents and warrants that (a) it is experienced in investing in or otherwise entering into options and other financial instruments similar to the Transaction and has determined that the Transaction is a suitable investment for it, and (b) it is an institution which qualifies as an "accredited investor" or "qualified institutional buyer" as such terms are defined under relevant regulations promulgated under the Securities Act.

(v) Buyer understands and specifically acknowledges and agrees that the composition of the Basket as well as the Basket Base Performance shall be under the sole discretionary trading authority of Investment Advisor, an investment advisor independent of Seller. A copy of the Investment Advisory Agreement has been previously made available to, and has been reviewed by, Buyer. Buyer has obtained all the information it desires regarding the Investment Advisor, including, for the avoidance of doubt, investment advisor fees. Buyer agrees and acknowledges that neither Seller nor the Designated Agent take any responsibility for such information. Buyer has made an independent judgment of the experience and expertise of the Investment Advisor. Buyer agrees that it shall not attempt to direct or influence the choice of investments in the Basket. Buyer acknowledges and agrees that Buyer has no rights under the Investment Advisory Agreement and is not a third party beneficiary thereto.

(vi) Buyer represents to Seller, that Buyer has sufficient experience with derivative transactions or similar securities or instruments to make a determination to enter into a Transaction linked to the securities underlying or referred to in such derivative transactions, and has the capacity and authority to invest directly in the securities underlying or referred to in such derivative transactions. This representation shall be deemed to be true and accurate on each day that this Confirmation remains in force and effect.

(vii) Buyer acknowledges that Basket Positions may exist in the absence of actually executed transactions. Buyer understands that the existence of a Basket Position does not necessarily indicate that an actual purchase or sale of Shares occurred, and that the Basket Base Performance and the value of the Cash Settlement Amount may be affected by records of transactions that did not actually occur. Buyer and Seller agree that nothing in this Confirmation obligates the Seller to actually purchase or sell any of the underlying securities from which a Basket Position is derived.

(viii) Buyer has received an opinion of counsel from its own tax advisor with respect to the Transaction.

(ix) Buyer and Seller acknowledge that Buyer has no rights in the Basket, including rights to receive distributions on, the proceeds from disposition of, or information received in respect of, the Basket.

(x) Buyer acknowledges that it has no voting rights in respect of any security which may be held by Seller. Buyer and Seller acknowledge and agree that Seller will not take account of the interests of the holder of the option constituting the Transaction or any third party in voting or otherwise exercising any of its rights, as owner, in the Basket.

(xi) It is the intention of the parties that the obligations of Seller in respect of the Transaction evidenced by this Confirmation are general recourse obligations of Seller. To the extent that, in any relevant proceeding or under any applicable law, Buyer should have the right to marshall, to appoint a receiver over, or otherwise have recourse to, the ownership or equity interest of Seller in the Basket, Buyer hereby waives, and agrees not to enforce, such rights provided that such waiver and agreement shall not reduce or limit the obligations of Seller hereunder.

6. GOVERNING LAW: THIS CONFIRMATION WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS ENTERED INTO AND TO BE PERFORMED ENTIRELY WITHIN THE STATE.

7. The time of dealing will be confirmed by Seller upon written request.

8. Deutsche Bank AG London is regulated by the Securities and Futures Authority.

9. **Account Details:**

▬▬ = Redacted by the Permanent Subcommittee on Investigations

Payment to Party A:	The Bank of NY ABA 021-000-018 Account # [redacted] Account Deutsche Bank
Payment to Party B:	To be, and as, provided by Party B.

10. **Notices and other Communications:**

Contact particulars for notices and other communications (including reports) shall be delivered in accordance with Section 12 of the Agreement to the relevant person or persons specified in Schedule I hereto. Notwithstanding anything in Section 12 of the Agreement to the contrary, notices sent by e-mail shall be deemed delivered when sent.

Each Party has agreed to make payments to the other in accordance with this Confirmation. Please confirm that the foregoing correctly sets forth the terms of our agreement by sending a return executed acknowledgment hereof to such effect to the attention of Adam Tolchinsky, Legal Division (Fax No. (212) 797-4562).

[Signature Page Follows]

We are very pleased to have concluded this Transaction with you.

Regards,

DEUTSCHE BANK AG LONDON

By:
Name: Eamon McCooey
Title: Attorney-in-Fact Attorney-in-Fact

By:
Name: Matthew Bowen
Title: Attorney-in-Fact Attorney-in-Fact

DEUTSCHE BANK SECURITIES INC.,
acting solely as Agent in connection with this Transaction

By:
Name: Eamon McCooey
Title: Managing Director

By:
Name: Matthew Bowen
Title: Managing Director

Confirmed and Acknowledged as of the date first above written:

MOSEL EQUITIES L.P.
By Renaissance Technologies LLC,
Its General Partner

By:
Name: James Bowen
Title: COO

[Signature page to Confirmation]

SCHEDULE I

Contact Particulars for Notices and Other Communications

Contact Particulars for Party A:

Copies of All Notices: RentecNotification@list.db.com

Specified Contacts:

Confirmations: Adam Tolchinsky
Telephone: (212) 250-2537
Fax No.: (212) 797-4562
E-mail: adam.tolchinsky@db.com

Payments/Fixings: Vincent Capone
Telephone: (212) 250-7221
Fax No.: (212) 797-4932
E-mail: vincent.j.capone@db.com

Basket Base Performance; NAV Index Levels Basket Performance Reports:
Vincent Capone
Telephone: (212) 250-7221
Fax No.: (212) 797-4932
E-mail: vincent.j.capone@db.com

Early Expiration Event/Notice: Satish Ramakrishna
Telephone: (212) 250-4928
Fax No.: (212) 797-9358
E-mail: satish.ramakrishna@db.com

Contact Particulars for Party B:

Early Expiration Event/Notice: Peter Brown, Bob Mercer; Mark Silber, Carla Volpe Porter, James Rowen
Telephone: (631) 444-7000; (212) 486-6780
Fax: (631) 689-4495; (212) 758-7136
Email: Peter@rentec.com
Mercer@rentec.com

Silber@rentec.com
Carla@rentec.com
JRowen@rentec.com

Basket Base Performance; NAV Index Levels; Basket Performance Reports
Eric Altmann
Scott Chinsky
Telephone: (212) 486-6780
Fax No.: (212) 486-7291
Email: eric@rentec.com
Scott@rentec.com

Confirmations:	Mark Silber / Carla Volpe Porter
Telephone:	(212) 486-6780
Fax No.:	(212)758-7136
Email:	Silber@rentec.com
	Carla@rentec.com

SCHEDULE II

Non-USD BENCHMARK RATE AND SPREAD SCHEDULE

Applicable to the specified Non-USD Trading Basket and the Term Basket

Country / Exchange on which securities trade	Benchmark Rate	Rebate Share Value	Basket Credit Balance	Basket Debit Balance
Australia / Australian Stock Exchange (ASX)	BBSW 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Austria / Vienna Stock Exchange	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Belgium / Euronext Brussels / NYSE Euronext	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Canada / Toronto Stock Exchange (TSE)	BBA LIBOR CAD 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Denmark / Nordic Exchange	Copenhagen IBOR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Finland / Helsinki Stock Exchange (HEX)	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
France / Euronext Paris / NYSE Euronext	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Germany / Frankfurt Stock Exchange	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Ireland / Irish Stock Exchange (ISE)	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Italy / Borsa Italiana	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Japan / Tokyo Stock Exchange (TSE)	LIBOR JPY 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Mexico / Bolsa Mexicana de Valores (BMV)	DB Internal Funding Rate	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Netherlands / Euronext Amsterdam/ NYXE Euronext	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Norway / Oslo Bors	Norway IBOR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Portugal / Euronext Lisbon Exchange	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Singapore / Singapore Exchange (SGX)	DB Internal Funding Rate	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)

South Africa / Johannesburg Stock Exchange (JSE)	SA JIBAR 1M	125 basis points (1.25%)	25 basis points (0.25%)	55 basis points (0.55%)
Spain / Bolsa de Madrid	BBA LIBOR EUR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Sweden / Stockholmsborsen AB	STIBOR 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)
Switzerland / Swiss Exchange (SWX)	LIBOR CHF 1M	60 basis points (0.60%)	25 basis points (0.25%)	35 basis points (0.35%)

ANNEX I

[DATE]

MOSEL EQUITIES L.P.
[FULL ADDRESS]
Attn: [ ]
Tel: [ ]
Fax: [ ]

▬▬ = Redacted by the Permanent Subcommittee on Investigations

[EARLY EXPIRATION] [SELLER TERMINATION] NOTICE

Dear Sirs:

The purpose of this notice is to inform the Buyer that pursuant to the original terms of the Barrier Option Transaction (the "Subject Transaction"), entered into between the Buyer and the Seller, and identified by the Confirmation bearing DBSI Reference Number [redacted]] (the "Confirmation"):

[At the close of business on [ ], the NAV Index Level is at [ ] which is less than or equal to the Barrier NAV Index Level. This constitutes an Early Expiration Event. The Subject Transaction has expired in accordance with the terms of the Confirmation.][2]

[The Seller is electing to terminate the Subject Transaction, under the terms of the Confirmation, in accordance with [DESCRIBE RELEVANT CONFIRMATION PROVISION], upon receipt of this notice.][3]

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

Very truly yours,

DEUTSCHE BANK SECURITIES INC.

By:
Name:
Title:
Eamon McCooey
Managing Director

By:
Name:
Title:
Matthew Bowen
Managing Director

[2] Delete if this notice not is not being delivered pursuant to an Early Expiration Event.
[3] Delete if this notice is being delivered pursuant to an Early Expiration Event.

ANNEX II

[DATE]

DEUTSCHE BANK AG LONDON
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Attn.: Satish Ramakrishna/[Kam Singh]
Tel: (212) 250-4928

— = Redacted by the Permanent Subcommittee on Investigations

BUYER TERMINATION NOTICE

Dear Sirs:

Reference is made to the Barrier Option Transaction (the "Subject Transaction"), entered into between Mosel Equities L.P. (the "Buyer") and Deutsche Bank AG, London Branch (the "Seller"), and identified by the Confirmation bearing DBSI Reference Number [redacted] (the "Confirmation").

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

The purpose of this notice is to inform the Seller that the Buyer is electing to terminate the Subject Transaction, under the terms of the Confirmation, in accordance with [DESCRIBE RELEVANT CONFIRMATION PROVISION], upon receipt of this notice.

Very truly yours,

MOSEL EQUITIES L.P.

By:____________________
Name:
Title:

MAPS Transactions

Advisor	Option Buyer	Notional Amt.	Start Date	Expiration Date	Exercise/Settlement Date (if different)
Ballentine Capital Management	Cangard Investments LLC	400,000,000	October 1, 1998	January 31, 2000	
Ballentine Capital Management	Cangard Investments LLC	800,000,000	December 27, 1999	January 31, 2002	
Ballentine Capital Management	Cangard Investments LLC	800,000,000	December 22, 2000	January 31, 2003	
Ballentine Capital Management	Cangard Investments LLC	50,000,000	December 27, 2001	January 31, 2004	
Ballentine Capital Management	Cangard Investments LLC	320,000,000	December 22, 2000	January 31, 2003	
Ballentine Capital Management	Cangard Investments LLC	208,000,000	February 4, 2002	January 31, 2003	
Ballentine Capital Management	Cangard Investments LLC	28,000,000	December 24, 2002	January 31, 2004	
Renaissance Technologies Corp	Franconia Equities Ltd.	750,000,000	July 17, 2000	September 5, 2005	
Renaissance Technologies Corp	Franconia Equities Ltd.	3,000,000,000	March 14, 2002	March 15, 2005	
Renaissance Technologies Corp	Franconia Equities Ltd.	937,500,000	June 26, 2003	July 31, 2005	December 10, 2004
Renaissance Technologies Corp	Franconia Equities Ltd.	937,500,000	June 26, 2003	January 31, 2006	July 20, 2004
Renaissance Technologies Corp	Franconia Equities Ltd.	937,500,000	June 26, 2003	July 31, 2006	June 15, 2005
Renaissance Technologies Corp	Franconia Equities Ltd.	937,500,000	June 26, 2003	January 31, 2007	January 31, 2007
Renaissance Technologies Corp	Franconia Equities Ltd.	243,000,000	June 16, 2005	January 15, 2007	June 23, 2006
Renaissance Technologies Corp	Franconia Equities Ltd.	364,500,000	June 16, 2005	July 16, 2007	June 23, 2006
Renaissance Technologies Corp	Franconia Equities Ltd.	243,000,000	June 16, 2005	January 15, 2008	June 23, 2006
Renaissance Technologies Corp	Franconia Equities Ltd.	364,500,000	June 16, 2005	July 15, 2008	June 23, 2006
Renaissance Technologies Corp	Franconia Equities Ltd.	1,574,100,000	December 16, 2005	July 15, 2008	December 21, 2006
Renaissance Technologies Corp	Franconia Equities Ltd.	1,574,100,000	December 16, 2005	January 15, 2009	May 10, 2007
Renaissance Technologies Corp	Franconia Equities Ltd.	1,049,400,000	December 16, 2005	January 15, 2008	December 27, 2006
Renaissance Technologies Corp	Franconia Equities Ltd.	3,600,000,000	December 16, 2005	April 15, 2009	December 27, 2006
Renaissance Technologies Corp	Franconia Equities Ltd.	1,049,400,000	December 22, 2006	July 15, 2009	January 4, 2008
Renaissance Technologies Corp	Franconia Equities Ltd.	1,620,000,000	December 22, 2006	July 15, 2009	January 4, 2008
Renaissance Technologies Corp	Franconia Equities Ltd.	810,000,000	December 22, 2006	October 15, 2009	January 4, 2008
Renaissance Technologies Corp	Franconia Equities Ltd.	450,000,000	December 22, 2006	January 15, 2010	June 27, 2008
Renaissance Technologies Corp	Franconia Equities Ltd.	2,187,000,000	May 8, 2007	May 10, 2010	June 27, 2008
Renaissance Technologies Corp	Franconia Equities Ltd.	2,700,000,000	November 19, 2007	November 28, 2008	December 3, 2008
Renaissance Technologies Corp	Mosel Equities LP	1,170,000,000	December 18, 2007	June 16, 2011	January 5, 2010
Renaissance Technologies Corp	Mosel Equities LP	2,430,000,000	December 18, 2007	December 26, 2008	December 30, 2008
Renaissance Technologies Corp	Mosel Equities LP	1,350,000,000	December 15, 2008	December 22, 2009	December 28, 2009
Renaissance Technologies Corp	Mosel Equities LP	3,150,000,000	June 9, 2009	June 29, 2010	July 2, 2010
Renaissance Technologies Corp	Mosel Equities LP	3,600,000,000	October 8, 2009	December 18, 2010	December 23, 2010
Renaissance Technologies Corp	Mosel Equities LP	2,700,000,000	November 20, 2009	December 28, 2010	December 31, 2010
Renaissance Technologies Corp	Mosel Equities LP	900,000,000	May 24, 2010	December 19, 2011	December 22, 2011
Renaissance Technologies Corp	Mosel Equities LP	2,700,000,000	September 23, 2010	December 27, 2011	November 30, 2011

MAPS Transactions

Advisor	Option Buyer	Notional Amt.	Start Date	Expiration Date	Exercise/Settlement Date (if different)
Renaissance Technologies Corp	Mosel Equities LP	2,700,000,000	November 15, 2010	June 28, 2012	July 3, 2012
Renaissance Technologies Corp	Mosel Equities LP	2,700,000,000	April 24, 2012	March 22, 2013	December 5, 2012
Renaissance Technologies Corp	Mosel Equities LP	1,800,000,000	June 7, 2012	December 14, 2012	December 18, 2012
Renaissance Technologies Corp	Mosel Equities LP	2,025,000,000	November 29, 2012	November 14, 2013	November 22, 2013
Renaissance Technologies Corp	Mosel Equities LP	2,025,000,000	December 11, 2012	November 26, 2013	December 5, 2013
Renaissance Technologies Corp	Mosel Equities LP	1,800,000,000	December 21, 2012	December 6, 2013	December 16, 2013
Renaissance Technologies Corp	Mosel Equities LP	3,150,000,000	November 14, 2013	July 7, 2014	
Renaissance Technologies Corp	Mosel Equities LP	1,800,000,000	December 6, 2013	November 17, 2014	
Deephaven Capital Management LLC	Deephaven Domestic Convertible Trading Ltd	175,000,000	September 22, 1999	October 21, 2000	
Deephaven Capital Management LLC	Deephaven Domestic Convertible Trading Ltd	150,000,000	September 9, 1999	October 9, 2000	
Deephaven Capital Management LLC	Deephaven Domestic Convertible Trading Ltd	150,000,000	October 1, 1999	October 9, 2000	
Deephaven Capital Management LLC	Deephaven Domestic Convertible Trading Ltd	200,000,000	November 15, 1999	December 18, 2000	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	500,000,000	December 18, 2000	June 18, 2002	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	240,000,000	December 18, 2000	June 18, 2002	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	300,000,000	December 18, 2000	December 20, 2002	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	1,000,000,000	June 19, 2001	December 20, 2002	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	144,000,000	June 19, 2001	December 26, 2002	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	750,000,000	November 19, 2002	December 20, 2003	
Deephaven Investment Advisors	Deephaven Statistical Arb Trading Ltd	96,000,000	February 25, 2002	August 27, 2002	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	600,000,000	August 19, 2003	August 23, 2004	August 23, 2004
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd	600,000,000	August 19, 2003	August 23, 2004	
Deephaven Capital Management LLC	Deephaven Statistical Arb Trading Ltd			November 22, 2004	

MAPS Transactions

Advisor	Option Buyer	Notional Amt.	Start Date	Expiration Date	Exercise/Settlement Date (if different)
Deephaven Capital Management	Deephaven Relative Value Equity Trading LTD	1,000,000,000	June 23, 2004	June 24, 2005	November 22, 2004
Deephaven Capital Management LLC	Deephaven Relative Value Equity Trading LTD	1,200,000,000	November 15, 2004	November 11, 2005	June 21, 2005
Deephaven Capital Management LLC	Deephaven Relative Value Equity Trading LTD	400,000,000	June 21, 2005	February 17, 2006	
Deephaven Capital Management LLC	Deephaven Relative Value Equity Trading LTD	400,000,000	June 21, 2005	June 21, 2006	February 17, 2006
Deephaven Capital Management LLC	Deephaven Relative Value Equity Trading LTD	30,000,000	February 14, 2006	February 14, 2007	December 22, 2006
Deephaven Capital Management LLC	Deephaven Relative Value Equity Trading LTD	30,000,000	December 22, 2006	December 21, 2007	
Quaker Partners LLC	GWA LLC	500,000,000	April 15, 2003	April 30, 2015	April 30 2009
Quaker Partners LLC	GWA LLC	500,000,000	May 20, 2003	December 26, 2005	December 26, 2005
Quaker Partners LLC	GWA LLC	184,000,000	December 21, 2005	December 21, 2017	December 28, 2006
Quaker Partners LLC	GWA LLC	276,000,000	December 21, 2005	December 21, 2017	December 28, 2006
Quaker Partners LLC	GWA LLC	184,000,000	December 21, 2005	December 21, 2017	May 14 2010
Quaker Partners LLC	GWA LLC	276,000,000	December 21, 2005	December 21, 2017	May 14 2010
Quaker Partners LLC	GWA LLC	184,000,000	December 12, 2006	December 18, 2018	May 19, 2010
Quaker Partners LLC	GWA LLC	276,000,000	December 12, 2006	December 18, 2018	May 14 2010
Quaker Partners LLC	GWA LLC	184,000,000	December 12, 2006	December 18, 2018	May 24, 2010
Quaker Partners LLC	GWA LLC	276,000,000	December 12, 2006	December 18, 2018	May 19, 2010
SAC Capital Advisors	SAC Capital Associates LLC	150,000,000	January 8, 1999	March 4, 2000	
SAC Capital Advisors	SAC Capital Associates LLC	105,000,000	January 8, 1999	March 4, 2000	
SAC Capital Advisors	SAC Capital Associates LLC	100,000,000	September 30, 1998	April 1, 2000	
SAC Capital Advisors	SAC Capital Associates LLC	150,000,000	February 15, 2000	March 15, 2001	
SAC Capital Advisors	SAC Capital Associates LLC	160,000,000	March 6, 2000	October 29, 2001	
SAC Capital Advisors	SAC Equinox Fund	140,000,000	March 6, 2000	October 29, 2001	
SAC Capital Advisors	SAC Capital Associates LLC	150,000,000	April 3, 2000	May 3, 2001	
SAC Capital Advisors	SAC Capital Associates LLC	441,562,366	March 15, 2001	March 18, 2002	
SAC Capital Advisors	SAC Capital Associates LLC	150,000,000	May 3, 2001	June 10, 2002	
SAC Capital Advisors	SAC Capital Associates LLC	332,220,000	January 2, 2002	January 6, 2003	
SAC Capital Advisors	SAC Capital Associates LLC	150,000,000	June 10, 2002	July 10, 2003	
SAC Capital Advisors	SAC Capital Associates LLC	332,220,000	January 6, 2003	January 12, 2004	
SAC Capital Advisors	SAC Capital Associates LLC	150,000,000	July 14, 2003	August 11, 2004	August 16, 2004
SAC Capital Advisors	SAC Capital Associates LLC	332,220,000	January 12, 2004	January 18, 2005	January 21, 2005

MAPS Transactions

Advisor	Option Buyer	Notional Amt.	Start Date	Expiration Date	Exercise/Settlement Date (if different)
SAC Capital Advisors	SAC Capital Associates LLC	100,000,000	January 18, 2005	January 18, 2006	January 20, 2006
SAC Capital Advisors	SAC Capital Associates LLC	100,000,000	January 17, 2006	January 18, 2007	
SAC Capital Advisors	SAC Capital Associates LLC	100,000,000	January 18, 2007	January 18, 2008	
Talon Capital LLC	Talon Investment Fund I LLC	24,000,000	July 2, 2002	August 1, 2003	
Talon Capital LLC	Talon Investment Fund I LLC	48,000,000	July 2, 2002	August 1, 2003	
Talon Capital LLC	Talon Investment Fund I LLC	40,000,000	November 15, 2002	January 6, 2004	
Talon Capital LLC	Talon Investment Fund I LLC	64,000,000	July 29, 2003	February 1, 2005	August 11, 2004
Talon Capital LLC	Talon Investment Fund I LLC	56,000,000	December 2, 2003	February 1, 2005	December 10, 2004
Talon Capital LLC	Talon Investment Fund I LLC	64,000,000	August 11, 2004	February 1, 2006	August 19, 2005
Talon Capital LLC	Talon Investment Fund I LLC	72,000,000	December 7, 2004	June 7, 2006	
Talon Capital LLC	Talon Investment Fund I LLC	32,000,000	August 18, 2005	February 14, 2007	November 14, 2006
Talon Capital LLC	Talon Investment Fund I LLC	32,000,000	August 18, 2005	March 16, 2007	December 5, 2006
Talon Capital LLC	Talon Investment Fund I LLC	36,000,000	December 16, 2005	March 17, 2007	March 6, 2007
Talon Capital LLC	Talon Investment Fund I LLC	36,000,000	December 16, 2005	June 17, 2007	June 4, 2007
Talon Capital LLC	Talon Investment Fund I LLC	32,000,000	November 14, 2006	May 14, 2008	
Talon Capital LLC	Talon Investment Fund I LLC	32,000,000	December 5, 2006	August 5, 2008	
Talon Capital LLC	Talon Investment Fund I LLC	36,000,000	March 7, 2007	September 4, 2008	
Talon Capital LLC	Talon Investment Fund I LLC	36,000,000	June 5, 2007	December 5, 2008	October 3, 2008
Talon Capital LLC	Talon Investment Fund I LLC	32,000,000	November 16, 2007	May 19, 2009	May 11 2009
Talon Capital LLC	Talon Investment Fund I LLC	32,000,000	December 10, 2007	June 3, 2009	June 9, 2009
Provident Advisors LLC	Provident Premier Master Fund Ltd	30,000,000	December 29, 2003	May 31, 2004	
Provident Advisors LLC	Provident Premier Master Fund Ltd	20,000,000	June 2, 2004	December 3, 2004	
Provident Advisors LLC	Provident Premier Master Fund Ltd	30,000,000	October 15, 2004	December 3, 2004	
Provident Advisors LLC	Provident Premier Master Fund Ltd	50,000,000	December 3, 2004	June 3, 2005	
Provident Advisors LLC	Provident Premier Master Fund Ltd	50,000,000	April 25, 2005	June 3, 2005	
Provident Advisors LLC	Provident Premier Master Fund Ltd	80,000,000	June 3, 2005	December 5, 2005	
Provident Advisors LLC	Provident Premier Master Fund Ltd	77,500,000	December 5, 2005	June 6, 2006	
Provident Advisors LLC	Provident Premier Master Fund Ltd	65,000,000	June 6, 2006	May 9, 2007	
Provident Advisors LLC	Provident Premier Master Fund Ltd	60,000,000	May 7, 2007	April 6, 2008	
Provident Advisors LLC	Provident Premier Master Fund Ltd	60,000,000	April 8, 2008	July 17, 2008	July 11, 2008
Provident Advisors LLC	Provident Premier Master Fund Ltd	60,000,000	July 11, 2008	October 17, 2008	
Provident Advisors LLC	Provident Premier Master Fund Ltd	55,000,000	October 14, 2008	January 26, 2009	January 21, 2009
MFT Limited	Trout Trading Fund Ltd	2,500,000	September 29, 1999	January 28, 2000	
MFT Limited	Trout Trading Fund Ltd	20,000,000	November 8, 1999	January 28, 2000	
MFT Limited	Trout Trading Fund Ltd	30,000,000	December 15, 1999	February 29, 2000	

MAPS Transactions

Advisor	Option Buyer	Notional Amt.	Start Date	Expiration Date	Exercise/Settlement Date (if different)
MFT Limited	Trout Trading Fund Ltd	100,000,000	February 14, 2000	August 17, 2000	
MFT Limited	Trout Trading Fund Ltd	120,000,000	March 17, 2000	September 17, 2000	
MFT Limited	Trout Trading Fund Ltd	150,000,000	April 5, 2000	October 5, 2000	
MFT Limited	Trout Trading Fund Ltd	200,000,000	May 30, 2000	November 30, 2000	
MFT Limited	Trout Trading Fund Ltd	300,000,000	June 30, 2000	December 30, 2000	
MFT Limited	Trout Trading Fund Ltd	500,000,000	August 3, 2000	February 2, 2001	
MFT Limited	Trout Trading Fund Ltd	700,000,000	August 15, 2000	February 15, 2001	
MFT Limited	Trout Trading Fund Ltd	850,000,000	September 1, 2000	March 1, 2001	
MFT Limited	Trout Trading Fund Ltd	1,000,000,000	September 14, 2000	March 14, 2001	
MFT Limited	Trout Trading Fund Ltd	1,200,000,000	October 18, 2000	April 24, 2001	
MFT Limited	Trout Trading Fund Ltd	1,300,000,000	December 1, 2000	April 24, 2001	
MFT Limited	Trout Trading Fund Ltd	1,200,000,000	January 24, 2001	July 27, 2001	
MFT Limited	Trout Trading Fund Ltd	1,400,000,000	May 11, 2001	November 14, 2001	
MFT Limited	Trout Trading Fund Ltd	1,400,000,000	July 25, 2001	January 25, 2002	
MFT Limited	Trout Trading Fund Ltd	1,400,000,000	July 25, 2001	January 25, 2002	
MFT Limited	Trout Trading Fund Ltd	1,400,000,000	November 27, 2001	May 28, 2002	
MFT Limited	Tewksbury Investment Fund Ltd	1,400,000,000	May 28, 2002	November 28, 2002	
MFT Limited	Tewksbury Investment Fund Ltd	1,800,000,000	August 23, 2002	February 21, 2003	
MFT Limited	Tewksbury Investment Fund Ltd	1,800,000,000	February 11, 2003	August 11, 2003	
MWN Limited	Tewksbury Investment Fund Ltd	2,000,000,000	April 8, 2003	October 3, 2003	October 8, 2003
MWN Limited	Tewksbury Investment Fund Ltd	2,800,000,000	November 12, 2003	May 13, 2004	
MWN Limited	Tewksbury Investment Fund Ltd	2,200,000,000	July 18, 2003	January 20, 2004	
MWN Limited*	Tewksbury Investment Fund Ltd	3,400,000,000	January 23, 2004	July 22, 2004	
Analytic Investors Inc	Analytic TSA Investors Inc	100,000,000	February 16, 1999	January 31, 2000	
Analytic Investors Inc	Analytic TSA Investors Inc	150,000,000	July 2, 1999	January 31, 2000	
Riverside Asset Management LLC	*	125,000,000	July 3, 2000	January 3, 2002	
Riverside Asset Management LLC	*	200,000,000	July 3, 2000	January 3, 2002	
Riverside Asset Management LLC	*	150,000,000	December 17, 2001	June 30, 2003	
646 Advisors LLC	Concentrated Alpha Partners LP	30,000,000	September 3, 2002	October 1, 2003	
646 Advisors LLC	Concentrated Alpha Partners LP	60,000,000	November 1, 2002	October 31, 2003	
646 Advisors LLC	Concentrated Alpha Partners LP	20,000,000	June 18, 2003	December 21, 2003	
*	WhiteBox	40,000,000	June 6, 2001	June 1, 2006	

MAPS Transactions

Advisor	Option Buyer	Notional Amt.	Start Date	Expiration Date	Exercise/Settlement Date (if different)
*	WhiteBox	30,000,000	June 28, 2002	January 31, 2004	
Northern Asset Management, Inc.	Northern Asset Hedged Utility	48,000,000	November 1, 2003	May 2, 2005	
* Advisor/Option Buyer information will be supplemented and/or updated to the extent located.					

Description	Start Date	Expiration Date	Exercise/Settlement Date (if different)	Premium	SETTLEMENT AMOUNT	Settlement Amount less returned part of premium
(RenTech) Franconia Equities Ltd.	July 17, 2000	September 5, 2005		83,333,333.00	124,798,811.59	41,465,478.59
(RenTech) Franconia Equities Ltd.	March 14, 2002	March 15, 2005		333,333,333.00	391,518,930.67	58,185,597.67
(RenTech) Franconia Equities Ltd.	June 26, 2003	July 31, 2005	December 10, 2004	104,166,666.00	237,414,625.45	133,247,959.45
(RenTech) Franconia Equities Ltd.	June 26, 2003	January 31, 2006	July 20, 2004	104,166,666.00	320,463,703.03	216,297,037.03
(RenTech) Franconia Equities Ltd.	June 26, 2003	July 31, 2006	June 5, 2005	104,166,666.00	465,239,842.00	361,073,176.00
(RenTech) Franconia Equities Ltd.	June 26, 2003	January 31, 2007	December 31, 2005	104,166,666.00	465,812,500.00	361,645,834.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	January 15, 2007	June 23, 2006	27,000,000.00	113,766,120.00	86,766,120.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	July 16, 2007	June 23, 2006	40,500,000.00	170,649,175.00	130,149,175.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	January 15, 2008	June 23, 2006	27,000,000.00	113,766,120.00	86,766,120.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	July 15, 2008	June 23, 2006	40,500,000.00	170,649,175.00	130,149,175.00
(RenTech) Franconia Equities Ltd.	December 16, 2005	January 15, 2008	December 21, 2006	116,600,000.00	423,262,912.49	306,662,912.49
(RenTech) Franconia Equities Ltd.	December 16, 2005	July 15, 2008	December 27, 2006	174,900,000.00	634,894,373.72	459,994,373.72
(RenTech) Franconia Equities Ltd.	December 16, 2005	April 15, 2009	December 27, 2006	174,900,000.00	634,894,373.72	459,994,373.72
(RenTech) Franconia Equities Ltd.	December 16, 2005	January 15, 2009	May 10, 2007	116,600,000.00	691,030,320.75	574,430,320.75
(RenTech) Franconia Equities Ltd.	December 22, 2006	October 15, 2009	January 4, 2008	90,000,000.00	338,985,067.39	248,985,067.39

(RenTech) Franconia Equities Ltd.	December 22, 2006	July 15, 2009	January 4, 2008	116,600,000.00	1,506,600,299.80	1,390,000,299.80
(RenTech) Franconia Equities Ltd.	December 22, 2006	July 15, 209	January 4, 2008	180,000,000.00	677,970,133.09	497,970,133.09
(RenTech) Franconia Equities Ltd.	December 22, 2006	January 15, 2010	June 27, 2008	50,000,000.00	453,093,854.10	403,093,854.10
(RenTech) Franconia Equities Ltd.	May 8, 2007	May 10, 2010	June 27, 2008	243,000,000.00	1,350,124,280.00	1,107,124,280.00
(RenTech) Franconia Equities Ltd.	November 19, 2007	November 28, 2008	December 3, 2008	300,000,000.00	1,834,512,282.76	1,534,512,282.76
(RenTech) Mosel Equities LP.	December 18, 2007	June 16, 2011	January 5, 2010	130,000,000.00	2,054,103,445.00	1,924,103,445.00
(RenTech) Mosel Equities LP	December 18, 2007	December 26, 2008	December 30, 2008	270,000,000.00	1,765,282,524.35	1,495,282,524.35
(RenTech) Mosel Equities LP (IA1)	December 15, 2008	December 22, 2009		150,000,000.00	554,291,533.83	434,618,004.83
(RenTech) Mosel Equities LP (IA2)	June 9, 2009	June 29, 2010	June 12, 2009	350,000,000.00	788,621,554.13	508,679,042.13
(RenTech) Mosel Equities LP (IA3)	October 8, 2009	December 18, 2010	December 23, 2010	400,000,000.00	1,066,064,569.45	745,499,065.45
(RenTech) Mosel Equities LP (IA4)	November 20, 2009	December 28, 2010	December 31, 2010	300,000,000.00	722,101,787.27	482,195,277.27
(RenTech) Mosel Equities LP (IA5)	May 24, 2010	December 19, 2011	December 22, 2011	100,000,000.00	444,152,969.75	364,295,135.33
(RenTech) Mosel Equities LP (IA6)	September 23, 2010	December 27, 2011	November 30, 2011	300,000,000.00	766,549,541.94	526,543,289.94
(RenTech) Mosel Equities LP (IA7)	November 15, 2010	June 28, 2012	July 3, 2012	300,000,000.00	1,491,674,872.52	1,251,910,240.52
(RenTech) Mosel Equities LP (IA8)	April 24, 2012	March 22, 2013	December 5, 2012	300,000,000.00	385,392,877.03	209,561,900.03
(RenTech) Mosel Equities LP (IA9)	June 7, 2012	December 14, 2012	December 18, 2012	200,000,000.00	326,932,172.36	151,383,132.36
(RenTech) Mosel Equities LP (IA10)	November 29, 2012	November 14, 2013	November 22, 2013	225,000,000.00	467,062,733.81	269,094,478.81

(RenTech) Mosel Equities LP (IA11)	December 11, 2012	November 26, 2013	December 5, 2013	225,000,000.00	490,361,992.49	292,547,937.49
(RenTech) Mosel Equities LP (IA12)	December 21, 2012	December 6, 2013	December 16, 2013	200,000,000.00	507,781,293.62	331,740,968.62
(RenTech) Mosel Equities LP (IA13)	November 14, 2013	July 7, 2014		350,000,000.00		
(RenTech) Mosel Equities LP (IA14)	December 6, 2013	November 17, 2014		200,000,000.00		

EXECUTION COPY

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c/o Renaissance Technologies LLC
800 Third Avenue
New York, NY 10022
Attn: Mark Silber / Carla Volpe Porter
Tel: (212) 486-6780
Fax: (212) 758-7136

[redacted] = Redacted by the Permanent Subcommittee on Investigations

BARRIER OPTION TRANSACTION – Cash Settled –
DBSI Reference No. [redacted]

Dear Sirs:

The purpose of this letter agreement (this "Confirmation") is to confirm the terms and conditions of the transaction entered into between **DEUTSCHE BANK AG, LONDON BRANCH** ("Party A" or "Seller") and **MOSEL EQUITIES L.P.** ("Party B," or "Buyer," and together with Party A, the "Parties") on the Trade Date specified below (the "Transaction"). This Confirmation constitutes a "Confirmation" as referred to in the ISDA Master Agreement specified below. This Confirmation constitutes the entire agreement and understanding of the parties with respect to the subject matter and terms of the Transaction and supersedes all prior or contemporaneous written or oral communications with respect thereto.

DEUTSCHE BANK AG IS NOT REGISTERED AS A BROKER DEALER UNDER THE U.S. SECURITIES EXCHANGE ACT OF 1934. DEUTSCHE BANK SECURITIES INC. ("DBSI" or "DESIGNATED AGENT") HAS ACTED SOLELY AS AGENT IN CONNECTION WITH THIS TRANSACTION AND HAS NO OBLIGATION, BY WAY OF ISSUANCE, ENDORSEMENT, GUARANTEE OR OTHERWISE WITH RESPECT TO THE PERFORMANCE OF EITHER PARTY UNDER THE TRANSACTION. DEUTSCHE BANK AG, LONDON BRANCH IS NOT A MEMBER OF THE SECURITIES INVESTOR PROTECTION CORPORATION (SIPC).

1. The definitions and provisions contained in the 2000 ISDA Definitions (the "Swap Definitions") and in the 2002 ISDA Equity Derivatives Definitions (the "Equity Definitions", and together with the Swap Definitions, the "Definitions"), in each case as published by the International Swaps and Derivatives Association, Inc. are incorporated into this Confirmation. In the event of any inconsistency between the Swap Definitions and the Equity Definitions, the Equity Definitions will govern. In the event of any inconsistency between either set of Definitions and this Confirmation, this Confirmation will govern. For purposes of the Equity Definitions, the Transaction shall constitute an "Index Option Transaction".

[1] Deutsche Bank AG is regulated by the FSA for the conduct of designated investment business in the UK, is a member of the London Stock Exchange and is a joint stock corporation with limited liability incorporated in the Federal Republic of Germany HRB No. 30 000 District Court of Frankfurt am Main; Branch Registration No. in England and Wales BR000005, Registered address: Winchester House, 1 Great Winchester Street, London EC2N 2DB, Telephone: +44 20 7545 8000.

This Confirmation constitutes a "Confirmation" as referred to in, and supplements, forms a part of and is subject to, the 1992 ISDA Master Agreement, including the Schedule thereto dated as of December 15, 2008 as amended and supplemented from time to time (the "Agreement"), between Party A and Party B. For the avoidance of doubt, the Transaction shall not be subject to the provisions of any other agreement between Party A and Party B, including any other ISDA Master Agreement and any Credit Support Annex thereto. All provisions contained in the Agreement govern this Confirmation except as expressly modified below. All provisions contained or incorporated by reference in the Agreement will govern this Confirmation, except that, without limiting the foregoing, in the event of any inconsistency between this Confirmation and any provisions contained or incorporated by reference in the Agreement with respect to any payment obligations of Party A or Party B, the terms of this Confirmation shall govern. For the avoidance of doubt, notwithstanding anything in Section 6(d) or Section 6(e) of the Agreement to the contrary, any payment or delivery required to be made in connection with the termination of the Transaction shall be calculated and paid in accordance with the provisions contained in this Confirmation.

2. The terms of the particular Transaction to which the Confirmation relates are as follows:

General Terms

Trade Date:	October 8, 2009, which is the first date on which trading in the Basket (as defined below) can occur.
Effective Date:	The Trade Date
Term:	The period from and including the Trade Date to but excluding the Final Valuation Date.
Tenor:	The number of days in the period from and including the Premium Payment Date to but excluding the Scheduled Expiration Date.
Option Type:	Call
Option Style:	European
Buyer:	Party B
Seller:	Party A
Index:	The NAV Index Level
Business Day:	New York
Business Day Convention:	Following Business Day.
Exchange Business Day:	For each Exchange (as defined below), any Scheduled Trading Day on which such Exchange is open for trading during its regular trading session notwithstanding such Exchange closing prior to its Scheduled Closing Time.

Transaction Details

Number of Options:	One
Strike Price:	100
Notional Amount:	USD3,600,000,000
Initial Leverage:	USD2,825,000,000
Premium:	USD400,000,000
Premium Payment Date:	The third (3rd) Business Day immediately following the Trade Date.
Calculation Agent:	Designated Agent

Procedure for Exercise

Expiration Time:	5 p.m. (local time in New York City).
Expiration Date:	The date which is the earliest of: (i) December 18, 2010, (the "Scheduled Expiration Date"), (ii) the first date on which the NAV Index Level is at or below the Barrier NAV Index Level (such event and date described in this clause (ii) shall be referred to herein as an "Early Expiration Event" and an "Early Expiration Date", respectively) and (iii) any other date on which the Transaction is terminated or expires in accordance with the Confirmation or the Agreement.
Automatic Exercise:	Applicable.
Seller's Agent's Telephone Number and Facsimile Number and Contact Details for Purpose of Giving Notice:	Seller's Agent's Name: Satish Ramakrishna Specified Location: 60 Wall Street, 4th Floor, New York, NY 10005 Tel: (212) 250-4928 Fax: (212) 797-9358 Email: satish.ramakrishna@db.com

Valuation

Final Valuation Date:	The last Pricing Day in the Pricing Period.
Pricing Period:	The period commencing on, and including, the Expiration Date and ending on, and including, the earlier of (i) the Expiration Date, or if such day is not a Pricing Day, then the first (1st) Pricing Day immediately following the Expiration Date, and (ii) the 14th Business Day immediately following the Expiration Date, <u>provided, however</u>, that the Pricing Period shall not be deemed to

commence until the earlier of (a) the Advisor (as defined in Master Investment Advisory Agreement (as defined below)) commencing a Liquidation (as defined therein) of the Sub-Account (as defined therein) relating to the Basket and (b) the Seller having the right, under the Master Investment Advisory Agreement, to take control of the Sub-Account relating to the Basket, provided, further, that the Pricing Period may be a longer or shorter period as mutually agreed upon by the Parties, provided, further, that the Pricing Period shall be deemed to continue until such time as the Calculation Agent has determined, in accordance with customary practices, that it has ended. In the event that the Buyer disputes the Calculation Agent's determination of the Pricing Period and can reasonably demonstrate that an investment manager could have liquidated and reduced to cash a portfolio substantially similar to the Basket in a shorter period subject to the same conditions considered by the Calculation Agent in determining the Pricing Period, then Buyer and Seller shall mutually determine in good faith any adjustment to the Pricing Period and the Pricing Period shall end on the last day of such adjusted period. Notwithstanding the foregoing, if an Early Expiration Event has occurred, the commencement and termination of the Pricing Period will be as determined by the Calculation Agent at such time.

Valuation Method: Upon the expiration or termination of the Transaction, for purposes of establishing the NAV Index Level used to calculate the Cash Settlement Amount, it shall be assumed that (i) all Effected Positions shall be liquidated during the Pricing Period and (ii) each Designated Position shall be deemed liquidated at such time and price as the Investment Advisor, the Seller or any manager chosen by the Seller would have liquidated in conformity with the liquidation provisions of the Master Investment Advisory Agreement (as defined below). It also shall be assumed that Seller, or any manager chosen by Seller to exercise control over the Basket, shall, commencing on the Expiration Date or as soon as is practicable thereafter, conduct an orderly liquidation and reduction to cash of all Effected Positions contained in the Basket, in a commercially reasonable manner and in accordance with the provisions of the Master Investment Advisory Agreement relating to effecting a liquidation, with the objective of minimizing market impact and preserving the remaining equity value of the Basket. Except in the case of an Early Expiration Event, it shall be assumed, in conducting the liquidation, Seller or any manager chosen by Seller to exercise control over the Basket (if applicable) shall give due regard to effecting proportionate reductions of any economic long positions and economic short positions. Notwithstanding the foregoing, if Section 9(b) of the Master Investment Advisory Agreement applies and the Investment Advisor has advised the Seller in a timely fashion to accept the bid that established the Market Bid Level (as defined therein), then for purposes of establishing the NAV Index Level used to calculate the Cash Settlement Amount, the Basket shall be deemed to have been liquidated at the Market Value (as defined in the Master Investment Advisory Agreement).

Pricing Day:	For each Trading Basket, an Exchange Business Day on which a Market Disruption Event has not occurred.

Settlement Terms:

Cash Settlement:	Applicable
Settlement Currency	USD
Term Rate:	2.07%
Debit Spread:	The Spread applied to the Basket Debit Balance in accordance with the U.S. Spread Schedule (as outlined below).
Remaining Tenor:	As of any day during the period from and including the Premium Payment Date to but excluding the Scheduled Expiration Date, the number of days remaining in the Tenor, from and including the day on which such determination is being made to but excluding the Scheduled Expiration Date.

Optionality Value: As of any day during the period from and including the Trade Date to but excluding the Premium Payment Date, an amount equal to:

$$\frac{\textit{Initial Leverage} \times (\textit{Term Rate} + \textit{Debit Spread}) \times \textit{Tenor}}{365 + (\textit{Term Rate} \times \textit{Tenor})}$$

; and as of any other day during the Term of this Transaction, the **greater of** (i) zero and (ii) an amount determined by the difference of (a) the Optionality Value calculated for the previous day **minus** (b) the quotient of (x) the Optionality Value as of the Trade Date **divided** by (y) Tenor.

Intrinsic Value:	As of the Trade Date, an amount equal to (i) the Premium **minus** (ii) the Optionality Value as of the Trade Date (the "Initial Intrinsic Value"); and as of any other day during the Term of this Transaction, an amount (which may be positive or negative) equal to the sum of (a) the Intrinsic Value calculated for the previous day **plus** (b) the change in Basket Base Performance for such day (which may be a positive or negative number).
NAV Index Level:	As of each day during the Term of this Transaction, an amount determined as follows:

$$100+\left(100\times\frac{Intrinsic\ Value\ as\ of\ such\ date}{Notional\ Amount}\right)$$

Barrier NAV Index Level:

As of the Trade Date, 106.604597; and as of each day during the Term of this Transaction, an amount determined as follows:

$$100\times\left(.977+\frac{Premium-Optionality\ Value}{Notional\ Amount}\right)$$

Cash Settlement Amount:

Cash Settlement Scenario "A" or Cash Settlement Scenario "B" (each, a "Cash Settlement Scenario"), as specified herein, determined as of the Final Valuation Date. Except as otherwise stated herein, if for any reason this Transaction is terminated or expires prior to the Scheduled Expiration Date, the measure for any payment owed shall be Cash Settlement Amount Scenario "A". For the avoidance of doubt, if a Party delivers a notice specifying an Expiration Date and the grounds on which such termination notice is being delivered, the Cash Settlement Scenario associated with such grounds shall be the Cash Settlement Amount, notwithstanding the occurrence, between the delivery of the termination notice and the Expiration Date specified therein, of circumstances or events giving rise to the alternative Cash Settlement Scenario.

(i) For the avoidance of doubt, without limitation, the following events will result in the Cash Settlement Amount being Cash Settlement Scenario "A:"

(a) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(d)(i), Paragraph 4(d)(iii) or Paragraph 4(d)(iv) of this Confirmation;

(b) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(e) of this Confirmation;

(c) a termination of the Transaction resulting from the occurrence of an Event of Default other than one described in paragraph (ii)(c) below;

(d) a termination of the Transaction resulting from the occurrence of a Termination Event other than one described in paragraph (ii)(d) below; and

(e) all other events that result in the Transaction being terminated, either automatically under the terms of this Agreement, or by action of one of the Parties, where the Cash Settlement Amount is not otherwise specified.

(ii) For the avoidance of doubt, without limitation, the following events will result in the Cash Settlement Amount being Cash Settlement Scenario "B":

(a) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(d)(ii) of this Confirmation;

(b) a termination of the Transaction, effected by Buyer, as the result of the occurrence of an Additional Termination Event described in Paragraph 4(f) of this Confirmation;

(c) a termination of the Transaction effected by Buyer as the result of the occurrence of one of the following Events of Default:

(1) a breach by Seller of an agreement in accordance with Section 5(a)(ii) of the Agreement;

(2) a misrepresentation by Seller in accordance with Section 5(a)(iv) of the Agreement;

(3) a default by Seller under Section 5(a)(v)(2) of the Agreement;

(4) a default by Seller under Section 5(a)(vi) of the Agreement;

(5) the occurrence of an event described in Section 5(a)(vii) of the Agreement in respect of the Seller; and

(6) a "merger without assumption" in respect of the Seller as described in Section 5(a)(viii) of the Agreement;

and

(d) a termination of the Transaction resulting from the occurrence of one of the following Termination Events:

(1) an Illegality in accordance with Section 5(b)(i) of the Agreement in respect of which the Seller is the sole Affected Party;

(2) a Tax Event in accordance with Section 5(b)(ii)(y) of the Agreement in respect of which

the effective date of the Change in Law has not yet occurred and Seller has delivered notice to terminate the Transaction;

(3) (X) an Additional Termination Event described in the second paragraph of Paragraph 4(l) of this Confirmation or (Y) the designation by Seller of an Early Termination Date in accordance with Paragraph 4(n) of this Confirmation, provided that in the case of (X) or (Y) above, such Termination Event occurs in respect of any change in applicable law or Change in U.S. Tax Law, as applicable, that has not become effective; and

(4) a Tax Event Upon Merger in accordance with Section 5(b)(iii) of the Agreement in respect of which Seller is the sole Affected Party;

(for the avoidance of doubt, each reference to provisions in the Agreement are as amended by the Schedule thereto).

Cash Settlement Scenario "A": The **greater of** (i) zero, and (ii) an amount determined as follows:

$$(NAV Index\ Level - Strike\ Price) \times \frac{Notional\ Amount}{100}$$

Cash Settlement Scenario "B": The **greater of** (i) zero, and (ii) an amount determined as follows: the sum of (a):

$$(NAV Index\ Level - Strike\ Price) \times \frac{Notional\ Amount}{100}$$

plus (b) the Optionality Value.

Cash Settlement Payment Date: The third (3rd) Exchange Business Day immediately following the Final Valuation Date.

Early Settlement Amount: Without altering the foregoing or the final determination of the Cash Settlement Amount or the Seller's obligations in respect thereof, from time to time on any day during the Pricing Period, Buyer may request, and upon such request Seller shall make, a payment to Buyer (all such payments less all repayments of such payments by Buyer to Seller being, the "Early Settlement Payment") in an amount equal to the Available Early Settlement Amount (as defined below). If such request is made by Buyer on or prior to 5:00 p.m., New York time, on a Business Day then Seller shall make such payment to Buyer prior to 2:00 p.m., New York time on the next Business Day. If such request is made after 5:00 p.m., New York time, on a Business Day, Seller shall make such payment to Buyer prior to noon, New York time, on the second succeeding Business Day. If the Seller determines that the Early Settlement Payment on any day during the Pricing Period exceeds the Early Settlement Amount for such day, then the Seller shall so notify Buyer and prior to 5:00 p.m., New York time on the next Business Day, Buyer shall repay such excess to Seller. For each day in the Pricing Period, the Early Settlement Payment on such day shall bear interest at a rate equal to the overnight USD-Federal Funds – H.15 for such day. On the Cash Settlement Payment Date, Buyer shall repay to Seller an amount equal to the Early Settlement Payment together with interest accrued thereon.

For these purposes, at any time:

(i) "Available Early Settlement Amount" equals the excess, if any, of the Early Settlement Amount at such time over the Early Settlement Payment at such time;

(ii) "Early Settlement Amount" means (x) if the Net Hedge Ratio is greater than or equal to .05, zero and (y) otherwise, the amount that equals the product of .75 multiplied by (Intrinsic Value – (Gross Basket Value/(Notional Amount x 1.60)/Premium));

(iii) "Gross Basket Value" means the sum of (x) the total USD market value of all Basket Positions held long plus (y) the absolute value of the total USD market value of all Basket Positions held short;

(iv) "Net Hedge Ratio" means the absolute value of the amount determined by the following formula: (x) total USD market value of all Basket Positions held long less the absolute value of the total USD market value of all Basket Positions held short divided by (y) Gross Basket Value.

Adjustments For Potential Adjustment Events:	Calculation Agent Adjustment (as defined below)
Consequences of Merger Events:	Calculation Agent Adjustment (as defined below)
Nationalization or Insolvency:	Calculation Agent Adjustment (as defined below)
Calculation Agent Adjustment:	For purposes of Adjustments for Potential Adjustment Events, Consequences of Merger Events and Nationalization or Insolvency, all with respect to the relevant Basket Positions which comprise the Basket from time to time, the Calculation Agent will make such adjustments to the Share price, the then applicable Basket Base Performance, the NAV Index Level and any other variable relevant to the exercise, settlement or

payment terms of the Transaction, as the Calculation Agent, acting in good faith and commercially reasonable manner, determines appropriate, with reference (as deemed appropriate) to any relevant adjustment rules and precedents in effect for any primary options exchange for exchange-traded options contracts on the relevant affected Basket Positions and in consultation with Buyer.

Additional Terms

The following additional terms shall apply to this Transaction.

3. **Further Definitions:**

The Basket--

"Basket" means a record maintained by the Calculation Agent for this Transaction identifying, at all times, all of the positions that (i) actually result from transactions specified by the Investment Advisor (as defined below) to be included in such record (the "Effected Positions") or (ii) are Designated Positions (as such term is defined in the Master Investment Advisory Agreement, the Designated Positions together with the Effected Positions, the "Basket Positions"). For the avoidance of doubt, any dividend, interest or any other income that would have been received or accrued on or in respect of, or any expense incurred with respect to, any Designated Position, will be deemed credited or debited to the Basket as Basket Income or Basket Expenses, as the case may be. If a Designated Position would have been entered into but for the fact that the intended Designated Position violated the Investment Guidelines and Compliance Restrictions (as defined below) at the time such transaction was specified by the Investment Advisor, then such position shall be void *ab initio* and therefore not, at any time, a component of the Basket. To the extent that a Designated Position subsequently violates the Investment Guidelines and Compliance Restrictions, it shall be deemed to have been (X) in the case of a long position, sold, and (Y) in the case of a short position, covered, as of the time such Investment Guideline violation occurred. The Basket may be divided, at any time, into sub-records, each constituting either a Trading Basket or a Term Basket (each as defined below).

"Basket Base Performance" means, during a period, the sum (expressed in USD), during such period, of (i) Basket Gains and Losses **plus** (ii) Basket Income and Expenses.

"Basket Gains and Losses" means, during a period, the difference (expressed in USD), during such period, of (i) realized and unrealized gains in respect of the Basket Positions **minus** (ii) realized and unrealized losses in respect of the Basket Positions.

"Basket Income and Expenses" during a period means (i) Basket Income **minus** (ii) Basket Expenses.

"Basket Income" during a period means: the sum, expressed in USD, of (i) dividend income (determined based on ex-dividend dates that have occurred during such period), net of the non-U.S. and U.S. withholding taxes, if any, that would be imposed on a holder of the relevant position that (a) is a resident of the Federal Republic of Germany, (b) is entitled to the benefits of income tax treaties between the Federal Republic of Germany and other countries, (c) properly treats such dividend income as effectively connected with its U.S. trade or business and (d) has provided properly completed and executed certifications claiming such treaty or effectively connected income status; provided, however, in the case of Effected Positions, dividend income will be further reduced by any additional taxes (and penalties and interest associated therewith) incurred by Seller that would not have been incurred by the Seller in the absence of the relationship between Seller and Buyer under this Transaction, **plus** (ii) interest income, receivable and received, on any USD Basket Credit Balance, such interest calculated at the relevant Benchmark Rate minus the Spread applicable to the USD Basket Credit Balance (as stated below) **plus** (iii) the product of (a) the Rebate Share Value (as defined below) on the USD Trading Basket

multiplied by (b) the difference of (1) the relevant Short Benchmark Rate (as defined below) **minus** (2) (A) to the extent such Rebate Share Value is not composed of Hard-To-Borrow Shares (as defined below), the relevant Spread on such Rebate Share Value (stated in the U.S. Spread Schedule below) and (B) to the extent such Rebate Share Value is composed of Hard-to-Borrow Shares, a short spread reflective of the Hard-To-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (iv) interest income receivable on any Non-USD Basket Credit Balance, in each case such interest calculated at the relevant Benchmark Rate minus the Spread applicable to such Non-USD Basket Credit balance, **plus** (v) the product of the Rebate Share Value for each Non-USD Trading Basket **multiplied** in each case by the relevant Benchmark Rate, **plus** (vi) total accrued and paid interest income on Term Basket realized gains and dividend income, that have been realized or paid respectively between Term Basket Reset Dates, calculated at the LIBOR Rate, **plus** (vii) all other income enumerated in the Basket Performance Report. Each interest calculation under this definition shall be performed using the currency associated with the specified Trading Basket for such Trading Basket and all non-USD amounts shall be converted to USD at the spot rate for such currency at the time the Basket Income calculation is performed. As relates to Basket Income, with respect to any Basket Position, "withholding taxes" shall include stamp and excise taxes whether or not collected by withholding.

"Basket Expenses" during a period means: the sum, expressed in USD, of (i) payments in lieu of dividends (including any U.S. or non-U.S. withholding taxes required to be withheld by Seller with respect to such payments in lieu of dividends), provided, however, that in the case of Effected Positions, Basket Expenses will be increased by any additional taxes (and penalties and interest associated therewith) incurred by Seller that would not have been incurred by Seller in the absence of the relationship between Buyer and Seller under this Transaction, **plus** (ii) any interest expenses, excluding accrued interest expenses on any USD Basket Debit Balance, **plus** (iii) total accrued and paid interest expense on the USD Basket Debit Balance, calculated at the Debit Rate on the USD Basket Debit Balance (using the applicable Spread from the U.S. Spread Schedule below), **plus** (iv) total accrued and paid interest expense on any Non-USD Basket Debit Balance, in each case calculated at the Debit Rate on such Non-USD Basket Debit Balance (using the applicable Spread from the Non-U.S. Spread Schedule below), **plus** (v) total accrued and paid interest expense on any Term Basket open long position, in each case calculated at the Debit Rate on such Term Basket open long position's notional amount (using the applicable Spread from the Non-U.S. Spread Schedule below), **plus** (vi) the stock borrow fee payable on any Non-USD Trading Basket, in each case such fee calculated as the product of the Rebate Share Value for such Non-USD Trading Basket **multiplied** by (a) to the extent such Rebate Share Value is not composed of Hard-To-Borrow Shares, the relevant Spread on such Rebate Share Value (as stated in the Non-U.S. Spread Schedule below) and (b) in the case of Hard-to-Borrow Shares composing such Rebate Share Value, a short spread reflective of the Hard-To-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (vii) the stock borrow fee payable on any Term Basket open short position, in each case such fee calculated as the product of the Term Basket open short position's notional amount **multiplied** by (a) to the extent such Term Basket open short position's notional amount is not composed of Hard-to-Borrow Shares, the relevant Spread on such Term Basket open short position's notional amount (as stated in the Non-U.S. Spread Schedule below) and (b) in the case of Hard-to-Borrow Shares composing such Term Basket open short position's notional amount, a short spread reflective of the Hard-to-Borrow nature of such Shares as determined by the Calculation Agent, **plus** (viii) total accrued and paid interest expense on Term Basket realized losses and payments in lieu of dividends, that have been realized or paid respectively between Term Basket Reset Dates, calculated at the LIBOR Rate, **plus** (ix) all other expenses enumerated in the Basket Performance Report, **plus** (x) any investment advisor fees accrued during such period, whether or not actually paid by Seller. Each interest calculation under this definition shall be performed using the currency associated with the specified Trading Basket for such Trading Basket and all non-USD amounts shall be converted to USD at the spot rate for such currency at the time the Basket Expenses calculation is performed. As relates to Basket Expenses, with respect to any Basket Position, "withholding taxes" shall include stamp and excise taxes whether or not collected by withholding.

"Basket Performance Report" means a periodic report prepared and compiled by the Calculation Agent in its sole discretion (but after consultation with the Investment Advisor), setting forth (among other things) the Basket Base Performance, as well as such other items the Calculation Agent determines, in its

sole discretion, affects the performance of the option. The most current Basket Performance Report as of any date shall be available to Buyer on a daily basis.

"Benchmark Rate" means, (i) for the USD Trading Basket, as of any day, the **FEDSOPEN Rate** for such day (or if such day is not a Business Day as of the preceding Business Day) determined by reference to the **FEDSOPEN Index** as published by the Federal Reserve and as disseminated via Bloomberg and (ii) for each Non-USD Trading Basket, the applicable rate specified in the Non-USD Benchmark Rate Schedule on Schedule II hereto, or if no rate is so specified, the recognized overnight rate for the applicable currency as determined by the Calculation Agent, in good faith, or if such overnight rate is not available, the one week rate for such currency as determined by the Calculation Agent, in good faith.

"Debit Rate" means the sum of (i) the Benchmark Rate for any Trading Basket or the LIBOR Rate (as defined below) for any Term Basket, as the case may be **plus** (ii) for both USD Basket Positions and Non-USD Basket Positions, the Spread for the Basket Debit Balance as listed in the applicable Spread Schedule below.

"Exchange" means, in respect of each Basket Position or the related underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which such underlying security is actively traded or quoted.

"Hard-to-Borrow Shares" means, as determined by the Calculation Agent, (i) in respect of Basket Positions recorded under the USD Trading Basket, any Shares that are components of the USD Trading Basket from time to time for which the market rebate rate is lower than the normal rebate rate received on "general collateral" shares in connection with a theoretical stock borrow arrangement, and (ii) in respect of Basket Positions recorded under a Non-USD Trading Basket, any Shares that are components of such Non-USD Trading Basket from time to time for which the market fee rate is higher than the normal fee rate paid on "general collateral" shares in connection with a theoretical stock borrow arrangement.

"LIBOR Rate" means, in respect of each Term Basket, the one-month LIBOR interest rate on the Start Date (as defined below), and on each Term Basket Reset Date.

"Non-USD Basket Credit Balance" means, for each Non-USD Trading Basket, at any time, the excess, if any, of (i) the sum of (a) the cumulative realized gains on all former Basket Positions in such Non-USD Trading Basket, **plus** (b) the Short Proceeds Amount for such Non-USD Trading Basket, **over** (ii) the sum of (a) the aggregate of the initial "cost basis" of all open long Basket Positions in such Non-USD Trading Basket, **plus** (b) the cumulative realized losses on all former Basket Positions in such Non-USD Trading Basket, **and** (c) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in a currency other than USD to the Basket, but excluding accrued and unpaid income and expense items. Non-USD Basket Credit Balance determinations shall be made on a Share "settlement date" basis and shall be denominated in the currency associated with such Non-USD Trading Basket.

"Non-USD Basket Debit Balance" means, with respect to each Non-USD Trading Basket, at any time, the excess, if any, of (i) the sum of (a) the aggregate of the initial "cost basis" of all open long Basket Positions in such Non-USD Trading Basket, **plus** (b) the cumulative realized losses on all former Basket Positions in such Non-USD Trading Basket, over (ii) the sum of (a) the cumulative realized gains on all former Non-USD Basket Positions in such Trading Basket, **plus** (b) the Short Proceeds Amount for such Non-USD Trading Basket, **and** (c) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in a currency other than USD to the Basket, but excluding accrued and unpaid income and expense items, provided, that, for all Non-USD Basket Debit Balances greater than zero, solely for purposes of determining Basket Expenses, the Calculation Agent shall reduce any such Non-USD Basket Debit Balances by subtracting from the aggregate of such amounts the Unused Initial Leverage (any portion of the Unused Initial Leverage not so subtracted, the "**Remaining Unused Initial Leverage**"). The specific Non-USD Basket Debit Balances from which any Unused Initial Leverage is subtracted shall be determined by the Calculation Agent in its sole discretion but in no event shall any Non-

USD Basket Debit Balance be reduced below zero. Non-USD Basket Debit Balance determinations shall be made on a Share "settlement date" basis and shall be denominated in the currency associated with such Non-USD Trading Basket.

"Non-USD Basket Positions" means the Basket Positions recorded in a Non-USD Trading Basket.

"Non-USD Sub-Basket" means, for a given currency specified in respect of a Non-USD Trading Basket, a record maintained by the Calculation Agent identifying, at all times, all of the Non-USD Trading Baskets specifying that same currency. The Calculation Agent may elect to include in a Basket Performance Report information relating to any or all Non-USD Sub Baskets, which information shall be reported in the currency associated with such Non-USD Sub-Basket. By way of example and not of limitation, a report relating to a Non-USD Sub-Basket for a period may state (among other things) the Basket Credit Balances or Basket Debit Balances (as the case may be) of the relevant Non-USD Trading Baskets for such period, the stock borrow fees on such Non-USD Trading Baskets payable during such period, and any other information selected by the Calculation Agent for inclusion in such report, with all amounts reported in the applicable currency.

"Non-USD Trading Basket" means each Trading Basket that shall contain all Basket Positions representing Shares in respect of which the Exchange is not located in the United States.

"Rebate Share Value" means, at any time, in respect of any Trading Basket, the market value from time to time of all Basket Positions in such Trading Basket that represent open short sales of equity securities. For the avoidance of doubt, a separate Rebate Share Value may be specified for each Trading Basket, including the USD Trading Basket and all Non-USD Trading Baskets. The Rebate Share Value for a given Trading Basket shall be specified in the currency associated with such Trading Basket.

"Related Exchange(s)" means, in respect of each Basket Position or the related underlying security, the primary exchange or quotation system (or any successor thereto), if any, on which futures and/or options contracts with respect to such underlying security are actively traded or quoted.

"Remaining Unused Initial Leverage" is as defined above in the definition of Non-USD Basket Debit Balance.

"Short Benchmark Rate" means, in respect of the USD Trading Basket, (i) for any day prior to the Scheduled Expiration Date, (a) to the extent the Rebate Share Value of the USD Trading Basket is less than or equal to the Initial Leverage, the Term Rate, and (b) for any Rebate Share Value of the USD Trading Basket in excess of the Initial Leverage, the Benchmark Rate (which rate can be expressed as a weighted average rate for the purposes of calculation and reporting); and (ii) for any day during a Pricing Period occurring on or after the Scheduled Expiration Date, the Benchmark Rate.

"Short Proceeds Amount" means, for each Trading Basket, at any time, the sale price(s) received for the Basket Positions that represent open short sales of equity securities in such Trading Basket. A Short Proceeds Amount shall be expressed in the currency of the associated Trading Basket.

"Term Basket" means a record maintained by the Calculation Agent in respect of which all of the following characteristics have been specified: (i) a country, (ii) a currency, (iii) the date on which such record is established (the "Start Date"), (iv) the relevant LIBOR Rate and (v) the date on which all of the Basket Positions included in such record are scheduled to be liquidated (the "End Date"); and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record. Solely for purposes of calculating "Basket Expenses" the Calculation Agent shall reduce (but not below zero) the notional amount of open long positions in Term Baskets by subtracting from the aggregate of such notional amounts any Remaining Unused Initial Leverage. The specific open long positions from which any Remaining Unused Initial Leverage is subtracted shall be determined by the Calculation Agent in its sole discretion.

"Term Basket Reset Date" means, in respect of a Term Basket, the 15th day of each calendar month on a Modified Following Business Day Convention.

"Trading Basket" means a record maintained by the Calculation Agent in respect of which all of the following characteristics have been specified: (i) a country and (ii) a currency; and that identifies, at all times, all of the outstanding Basket Positions designated by the Investment Advisor to be included in such record.

"Unused Initial Leverage" means, at any time of determination, (i) if USD Basket Debit Balance is a negative amount, the absolute value of such amount, otherwise (ii) zero.

"USD Basket Credit Balance" means, at any time, the excess, if any, of (i) the sum of (a) the Initial Intrinsic Value, **plus** (b) the cumulative realized gains on all former USD Basket Positions, **plus** (c) the Short Proceeds Amount for the USD Trading Basket, over (ii) the sum of (a) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (b) the cumulative realized losses on all former USD Basket Positions, **plus** (c) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (d) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items. Basket Credit Balance determinations shall be made on a Share "settlement date" basis.

"USD Basket Debit Balance" means (i) on any day prior to the Scheduled Expiration Date the difference, whether positive or negative, between (a) the sum of (1) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (2) the cumulative realized losses on all former USD Basket Positions, plus (3) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (4) all adjustments for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items, **minus** (b) the sum of (1) the Initial Intrinsic Value, **plus** (2) the Initial Leverage, **plus** (3) the cumulative realized gains on all former USD Basket Positions, **plus** (4) the Short Proceeds Amount for the USD Trading Basket; and (ii) during any period beginning on the Scheduled Expiration Date and ending on the Final Valuation Date, the difference, whether positive or negative, between (a) the sum of (1) the aggregate of the initial "cost basis" of all open long USD Basket Positions, **plus** (2) the cumulative realized losses on all former USD Basket Positions, **plus** (3) the absolute value of the Rebate Share Value for the USD Trading Basket, **and** (4) all adjustments, as determined by the Calculation Agent, for any other paid income and expense items allocable in USD to the Basket, but excluding accrued and unpaid income and expense items, **minus** (b) the sum of (1) the Initial Intrinsic Value, **plus** (2) the Short Proceeds Amount for the USD Trading Basket, **plus** (3) the cumulative realized gains on all former USD Basket Positions provided that, in the case of (i) and (ii), if on any day such difference is negative then for purposes of calculating "Basket Expenses" for such day the "USD Basket Debit Balance" shall be deemed to be zero. Basket Debit Balance determinations shall be made on a Share "settlement date" basis.

"USD Basket Positions" means the Basket Positions recorded in the USD Trading Basket.

"USD Trading Basket" means the Trading Basket that shall contain all Basket Positions in respect of which the Exchange is located in the United States.

U.S. SPREAD SCHEDULE
Applies to the USD Trading Basket

Type	Spread
Rebate Share Value	37.5 basis points (0.375%)
Basket Credit Balance	25 basis points (0.25%)
Basket Debit Balance	37.5 basis points (0.375%)

Non-U.S. SPREAD SCHEDULE
Applies to all Non-USD Trading Baskets
and all Term Baskets

Type	Spread
Rebate Share Value in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate of One-Month USD-LIBOR-BBA	60 basis points (0.60%)
Basket Credit Balance in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate of One-Month USD-LIBOR-BBA	25 basis points (0.25%)
Basket Debit Balance in respect of Non-USD Trading Baskets and Term Baskets using a Benchmark Rate of One-Month USD-LIBOR-BBA	35 basis points (0.35%)
Rebate Share Value in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor
Basket Credit Balance in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor
Basket Debit Balance in respect of all other Non-USD Trading Baskets and Term Baskets	As determined in good faith by the Calculation Agent upon consultation with the Investment Advisor

4. Additional Provisions:

(a) Basket Position Composition: A Basket Position is a record reflecting the purchase or sale of any of the following: any equity securities in a company and listed on a recognized exchange, depositary receipts listed on a securities exchange in the United States of America, equity linked securities, OTC derivatives, index futures, exchange-traded funds, other equity linked securities (besides OTC derivatives, index futures, and exchange-traded funds), interest rate and currency transactions, or any other financial instruments that may be agreed to between the parties together with such other securities and assets arising by reason of any Potential Adjustment Events or Merger Events in respect of shares comprising the Basket from time to time (in each case, a "Share" and collectively, "Shares"). For the avoidance of doubt, Basket Positions may be records of purchase and sale transactions not actually executed.

(b) Share Pricing Method: Shares that are traded on a U.S. national securities exchange or the NASDAQ National Market System shall be valued at any time at the last sale price quoted for Shares on the Consolidated Tape on the date and at the time for which value is being determined, or, if no sale occurred on such date, then at the mean between the "bid" and the "asked" prices on such date as reported in any recognized interdealer quotation system. Other Shares traded over-the-counter shall be valued at the mean between the "bid" and the "asked" prices quoted for such Shares. Shares not so traded as described herein shall be valued at their fair market price, as determined in a commercially reasonable manner by the Calculation Agent; the Calculation Agent shall perform valuation of such

Shares in accordance with criteria regarding valuation times and share pricing methods communicated by Seller in writing to Buyer in a Basket Performance Report or otherwise. With respect to any position not described above, the Calculation Agent in valuing stocks, securities or other investments, may select such other methods of valuation as it in good faith shall deem appropriate under the circumstances and, once determined, all such valuations shall be final and conclusive in the absence of manifest bad faith. The Calculation Agent shall use the actual trade execution pricing for selling and/or acquiring the Shares (the "Share Execution Price") in connection with (i) any option expiration (including any Early Expiration Event), and (ii) determinations of any Basket Debit Balances or Basket Credit Balances. In the case of Designated Positions, except as otherwise described herein, the timing and price for the deemed selling and/or acquiring of a Designated Position shall be as determined by the Calculation Agent in good faith and a commercially reasonable manner, at such prices as would reasonably be expected to be the execution prices if the trade giving rise to the Designated Position had actually and timely been executed. The Calculation Agent's valuation of the Basket or its valuation methodology may differ from the valuation methodology it uses for its own books and records or other internal purposes.

(c) Termination and Early Expiration Notices: In connection with Termination Events under this Confirmation in which Buyer is an Affected Party and Seller has the right, upon delivery of notice to Buyer, to terminate this Transaction, then Seller may exercise such right to terminate by delivery of a Seller Termination Notice, substantially in the form attached hereto as Annex I. In connection with Termination Events under this Confirmation in which Seller is an Affected Party and Buyer has the right, upon delivery of notice to Seller, to terminate this Transaction, then Buyer may exercise such right to terminate by delivery of a Buyer Termination Notice, substantially in the form attached hereto as Annex II. Notwithstanding the provisions of Section 6(a) of the Agreement, the Early Termination Date in respect of this Transaction shall be the day on which the Seller Termination Notice or Buyer Termination Notice, as relevant, is effectively delivered provided that if such day is not an Exchange Business Day, the Early Termination Date shall be the first Exchange Business Day to occur after such day.

If an Early Expiration Event occurs, this Transaction will automatically expire at the time of such occurrence. In such instance, Seller may, solely as a courtesy and without obligation, give notice to Buyer of the occurrence of such Early Expiration Event. If Seller determines to provide such notice, it may do so substantially in the form attached hereto as Annex I. For the avoidance of doubt, notwithstanding the delivery or non-delivery of such a notice, an Early Expiration Event occurs automatically at the time the conditions described in clause (ii) of the definition of Expiration Date have occurred.

Except as otherwise specified herein, upon the occurrence of an event or circumstances giving Buyer the right to terminate this Transaction prior to the Scheduled Expiration Date (excluding an Event of Default in respect of Seller under Section 5(a)(vii) of the Agreement, but including, without limitation, any other Event of Default in respect of Seller or any Termination Event in respect of Seller), Buyer shall deliver a Buyer Termination Notice within 15 days of the accrual of such right to terminate this Transaction or Buyer shall be deemed to have waived such right to terminate this Transaction as the result of the occurrence of such event or circumstances, provided that for the purpose of determining when a Buyer's right to terminate this Transaction accrues under Section 5(a)(ii) of the Agreement or as the result of a Termination Event, Buyer shall be deemed to have delivered any notice required to be delivered by Buyer under Section 5(a)(ii) or Section 6(b)(i) of the Agreement, as the case may be, at the time Buyer learned of Seller's breach of agreement or obligation hereunder or of the facts giving rise to such Termination Event, as the case may be.

(d) Investment Advisor: Buyer acknowledges that **Renaissance Technologies LLC** (the "Investment Advisor") has been engaged by Seller to manage the composition of the Basket on a discretionary basis for the account of Seller, pursuant to (a) the Investment Guidelines and Compliance Restrictions (the "Master Investment Guidelines and Compliance Restrictions ") set forth in the Master Investment Advisory Agreement dated as of December 15, 2008, between Seller (or its specified affiliate) and the Investment Advisor (the "Master Investment Advisory Agreement,") and (b) the Supplemental Investment Guidelines and Compliance Restrictions (the "Supplemental Investment Guidelines and Compliance Restrictions," and together with the Master Investment Guidelines and Compliance

Restrictions, the "Investment Guidelines and Compliance Restrictions") set forth in the Supplemental Investment Advisory Agreement dated December 15, 2008, as may be amended from time to time, between the parties to the Master Investment Advisory Agreement, (the "Supplemental Investment Advisory Agreement," and together with the Master Investment Advisory Agreement, the "Investment Advisory Agreement"). While Seller, in the normal course of its business, shall review Investment Advisor's compliance with the Investment Guidelines and Compliance Restrictions, Seller shall have no liability to Buyer – and Buyer hereby waives any rights of action against Seller – in connection with Investment Advisor's non-compliance with said Investment Guidelines and Compliance Restrictions – or any other terms of the Investment Advisory Agreement.

If (i) the Investment Advisory Agreement or the Supplemental Investment Advisory Agreement is terminated after notice of termination by Seller for cause (as set out in the Master Investment Advisory Agreement); (ii) Seller delivers notice that it is terminating the Supplemental Investment Advisory Agreement without cause under the provisions of the Master Investment Advisory Agreement and either (x) the Investment Advisor has delivered notice, in accordance with the Master Investment Advisory Agreement, that it shall commence and manage the Liquidation or (y) three Exchange Business Days have passed without the Investment Advisor delivering such a notice, (iii) Investment Advisor delivers notice that it is terminating the Investment Advisory Agreement for cause (as set out in the Master Investment Advisory Agreement) and either (x) the Investment Advisor has delivered notice, in accordance with the Master Investment Advisory Agreement, that it shall commence and manage the Liquidation or (y) three Exchange Business Days have passed without the Investment Advisor delivering such a notice, or (iv) the Investment Advisory Agreement or the Supplemental Investment Advisory Agreement should terminate for any other reason, then for purposes of Section 5(b)(v) of the Agreement the occurrence of any of clause (i), (ii), (iii) or (iv) above shall be an Additional Termination Event with this Transaction as the sole Affected Transaction and Seller as the sole Affected Party. Upon the occurrence of such an Additional Termination Event, Seller shall timely deliver to Buyer notice of such event and Buyer shall have the right, but not the obligation, within 3 days of effective delivery of such notice (but not more than 3 days), to terminate this Transaction, by delivery of a notice to Seller substantially in the form attached hereto as Annex II. In the case of (i), (iii) or (iv), if this Transaction is terminated, the Cash Settlement Amount shall be Cash Settlement Scenario "A." In the case of (ii), if this Transaction is terminated, the Cash Settlement Amount shall be Cash Settlement Scenario "B."

(e) Additional Termination Event Relating to Seller CDS Spreads: The occurrence, from time to time, of a CDS Spread Event X or of a CDS Spread Event Y shall constitute an Additional Termination Event in respect of which Seller shall be the sole Affected Party and this Transaction and all other Transactions between Seller and Buyer shall be Affected Transactions. Notwithstanding the provisions of Section 6(b)(iv)(2) of the Agreement or any other provision of the Agreement to the contrary, in the event that such an Additional Termination Event occurs (the date of such occurrence being a "Trigger Date") and Buyer does not designate, as a result thereof, an Early Termination Date in respect of all (and not less than all) Transactions within fifteen (15) days of the related Trigger Date then Buyer shall be deemed to have waived such Additional Termination Event and no CDS Spread Event X or CDS Spread Event Y, whichever gave rise to such Additional Termination Event, may again occur during the ninety (90) day period that commenced on the related Trigger Date.

For purposes hereof the "CDS Spread" on any Business Day shall be the average of the mid-market (average of bid and offer for USD100,000,000 notional protection) five year senior debt credit default swap ("CDS") spreads in respect of Seller, as quoted by: Barclays Capital Inc., Citigroup Global Markets Inc., Goldman, Sachs & Co., J. P. Morgan Securities Inc. and Morgan Stanley & Co. Incorporated (each, and any successor thereto, a "Reference Dealer") (quoted at Bloomberg function CDSW, although if Buyer in good faith and in a commercially reasonable manner determines such a quote available at Bloomberg function CDSW is inconsistent with market conditions, it may confirm the quote directly with such Reference Dealer and such directly confirmed quote shall be used in place of the applicable one found at Bloomberg Function CDSW, if different), measured as of 3:00 p.m. New York time on such Business Day. In the event that, at such time, any one or more of the Reference Dealers specified above has not provided a quote of the CDS spreads in respect of Seller, the CDS Spread shall be the average of the CDS spreads quoted at such time by the other Reference Dealers provided that if, at such time, fewer than three of such Reference Dealers have provided such a quote, Buyer and Seller shall reasonably agree to include, in the averaging calculation, the quote of another recognized dealer or dealers, so that three such quotes have been averaged, for the purpose of determining the CDS Spread; provided, however, that if one or more Reference Dealer provides such a quote and the Buyer and Seller are unable to reasonably agree as to an additional recognized dealer or dealers (as applicable), the average of the quotes obtained from available Reference Dealers (or if only one Reference Dealer is providing a quote, such quote) shall be used to determine the CDS Spread. A CDS Spread Event X will occur if the CDS Spread is 325 basis points or more on at least three (3) consecutive Business Days. A CDS Spread Event Y will occur if the CDS Spread is at least 450 basis points on any Business Day. Buyer shall not buy, sell or otherwise engage in transactions with respect to CDS of the Seller. No affiliate of Buyer may engage in transactions with respect to CDS of the Seller for the purpose or with the intent of increasing such spread in order to trigger the provisions of this Paragraph.

(f) Fundamental Change to the Investment Guidelines and Compliance Restrictions: If Seller makes a fundamental change to the Investment Guidelines and Compliance Restrictions, as determined by Seller in its reasonable discretion, then Seller shall notify Buyer of such change and Buyer shall have the right, but not the obligation, to terminate this Transaction, by delivery of a notice to Seller substantially in the form attached hereto as Annex II. If Buyer elects to terminate this Transaction pursuant to this paragraph, the Cash Settlement Amount shall be Cash Settlement Scenario "B."

(g) Post-Settlement Adjustments: Notwithstanding anything to the contrary in the Agreement, if, (i) after the Transaction has terminated and any Cash Settlement Amount has been paid, Seller or Buyer becomes aware of (a) an operational misbooking or (b) any accrued but unpaid income or expense (as of the Final Valuation Date) that, (1) differed from the amount actually paid, (2) was determined to be in error or (3) was not actually paid in accordance with the value at which it had been booked by the Seller, and (ii) the occurrence of a situation described in clauses (a) or (b) affected the calculation of the Cash Settlement Amount, then the Party that becomes aware of such fact will notify the other Party, and the Parties will negotiate in good faith to allocate any payment adjustment between them. This provision shall survive the termination of this Confirmation or the Agreement.

(h) Change in Definition of Indemnifiable Tax: Solely for the purposes of this Transaction, the term Indemnifiable Tax will be defined to exclude any tax imposed on any payment under this Transaction that is based on, related to, in respect of, or measured by, in whole or in part, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket.

(i) Taxes: For purposes of determining Basket Base Performance, Basket Gains and Losses, Basket Income and Expenses, Basket Credit Balance, Basket Debit Balance and any other item used to calculate or affecting any of such amounts, gain, loss and any other income or expense items will be computed and taken into account without giving effect to any Tax that might be imposed in respect or by reason thereof (except to the extent that withholding taxes (including any penalties and interest associated with such taxes) are expressly included in Basket Income or in Basket Expenses).

(j) Non-Confidentiality: Except as otherwise hereinafter set forth in this paragraph, the parties hereto agree and acknowledge that the structure and tax aspects of the Transaction and all materials provided by either party with respect to such structure and tax aspects are, and have always been, non-confidential, and are not the proprietary information of either party. Notwithstanding anything herein to the contrary, each party and each Affiliate thereof (and each employee, representative, or other agent of any of the foregoing) may disclose, and has always been entitled to disclose, to any and all persons, without limitation of any kind, the tax treatment and tax structure of the Transaction and all materials of any kind (including opinions or other tax analyses) that are provided to such party (or Affiliate) relating to such tax treatment and tax structure (provided, however, that the names and all other identifying information of all entities and persons have been properly erased from such materials prior to the disclosure thereof unless and to the extent such information is necessary or helpful in understanding the tax treatment or tax structure of the transaction). Each party otherwise agrees not to disclose any proprietary, non-public information regarding the other party ("Confidential Information") it may have received in connection with the Transaction, including, without limitation, that such party has entered into the Transaction with the other party, and agrees that it shall not disclose or use the name of the other party (or any Affiliate thereof) for marketing or other purposes not directly relating to the implementation of the Transaction hereunder. Notwithstanding the foregoing, either party may disclose any such Confidential Information if required by law or required or requested by any judicial, governmental or other regulatory body, provided it gives prior written notice of such required disclosure to the other party. Confidential Information of a party shall not include any information in the public domain or information obtained from any third party not under a duty not to disclose it.

(k) Reporting. Seller represents that for tax purposes, it and any Affiliate thereof will report the Transaction, as a derivative financial instrument, and, for accounting, regulatory, tax and all other purposes, it and any Affiliate thereof will treat and report the Effected Positions and any other assets or positions that may be credited to or included within the Baskets (other than in respect of Designated Positions) as assets and positions of which Seller is the sole legal and beneficial owner and to which Seller is the party, as the case may be; provided, that in the event of a dispute between the parties as to the proper characterization of the Transaction and related assets subsequent to a Change in U.S. Tax Law, Seller will in good faith make its own determination of such characterization and treat and report the Transaction and related assets in accordance with its good faith determination. Seller represents that for U.S. federal income tax purposes all payments received under the Transaction will be treated as effectively connected with the conduct of a trade or business within the United States and as attributable to a trade or business carried on by it through a permanent establishment in the United States. (For purposes of this section the term "Change in U.S. Tax Law" means the (a) enactment, promulgation, execution or ratification of, or any change in or amendment to, the U.S. Internal Revenue Code of 1986, as amended, or the Treasury Regulations promulgated thereunder (including any proposed changes that are not required under such proposal to be prospective only) or (b) the announcement of the application or official interpretation thereof by the United States Internal Revenue Service or the United States Department of the Treasury, as the context requires), or (c) any action taken by a taxing authority, or brought in a court of competent jurisdiction, on or after the date on which the Transaction is entered into (regardless of whether such action is taken or brought with respect to a party to the Agreement) (which includes, for the avoidance of doubt, the commencement of a tax audit of Seller (that occurs on or after the date on which the Transaction is entered into) in which Seller believes, in its sole discretion, that the auditor will propose that Seller treat the Transaction in a manner other than described above).

(l) Additional Termination Events. Notwithstanding the provisions of Section 5(a)(iv) of the Agreement, if any of the representations made by Buyer in Part 2(b) of the Schedule to the Agreement in respect of this Transaction proves to have been incorrect or misleading in any material respect when made or repeated or deemed to have been made or repeated, such incorrect or misleading representations shall constitute an Additional Termination Event under Section 5(b)(v) of the Agreement, and Buyer shall be the sole Affected Party and this Transaction shall be the sole Affected Transaction.

If during the term of the Transaction (and solely with respect to this Transaction), as a result of any event described in clauses (x) or (y) of Section 5(b)(ii) of the Agreement, (which clause (x) will include, for the avoidance of doubt, the commencement of a tax audit of Seller), Seller makes its own reasonable determination, after consultation with Buyer, that it is substantially likely that either it is under an obligation to withhold or remit any tax on account of, or relating to, the declaration, payment or receipt of any dividend on any Shares comprising from time to time the Basket, or it will receive dividends on such Shares net of withholding tax, in each case due to the relationship between Seller and Buyer under this Transaction, then such determination shall constitute an Additional Termination Event under Section 5(b)(v) of the Agreement, and Buyer shall be the sole Affected Party and this Transaction shall be the sole Affected Transaction.

(m) Transferability. The option constituting the Transaction shall not be transferable by Seller without the prior written consent of Buyer which consent shall not unreasonably be withheld or delayed. The option constituting the Transaction shall be transferable by Buyer (and any transferee of the option constituting the Transaction) in whole or in part at any time to another U.S. Person (other than U.S. trusts under section 7701(a)(30) of the Code unless Seller in its sole discretion consents) with the written consent of Seller upon written notice, which consent shall not be unreasonably withheld and shall be delivered within a reasonable period of time. Without limitation to the foregoing, for purposes of this provision, it shall not be unreasonable for Seller to withhold consent if the transferee (x) is not a customer of Seller (or a related party thereto) and is unwilling or unable to meet Seller's then standards for customers (y) would otherwise violate Seller's standard operating procedures (for example, on account of know-your-customer rules or limits on exposure to any particular customer) or (z) would, in the reasonable belief of Seller, increase any risk (including, without limitation, tax risk) to Seller. Any purported transfer in violation of this provision shall be void and of no effect.

(n) Termination Following Regulatory Change. Notwithstanding anything to the contrary in this Confirmation, Seller may designate an Early Termination Date and terminate this Transaction upon not less than fifteen (15) Business Days prior written notice to Buyer, in the event that in the reasonable opinion of Seller (supported by the written opinion of nationally recognized counsel reasonably acceptable to Buyer): (i) any change after the Trade Date in applicable law (including, without limitation, any laws, treaties, ordinances, rules, regulations, rulings, interpretations and authorizations of the United States or of any political subdivision, regulatory body having authority over Seller) materially and adversely affects Seller's capital charges directly resulting from the Transaction and Buyer declines (in its sole judgment) to make any additional payments determined by Seller (in its sole judgment) that would make Seller indifferent to such change, or (ii) Seller's tax position with respect to the Transaction is affected due to any Change in U.S. Tax Law (as defined in "Reporting" above). If Seller elects to terminate the Transaction pursuant to this paragraph, the Cash Settlement Amount shall be (i) Cash Settlement Scenario "A" if the change in applicable law or Change in U.S. Tax Law has become effective or (ii) Cash Settlement Scenario "B", otherwise.

5. Additional Representations:

Buyer and Seller each make (and as indicated, Buyer makes) the following additional representations:

(i) it is entering into the Transaction as principal and not as agent or in any other capacity, fiduciary or otherwise and no other person has an interest herein.

(ii) it has, in connection with the Transaction (a) the knowledge and sophistication to independently appraise and understand the financial and legal terms and conditions of the Transaction and to assume the economic consequences and risks thereof and has, in fact, done so as a result of arm's length dealings with the other party; (b) to the extent necessary, consulted with its own independent financial, legal or other advisors and has made its own investment, hedging and trading decisions in connection with the Transaction based upon its own judgment and the advice of such advisors and not upon any view expressed by the other party; (c) not relied upon any representation (whether written or oral) of the other party, other than the representations expressly set forth hereunder and is not in any fiduciary relationship with the other party; (d) not obtained from the other party (directly or indirectly through any other person) any advice, counsel or assurances as to the expected or projected success, profitability, performance, results or benefits of the Transaction; and (e) determined to its satisfaction whether or not the rates, prices or amounts and other economic terms of the Transaction and the indicative quotations (if any) provided by the other party reflect those in the relevant market for similar transactions.

(iii) it is not a private customer (as defined in the Rules of The Securities and Futures Authority).

(iv) it understands that the offer and sale of the option constituting the Transaction is intended to be exempt from registration under the US Securities Act of 1933, as amended (the "Securities Act"), by virtue of Section 4(2) thereof. In furtherance thereof, it represents and warrants that (a) it is experienced in investing in or otherwise entering into options and other financial instruments similar to the Transaction and has determined that the Transaction is a suitable investment for it, and (b) it is an institution which qualifies as an "accredited investor" or "qualified institutional buyer" as such terms are defined under relevant regulations promulgated under the Securities Act.

(v) Buyer understands and specifically acknowledges and agrees that the composition of the Basket as well as the Basket Base Performance shall be under the sole discretionary trading authority of Investment Advisor, an investment advisor independent of Seller. A copy of the Investment Advisory Agreement has been previously made available to, and has been reviewed by, Buyer. Buyer has obtained all the information it desires regarding the Investment Advisor, including, for the avoidance of doubt, investment advisor fees. Buyer agrees and acknowledges that neither Seller nor the Designated Agent take any responsibility for such information. Buyer has made an independent judgment of the experience and expertise of the Investment Advisor. Buyer agrees that it shall not attempt to direct or influence the choice of investments in the Basket. Buyer acknowledges and agrees that Buyer has no rights under the Investment Advisory Agreement and is not a third party beneficiary thereto.

(vi) Buyer represents to Seller, that Buyer has sufficient experience with derivative transactions or similar securities or instruments to make a determination to enter into a Transaction linked to the securities underlying or referred to in such derivative transactions, and has the capacity and authority to invest directly in the securities underlying or referred to in such derivative transactions. This representation shall be deemed to be true and accurate on each day that this Confirmation remains in force and effect.

(vii) Buyer acknowledges that Basket Positions may exist in the absence of actually executed transactions. Buyer understands that the existence of a Basket Position does not necessarily indicate that an actual purchase or sale of Shares occurred, and that the Basket Base Performance and the value of the Cash Settlement Amount may be affected by records of transactions that did not actually occur. Buyer and Seller agree that nothing in this Confirmation obligates the Seller to actually purchase or sell any of the underlying securities from which a Basket Position is derived.

(viii) Buyer has received an opinion of counsel from its own tax advisor with respect to the Transaction.

(ix) Buyer and Seller acknowledge that Buyer has no rights in the Basket, including rights to receive distributions on, the proceeds from disposition of, or information received in respect of, the Basket.

(x) Buyer acknowledges that it has no voting rights in respect of any security which may be held by Seller. Buyer and Seller acknowledge and agree that Seller will not take account of the interests of the holder of the option constituting the Transaction or any third party in voting or otherwise exercising any of its rights, as owner, in the Basket.

(xi) It is the intention of the parties that the obligations of Seller in respect of the Transaction evidenced by this Confirmation are general recourse obligations of Seller. To the extent that, in any relevant proceeding or under any applicable law, Buyer should have the right to marshall, to appoint a receiver over, or otherwise have recourse to, the ownership or equity interest of Seller in the Basket, Buyer hereby waives, and agrees not to enforce, such rights provided that such waiver and agreement shall not reduce or limit the obligations of Seller hereunder.

6. **GOVERNING LAW:** THIS CONFIRMATION WILL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK APPLICABLE TO CONTRACTS ENTERED INTO AND TO BE PERFORMED ENTIRELY WITHIN THE STATE.

7. The time of dealing will be confirmed by Seller upon written request.

8. Deutsche Bank AG London is regulated by the Securities and Futures Authority.

▬ = Redacted by the Permanent Subcommittee on Investigations

9. Account Details:

Payment to **Party A**:	The Bank of NY ABA 021-000-018 Account #[redacted] Account Deutsche Bank
Payment to **Party B**:	To be, and as, provided by Party B.

10. Notices and other Communications:

Contact particulars for notices and other communications (including reports) shall be delivered in accordance with Section 12 of the Agreement to the relevant person or persons specified in Schedule I, hereto. Notwithstanding anything in Section 12 of the Agreement to the contrary, notices sent by e-mail shall be deemed delivered when sent.

Each Party has agreed to make payments to the other in accordance with this Confirmation. Please confirm that the foregoing correctly sets forth the terms of our agreement by sending a return executed acknowledgment hereof to such effect to the attention of Adam Tolchinsky, Legal Division (Fax No. (212) 797-4562).

[Signature Page Follows]

We are very pleased to have concluded this Transaction with you.

Regards,

DEUTSCHE BANK AG LONDON

By: Satish Ramakrishna
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By: ____________________
Name: Christopher Caruso
Title: Attorney-in-Fact

DEUTSCHE BANK SECURITIES INC.,
acting solely as Agent in connection with
this Transaction

By: Satish Ramakrishna
Name: Satish Ramakrishna
Title: Managing Director

By: ____________________
Name: Christopher Caruso
Title: Managing Director

Confirmed and Acknowledged as of the date first above written:

MOSEL EQUITIES L.P.
By Renaissance Technologies LLC,
Its General Partner

By: ____________________
Name:
Title:

[Signature page to Confirmation]

NEWYORK\53397

We are very pleased to have concluded this Transaction with you.

Regards,

DEUTSCHE BANK AG LONDON

By:____________________________
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By:____________________________
Name:
Title: Attorney-in-Fact

DEUTSCHE BANK SECURITIES INC.,
acting solely as Agent in connection with
this Transaction

By:____________________________
Name: Satish Ramakrishna
Title: Managing Director

By:____________________________
Name:
Title:

Confirmed and Acknowledged as of the date first above written:

MOSEL EQUITIES L.P.
By Renaissance Technologies LLC,
Its General Partner

By:
Name: James S. Rowen
Title: Chief Operating Officer

NEWYORK\53397 [Signature page to Confirmation]

SCHEDULE I
Contact Particulars for Notices and Other Communications

Contact Particulars for Party A:

Copies of All Notices:	RentecNotification@list.db.com

Specified Contacts:

Confirmations:	Adam Tolchinsky
Telephone:	(212) 250-2537
Fax No.:	(212) 797-4562
E-mail:	adam.tolchinsky@db.com

Payments/Fixings:	Vincent Capone
Telephone:	(212) 250-7221
Fax No.:	(212) 797-4932
E-mail:	vincent.j.capone@db.com

Basket Base Performance; NAV Index Levels;Basket Performance Reports:

	Peter Brophy
Telephone:	(212) 250-7626
Fax No.:	(212) 797-8733
E-mail:	Peter.Brophy@db.com

Early Expiration Event/Notice:	Satish Ramakrishna
Telephone:	(212) 250-4928
Fax No.:	(212) 797-9358
E-mail:	satish.ramakrishna@db.com

Contact Particulars for Party B:

Early Expiration Event/Notice:	Peter Brown Bob Mercer	Thomas Kerns Mark Silber Carla Volpe Porter James Rowen
Telephone:	(631) 444-7000	(212) 486 -6780
Fax:	(631) 689-4495	(212) 758-7136
Email:	Peter@rentec.com Mercer@rentec.com TKerns@rentec.com Silber@rentec.com Carla@rentec.com JRowen@rentec.com	

Basket Base Performance; NAV Index Levels; Basket Performance Reports:

	Thomas Kerns Scott Chinsky
Telephone:	(212) 486-6780
Fax No.:	(212) 486-7291
Email:	TKerns@rentec.com Scott@rentec.com

Confirmations:	Mark Silber / Carla Volpe Porter
Telephone:	(212) 486-6780
Fax No.:	(212)758-7136
Email:	Silber@rentec.com Carla@rentec.com

SCHEDULE II

Non-USD BENCHMARK RATE SCHEDULE
Applicable to the specified Non-USD Trading Basket and the Term Basket

Country / Exchange on which securities trade	Benchmark Rate
Australia / Australian Stock Exchange (ASX)	One-Month USD-LIBOR-BBA[2]
Belgium / Euronext Brussels / NYSE Euronext	One-Month USD-LIBOR-BBA
Canada / Toronto Stock Exchange (TSE)	One-Month USD-LIBOR-BBA
Finland / Helsinki Stock Exchange (HEX)	One-Month USD-LIBOR-BBA
France / Euronext Paris / NYSE Euronext	One-Month USD-LIBOR-BBA
Germany / Frankfurt Stock Exchange	One-Month USD-LIBOR-BBA
Ireland / Irish Stock Exchange (ISE)	One-Month USD-LIBOR-BBA
Italy / Borsa Italiana	One-Month USD-LIBOR-BBA
Japan / Tokyo Stock Exchange (TSE)	One-Month USD-LIBOR-BBA
Mexico / Bolsa Mexicana de Valores (BMV)	DB Internal Funding Rate
Netherlands / Euronext Amsterdam/ NYXE Euronext	One-Month USD-LIBOR-BBA
Norway / Oslo Bors	One-Month USD-LIBOR-BBA
Singapore / Singapore Exchange (SGX)	DB Internal Funding Rate
South Africa / Johannesburg Stock Exchange (JSE)	One-Month ZAR-JIBAR-SAFEX
Spain / Bolsa de Madrid	One-Month USD-LIBOR-BBA
Sweden / Stockholmsborsen AB	One-Month USD-LIBOR-BBA
Switzerland / Swiss Exchange (SWX)	One-Month USD-LIBOR-BBA

[2] As used on this Schedule II, "USD-LIBOR-BBA" shall have the meaning specified in the 2006 ISDA Definitions.

ANNEX I

[DATE]

MOSEL EQUITIES L.P.
[FULL ADDRESS]
Attn: [ ]
Tel: [ ]
Fax: [ ]

[EARLY EXPIRATION] [SELLER TERMINATION] NOTICE

Dear Sirs:

The purpose of this notice is to inform the Buyer that pursuant to the original terms of the Barrier Option Transaction (the "Subject Transaction"), entered into between the Buyer and the Seller, and identified by the Confirmation bearing DBSI Reference Number [redacted] (the "Confirmation"):

[At the close of business on [ ], the NAV Index Level is at [ ] which is less than or equal to the Barrier NAV Index Level. This constitutes an Early Expiration Event. The Subject Transaction has expired in accordance with the terms of the Confirmation.][3]

[The Seller is electing to terminate the Subject Transaction, under the terms of the Confirmation, in accordance with [DESCRIBE RELEVANT CONFIRMATION PROVISION], upon receipt of this notice.][4]

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

Very truly yours,

DEUTSCHE BANK SECURITIES INC.

By:________________________
Name:
Title:

By:________________________
Name:
Title:

---

[3] Delete if this notice not is not being delivered pursuant to an Early Expiration Event.
[4] Delete if this notice is being delivered pursuant to an Early Expiration Event.

ANNEX II

[DATE]

DEUTSCHE BANK AG LONDON
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Attn: Satish Ramakrishna/[Kam Singh]
Tel: (212) 250-4928

[redacted] = Redacted by the Permanent Subcommittee on Investigations

BUYER TERMINATION NOTICE

Dear Sirs:

Reference is made to the Barrier Option Transaction (the "Subject Transaction"), entered into between Mosel Equities L.P. (the "Buyer") and Deutsche Bank AG, London Branch (the "Seller"), and identified by the Confirmation bearing DBSI Reference Number [redacted] (the "Confirmation").

Capitalized terms used but not defined herein shall have the meanings set forth in the Confirmation.

The purpose of this notice is to inform the Seller that the Buyer is electing to terminate the Subject Transaction, under the terms of the Confirmation, in accordance with [DESCRIBE RELEVANT CONFIRMATION PROVISION], upon receipt of this notice.

Very truly yours,

MOSEL EQUITIES L.P.

By:________________________
Name:
Title:

EXCERPT

TRANSCRIPT OF AUDIO RECORDING PRODUCED TO THE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

[Audio recording of 11/6/2008 telephone call among James Rowen, RenTec, and Satish Ramakrishnan, and Deepak Agrawal of Deutsche Bank, DB-PSI 00122457]

Audio Bates No.	DB-PSI 00122457
Call Duration	23:56
Date of Call	November 6, 2008
Time Stamp	**Transcription**

Redacted by the Permanent Subcommittee on Investigations

1:00	**Mr. Rowen:** So Satish we sent you; Peter was good enough to answer your questions and provide a draft. **Mr. Ramakrishna:** Thank you. Yeah **Mr. Rowen:** So we thought... we wanted to see if the questions were sufficient... the answers were sufficient to your questions. **Mr. Ramakrishna:** Yeah I think... Here is the thing, so I agree with you that predicting the evolution of the market or its participants [inaudible] and I want a sense of what kind of portfolio controls do you use? I am sure this is your biggest risk.
1:30	**Mr. Ramakrishna:** It's not so much, your algorithm seems to work through a lot of very, very strenuous times, apart from August, in my experience, at least, from watching it nearly every day from the last one and a half years apart from the... the turmoil in August last year you seemed to have, you know, sort of pretty much managed, uh, the leverage down in a way that ties into where the volatility is in the market as well as liquidity.
2:00	**Mr. Ramakrishna:** So that's fine. I just want to understand what kind of portfolio controls you have that deal with extraneous things apart from, you know, things that are different from looking at the volatility. The fact that a broker went out of business doesn't

	necessarily change... it might change market spreads in some period of time... doesn't necessarily change market volatility. Though of course the last time that did effect market volatility a lot, but doesn't necessarily have to. Or a broker that backs off from committing capital...
2:30	**Mr. Ramakrishna:** ...in trades doesn't necessarily change either. **Mr. Brown:** Yeah, so, uh, I think your question, uh... is, I am going to try the Jim Rowen style of repeating the question to make sure I understand it properly. Uh... I think your question is, uh, how would we react, uh, when some extraordinary things happen that can't be so easily measured...
3:00	**Mr. Brown:** ...in market statistics. Is that accurate? **Mr. Ramakrishna:** Absolutely. Yeah. **Mr. Brown:** Yeah. Well the answer there is that uh... we have a risk control department and, uh, we also have a senior management all of whom are quite tuned in to the... to what's going on in a qualitative sense, uh, in the market. Jim Rowen here is a perfect example. He spends a good fraction of his day...
3:30	**Mr. Brown:** ...calling around to various counterparties, some of whom we have relationships with and, some of whom we don't, and getting a sense of what's going on in the market. We then take that into account and it adjusts the level at which we run. So for example now is a perfect example, uh, October, I think I can say this because it's going to be in a letter which I am just writing,
4:00	**Mr. Brown:** October was a record month for us. And we have done very well so far this month. It seems like an extremely... our models are functioning very well in this environment. Nonetheless, we are running at reduced levels and the reason we are running at reduced levels is precisely the reasons that you bring up. There's still uh... it's not clear... we're still in unchartered territory here. Uh,...
4:30	**Mr. Brown:** ...we don't know exactly, there is government intervention going on. This is new. The models don't see the government intervention but we do, and we are nervous that something could happen as a result. Right now the model would like to have very large portfolios, but we are running at reduced levels simply because of those qualitative, uh, extraordinary, uh, items that you are talking about. So we've actually intervened and we do that from time to time...
5:00	**Mr. Brown:** ...when things like this happen. **Mr. Ramakrishna:** Ok. Ok. Uh, that's fine, I mean that's, I can see that myself and you know I think that's also been the reason why you haven't suffered, you have actually haven't suffered some of the drawdowns that some others have had. At about and on the worst days when your portfolio lost money, it lost far less than others did. Peter : Overall I believe we have not had a losing month in over five years.

Redacted by the
Permanent Subcommittee on Investigations

EXCERPT

TRANSCRIPT OF AUDIO RECORDING PRODUCED TO THE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

[Audio recording of 12/1/2008 telephone call among Satish Ramakrishna, Deutsche Bank, and Jonathan Mayers, and Thomas Kerns of RenTec, DB-PSI 00122467.]

Bates No.	DB-PSI 00122467
Call Duration	8:04
Date of Call	December 1, 2008
Time Stamp	**Transcription**

Redacted by the Permanent Subcommittee on Investigations

	Mr. Ramakrishna: Second one is that...now the second one is one which I'm sure you going to have to discuss it with Peter because it's a little more problematic.
5:00	**Mr. Ramakrishna:** This is the one which is certainly more concerning, in that, there's an option that is started out, and you have now I understand that for various reasons, you're, uh, that pertains to your legal advice, you need to make sure that the leverage is 18 when you are starting up. **Mr. Mayers:** Correct, correct. **Mr. Ramakrishna:** That's fine. Then I think what I'm going to ask for that instead of the 25% reduction, for an Asset NAV of 97, ok, we get to a leverage ...

Redacted by the Permanent Subcommittee on Investigations

INVESTMENT ADVISORY AGREEMENT

AGREEMENT dated as of **March 14, 2002** between **Deutsche Bank AG, London Branch** (the "Client"), and **Renaissance Technologies Corp. (the "Advisor").**

In consideration of the premises and mutual promises hereinafter set forth, the parties hereto agree as follows:

1. Appointment of the Advisor.

(a) Client hereby appoints the Advisor as the exclusive manager of a separately managed account containing a designated portion of the Client's proprietary portfolio (the "*Account*") upon the terms hereinafter contained and in accordance with Client's investment guidelines and restrictions until its appointment shall be terminated as hereinafter provided and the Advisor hereby accepts such appointment and agrees to assume the obligations and duties set forth herein. Client's Investment Guidelines and Restrictions are as set forth on Appendix I hereto, as may be subsequently amended from time to time by written agreement between Client and the Advisor (the "*Investment Guidelines*"). **The Account shall be composed of two subaccounts, corresponding to (i) a Designated Trading Strategy Subaccount and (ii) a Benchmark Subaccount.**

(b) The fees and compensation of the Advisor for the performance of its duties under this Agreement ("*Advisor Fees*") are as set forth in the Fee Letter entered into between Advisor and Client attached hereto as Appendix II. The terms and provisions of such Fee Letter are incorporated herein by reference.

2. Functions, Powers, Duties and Obligations of the Advisor.

During the continuance of its appointment the Advisor shall, subject to compliance with the Investment Guidelines, have full power, authority and right to:

a) supervise and direct the investment and reinvestment of the cash and equity securities in the Account and engage in such transactions on behalf of the Client's Account as appropriate, in Advisor's discretion and without prior consultation with the Client, subject only to the terms of this Agreement, in any and all forms of securities or other property as permitted in the Client's Investment Guidelines and Restrictions; provided, however, that at any time the Client may reject the purchase or sale of certain securities directed for investment to the Account by the Advisor prior to the actual execution thereof, but all transactions so directed to the Account by the Advisor (whether or not actually executed) shall be referred to as the "Designated Positions". The prices of the securities not actually executed will be within market parameters, if applicable, based on the time of execution.

b) hold temporary cash balances in the Account or invest such temporary cash balances in money market funds or comparable short-term investments as specifically directed by the Client, with interest thereon credited to the Account;

c) prepare or procure the preparation of reports on the Account's investment performance and such other matters, as further provided herein;

d) select and place orders with brokers and dealers to execute Account transactions (and as further provided herein); and

e) provide such other services in connection with the management of the Account by mutual consent of the Client and the Advisor.

The Advisor shall keep or cause to be kept on behalf of the Client's Account such books, records, statements and accounts as may be necessary to evidence a complete record of all transactions carried out by the Advisor on behalf of the Account; and shall permit the Client and its employees and agents to inspect such books, records and statements at all reasonable times.

In exercising rights and carrying out its duties hereunder the Advisor is authorized to act for the Account and on the Client's behalf either itself or in part through its authorized agents as it shall determine; *provided, however*, that the appointment of any agent shall not relieve the Advisor of its responsibilities or liabilities hereunder.

The Advisor is authorized but shall not be required, to vote, tender or convert any securities in the Account; to execute waivers, consents, and other instruments with regard to such securities; to endorse, transfer or deliver such securities or to consent to any class action, plan of reorganization, merger, combination, consolidation, liquidation or similar plan with reference to such securities.

The authorities herein contained are continuing ones and shall remain in full force and effect until revoked by termination of this Agreement as hereinafter provided, but such revocation shall not affect any liability in any way resulting from transactions initiated prior to such revocation.

Notwithstanding anything to the contrary contained herein, with respect to the Benchmark Subaccount, the Share composition and Notional Amount of such subaccount--and adjustments from time to time thereto--shall only be effected by mutual consent of the Client and the Advisor.

3. Trade Process Procedures.

a) Daily Trade Blotter File. No later than at the close of business (i.e., 5:00 p.m. New York Time) on each "Exchange Business Day" (as defined in the 1996 ISDA Equity Derivatives Definitions and with respect to the primary Exchange(s) on which the equity securities in the Account trade), the Advisor shall deliver via facsimile or electronic transmission to the relevant Client Contact a Trade Blotter File setting forth for each transaction effected by the Advisor for the Account on such Exchange Business Day the following:

(i) the Ticker (or other security identifier);

(ii) the quantity and transaction price (gross basis);

(iii) commission or any other transaction fee, if available;

(iv) the name of the third party executing broker (if any); and

(v) transaction type (buy, sell, short, cover, etc.).

The Trade Blotter File shall be delivered to the Client in mutually agreed format/medium.

b) Short Sales. Prior to effecting any short sales in any security for the Account, the Advisor shall obtain from the authorized designee of the Client short sale borrowing capability, it being understood and agreed that securities borrowing transactions to cover short sales shall be the responsibility of the Client. Advisor shall effect all short sales and all other securities sales for the Client's Account in full compliance with all applicable short sale rules under Federal securities law and regulations and the rules of the relevant securities exchange.

c) Third Party Brokers. The Advisor shall execute trades in or for the Account only with those brokers identified on Appendix III hereto. Appendix III may, from time to time, be amended by mutual agreement of the parties hereto, such agreement not to be unreasonably withheld. Notwithstanding any provision regarding the Advisor's authority hereunder to act on behalf of the Client, any documentation required in connection with establishing such brokerage account shall be reviewed and approved by the Client prior to execution, such approval not be unreasonably withheld.

d) Equity Position Limitations. The Advisor specifically agrees and acknowledges that (i) U.S. and foreign securities and banking laws applicable to Client may limit from time to time the trading decisions of Advisor in respect of the Account; (ii) specifically (by way of example) pursuant to applicable U.S. banking laws and regulations the Client is subject to general limitations on holding a class of the outstanding voting equity securities ("Voting Equities") or any class of equity securities voting and non-voting of any U.S. company ("Voting/Non-Voting Equities"), and (iii) under relevant U.S. and foreign banking and securities laws, generally any equity position of a particular issuer held in the Account will be aggregated with equity positions of such issuer held in other proprietary account(s) of the Client for purposes of determining compliance with such banking laws.

e) Regulatory compliance. The Advisor specifically agrees and acknowledges that it may, from time to time, be necessary or advisable, in order to maintain compliance with U.S. or non-U.S. applicable law or maintain compliance with this Agreement, to liquidate certain positions in the Account, or take other remedial actions. The Advisor agrees to comply promptly with any Client directions on this regard, subject to 8(c) below.

4. Services of the Advisor Not Exclusive.

The services of the Advisor to the Client hereunder are not to be deemed exclusive and the Advisor shall be free to render similar services to others and to retain for its own use and benefit all fees or other moneys payable thereby and the Advisor shall not be deemed to be affected with notice of or to be under any duty to disclose to the Client any fact or thing which comes to the notice of the Advisor or any employee or agent of the Advisor in the course of the Advisor rendering similar services to others or in the course of its business in any other capacity or in any manner whatsoever otherwise than in the course of carrying out its duties hereunder. Nothing in this Agreement shall limit or restrict the right of any directors, officers or employees of the Advisor to engage in any other business or to devote his time and attention in part to the management or other aspects of any other business, whether of a similar or dissimilar nature. The Advisor may aggregate purchases or sales of securities for the Account with purchases or sales of the same securities by other clients of the Advisor, *provided* that Advisor first discloses to, and obtains approval of, Client regarding Advisor's allocation procedures. The Advisor agrees that in the event that purchases or sales of securities for the Account shall coincide with purchases or sales of the same securities by other clients of the Advisor, the Advisor will make such allocation in a manner believed by the Advisor to be equitable to each client.

Instructions to execute securities transactions may be placed by the Advisor with brokers, dealers and banks who supply research to the Advisor and such research may be used by the Advisor in advising other clients of the Advisor.

5. Indemnification.

Each party hereto (as applicable, the "Indemnifying Party") agrees to indemnify, defend and hold harmless the other party (the "Indemnified Party") and its officers, directors, shareholders, employees, affiliates and agents from and against all demands, claims, liabilities, damages, expenses (including legal fees and disbursements) and losses (collectively, "Claims") resulting directly from any misconduct or failure to act by the Indemnifying Party that results in any material breach by the Indemnifying Party of any of the representations, warranties or agreements of the Indemnifying Party contained in this Agreement and the Appendices annexed hereto.

6. Agency Cross Transactions.

The Advisor shall be permitted to effect transactions between the Client's Account and any other account for which the Advisor acts as investment advisor. In connection with such transactions, the Advisor may act as broker for, receive commissions from, and have a potentially conflicting division of loyalties and responsibilities regarding, both parties to such transactions. The foregoing permission may be revoked at any time by written notice from the Client to the Advisor.

7. Assignment.

This Agreement may not be assigned without the prior written consent of the non-assigning party. Neither party shall unreasonably withhold consent to any proposed assignment of this Agreement by the other party to any of its affiliates. In the event that a party wishes to assign this Agreement that party must provide to the non-assigning party such documents as the non-assigning party may reasonably request in connection with the assignment and shall allow a reasonable time during which the non-assigning party may review any such documents.

8. Termination.

a) The management services provided for herein shall continue in full force and effect until terminated by one of the parties hereto.

b) This Agreement may be terminated by either party upon **ten (10)** Exchange Business Days' notice to the other party, subject to the remaining provisions of this Section 8.

c) In the event the Client notifies Advisor in writing either that (i) the securities and other investments which make up the Account, Advisor's management activities, or any Account transaction is reasonably determined by the Client, in good faith, to be in violation of the Investment Guidelines (an "*Investment Guideline Violation*"), or (ii) the Client has reasonably determined in good faith that it is necessary or advisable to liquidate certain positions in the Account, or take other remedial actions, in order to maintain compliance with applicable law or to maintain compliance with this Agreement (a "*Compliance Violation*"), the Advisor shall (in the event of an Investment Guideline Violation) cause the conditions constituting such Investment Guidelines Violation to cease to exist, and (in the event of a Compliance Violation) effect either the liquidation of the positions to which the Compliance Violation relates, or take such other remedial action as the Client may direct. In connection with any such Compliance Violation or Investment Guidelines Violation, Advisor shall take such remedial steps within such time periods as Client shall direct in its written "Violation" notice to Advisor; and Client agrees that it shall act in a commercially reasonable manner, consistent with the specific circumstances, in setting any such remedial action and remedial time periods in connection with any such Violations.

If the conditions constituting such Investment Guideline Violation or Compliance violation continue to exist after the time for remedial action by Advisor, the Client shall be entitled upon written notice to the Advisor to immediately assume management of the Account, whereupon this Agreement shall be terminated.

d) Upon the occurrence of an "Early Termination Event", as defined in the Confirmation related to that certain American-style option transaction between the Client (as option writer) and **Franconia Equities Ltd.** (as option buyer), dated as of **March 14, 2002, (DBAB Ref. No. 1244131)** (the "Option Transaction") the Client shall be entitled to immediately assume management of the Account, whereupon this Agreement shall be immediately terminated. In connection therewith, Client shall commence an orderly liquidation and reduction to USD cash of the assets in the Account (the "Account Liquidation") over a **four consecutive Exchange Business Day period,** commencing on the Early **Termination** Date (or on the immediately following Exchange Business Day as determined by the Client). Such orderly liquidation shall be effected in an "equal dollar weighted" manner in approximately equal proportions (i.e., approximately 25% of the Account per Exchange Business Day) over such period, with the Client giving due regard to effecting proportionate reductions of any "long" positions and corresponding "short" positions In the event of timely receipt by the Client from the option buyer of the Buyer Termination Notice (as defined in the Confirmation related to the Option Transaction), the Account Liquidation shall occur on the Early Termination Date (or the immediately following Exchange Business Day as determined by the Client).

For the purpose of determining the Cash Settlement Amount (as defined in the Confirmation related to the Option Transaction), securities included in both the Benchmark Subaccount and in the

Semi-Fixed Basket (as defined in the Confirmation related to the Option Transaction) will be priced consistently.

e) For the purpose of this Section 8 if notice is being delivered with respect to a Compliance Violation or Investment Guideline Violation, such notice shall be delivered to the relevant person(s) specified in the Notices information below and shall specify the investment positions and/or other circumstances with respect to which the Compliance Violation relates, and (ii) in all events, notice shall be deemed to be received on the Exchange Business Day that it is received by the Advisor if such notice has been received by 10:00 A.M. on such Exchange Business Day. If notice is received after 10:00A.M. on an Exchange Business Day it shall be deemed to have been received on the following Exchange Business Day.

f) Unless previously terminated pursuant to the provisions of this Section 8, this Agreement shall terminate on the *"Cash Settlement Payment Date"* following option exercise by the option buyer under the Option Transaction or other earlier termination of the Option Transaction (other than by reason of an Early Termination Event as referenced in subsection (d), above). In connection with any such Option Transaction exercise (or early option termination), Advisor shall commence an orderly liquidation and reduction to USD cash of the assets in the Account over a **four consecutive Exchange Business Day period,** commencing on the date set forth in Client's related written notice (*"Account Liquidation Period"*). Such orderly liquidation shall be effected in "equal dollar weighted" manner in approximately equal proportions (i.e., approximately 25% of the Account per Exchange Business Day) over the Account Liquidation Period, with the Advisor giving due regard to effecting proportionate reductions of any "long" positions and corresponding "short" positions.

g) Unless previously terminated pursuant to the provisions of this Section 8, this Agreement shall terminate on the final scheduled Cash Settlement Payment Date under the Option Transaction, such date to occur on or about **March 14, 2005,** with the exact date to be specified by Client written notice to the Advisor.

h) Upon termination of this Agreement the Client shall resume control of the Account, without further liability or responsibility upon the Advisor therefor.

9. Confidentiality.

Neither of the parties hereto shall (except under compulsion of any applicable law or regulation made thereunder or as required by the regulatory authorities of any jurisdiction in which transactions on behalf of the Account are effected or regulated--hereafter, *"Regulatory Mandated Disclosure"*) either before or after the termination of this Agreement disclose to any person not authorized by the relevant party to receive the same any confidential information relating to such party or to the affairs of such party of which the party disclosing the same shall have become possessed during the period of this Agreement and party shall use all reasonable efforts to prevent any such disclosure as aforesaid. Without in any way limiting the generality of the foregoing, before acting upon a request for any Regulatory Mandated Disclosure, a party shall (i) immediately notify the other party of the existence, terms and circumstances surrounding such request; (ii) consult with such party on the advisability of taking legally available steps to resist or narrow such request; and (iii) if such Regulatory Mandated Disclosure is required, exercise such party's best efforts to obtain reasonable assurance that confidential treatment will be afforded.

The term "confidential information" shall include (without limitation) the existence of , and contents of, the Trade Restrictions List (referenced on Appendix I hereto) delivered by Client to Advisor from time to time. The Advisor acknowledges its obligations under applicable law, including federal and state laws, not to disclose, or otherwise effect trades based on, material non-public information. Without limiting the responsibilities and agreements of the Advisor under this Section 9, the Advisor specifically agrees with Client that it shall not utilize, directly or indirectly, any Trade Restrictions List as basis for trading or otherwise investing in (either through the Account or by means of any other independent trading or advisory activities of the Advisor) any securities included on such Trade Restrictions List.

The Client further specifically agrees that, other than by reason of Regulatory Mandated Disclosure, (i) except with the prior written consent of the Advisor it shall not disclose to any third party the terms of the Advisor-directed trading strategies (including the nature and content of the Account and the Subaccounts) contemplated under this Agreement (as evidenced by the annexed Investment Guidelines and related Transaction Reports); and (ii) it shall not establish or engage in any form of trading strategy or strategies, for its own (or any affiliate's) account--or for the account of any third party--which by virtue of Client's knowledge of Advisor's trading strategies provided for in this Agreement could be deemed to materially replicate any aspect of such Advisor trading strategy.

10. Risk Reducing Trades

Advisor agrees that other than in connection with the actual occurrence of an Early Termination Event (as determined by Client), if Client notifies Advisor that in connection with Client's delivery of an Early Expiration Notice to the option buyer under the Option Transaction, such option buyer has either (i) not delivered to Client a Buyer Termination Notice, within the time period required under the Option Transaction, or (ii) Client has provided the Advisor with verbal or written instruction to early terminate the Option Transaction, then the Advisor shall, consistent with the annexed Investment Guidelines and Restrictions, thereafter strictly limit its trading activities for the Account to risk reducing trades in a manner that preserves or increases the dollar neutrality, with the overall objective of preserving, at a minimum, the then current mark-to-market value of the Account. Such "risk reducing" trading strategy shall remain in effect for the remaining term of this Agreement, unless and until Client, by subsequent written notice to the Advisor, instructs Advisor to recommence "normal" trading activities under this Agreement.

11. Miscellaneous.

a) No failure on the part of either party to exercise, and no delay on its part in exercising, any right or remedy under this Agreement will operate as a waiver thereof nor will any single or partial exercise of any right or remedy preclude any other or further exercise thereof or the exercise of any other right or remedy. The rights and remedies provided in this Agreement are cumulative and not exclusive of any rights or remedies provided by law.

b) This Agreement may only be amended by the written agreement of the parties hereto.

c) The illegality, invalidity or unenforceability of any provision of this Agreement under the law of any jurisdiction shall not effect its legality, validity or enforceability under the law of any other jurisdiction nor the legality, validity or enforceability of any other provision.

d) Unless otherwise specified, any notice given hereunder shall be in writing and shall be served by hand (or courier service) at, or by being sent by facsimile or other electronic transmission to the office of the addressee identified herein or in the relevant schedule hereto or such other address as to which either party shall have given written notice to the other party hereto. Any such notice shall be deemed duly served at the time of delivery, as evidenced by a delivery receipt (if delivered by hand or by courier service), or at the time of receipt (if served by facsimile transmission or other transmission). The Advisor may rely and shall be protected in acting upon any written instruction or communication believed by it to be genuine and to have been signed by the proper party or parties.

e) The Advisor will forward to the Client a list of names and specimen signatures of persons authorized to act on behalf of the Account. The Client will forward from time to time a list of names and specimen signatures of persons authorized to act on behalf of the Client. The Advisor and/or the Client, as applicable, will provide to the other party a revised list of names and specimen signatures of persons authorized to act on behalf of the Account or Client whenever such authorized persons change.

f) Notwithstanding anything to the contrary contained in this Agreement, the Client agrees that any amounts owed or liabilities incurred by the Advisor in respect of any transactions contemplated by this Agreement, will be satisfied solely from the Advisor's assets. Without limiting the generality of the foregoing, in no event shall this Agreement give the Client recourse, whether by setoff or otherwise, with respect to any such amounts owed or liabilities incurred, to or against any assets of any person or entity other than the Advisor.

g) Notwithstanding anything to the contrary contained in this Agreement, absent any material breach of the terms of this Agreement, the Advisor will not be liable to the Client for any losses, damages, costs, expenses, or other liabilities arising in connection with their activities and services hereunder.

12. Representations and Warranties

Each of the parties (or the specified party, as the case may be,) represents, warrants, and agrees with the other party that:

(a) It is duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation and has all requisite power and authority to own its property, to conduct its business as currently conducted and to execute and deliver, and to perform its obligations under, this Agreement.

(b) This Agreement has been duly authorized, executed and delivered by it and constitutes a legal, valid and binding obligation of such party, enforceable against such party in accordance with its terms.

(c) No permits, licenses, franchises, approvals, authorizations, qualifications or consents of, or registrations or filings with, governmental authorities are required in connection with the execution or delivery by such party of, or the performance by such party of its obligations under, this Agreement, except for such as have been obtained and are in full force and effect.

(d) The execution and delivery of, and the performance by such party of its obligations under, this Agreement do not and will not result in a breach or constitute a violation of, conflict with, or constitute a default under, the certificate of incorporation or bylaws of such party or any agreement or instrument to which it is a party or by which it or any of its property is bound, which breach, violation, conflict or default could have a materially adverse effect on its ability to perform its obligations under this Agreement.

(e) No actions, proceedings or claims are pending or, to the knowledge of such party, threatened against such party or any of its property that could affect the validity or enforceability of this Agreement or that could have a materially adverse effect on the ability of such party to perform its obligations under this Agreement.

13. Governing Law.

THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE CHOICE OF LAW DOCTRINE.

IN WITNESS WHEREOF This Agreement has been entered into the day and year first above written.

DEUTSCHE BANK AG LONDON

By
Name: ~~James Bowen~~ Julian Sale
Title: Attorney-in-Fact

By
Name: Tarana Oommen
Title: Attorney-in-Fact

RENAISSANCE TECHNOLOGIES CORP.

By
Name: MARK SILBER
Title: VICE PRESIDENT

Notices:

All notice information for the relevant party must be sent in accordance with the information set forth below unless otherwise instructed by such party:

Deutsche Bank AG, London Branch
c/o Deutsche Bank Securities Inc.
31 West 52nd Street
New York, NY 10019

Attn: Thomas E. Kerns
Tel: (212) 469-4928
Fax: (212) 469-4994

Renaissance Technologies Corp.
800 Third Avenue
New York, NY 10022

Attn: Mark Silber
Carla Volpe Porter
Bruce Yablon

Tel: (212) 486-6780
Fax: (212) 758-7136

Attn: Peter Brown
Bob Mercer

Tel: (631) 444-7000
Fax: (631) 689-4495

Attn: Mike O'Rourke
Scott Chinsky

Tel: (212) 486-6780
Fax: (212) 486-7291

APPENDIX I

A. Designated Trading Strategy Subaccount: Investment Guidelines

1. This Subaccount shall be composed of the following types of equity securities only: Equity securities traded on recognized U.S. securities exchanges, NASDAQ and U.S. Index Futures.

2. (a) General strategy: Long / Short Statistical Arbitrage; and

   (b) Index Futures are only to be traded when, and if, there exists a dollar imbalance between the long market value and the short market value, and then only to the extent that the resulting long or short position in index futures reduces this imbalance. Further, all Index Futures trading must be executed by the Deutsche Bank AG, New York, Equity Finance trading desk.

3. The ***"Total Gross Notional"*** shall mean the sum of (a) the absolute value of the Trading Basket Long Positions (the "Gross Long Notional") and (b) the absolute value of the Trading Basket Actual Short Positions and the Trading Basket Synthetic Short Positions (together, the "Gross Short Notional").

4. ***"Capital Needed"*** shall mean the sum of (a) "Alpha" multiplied by the Total Gross Notional and (b) "Beta" multiplied by the absolute value of the result of (i) the Gross Long Notional minus (ii) the Gross Short Notional

   where:

   "Alpha" shall mean 5.26316%; and

   "Beta" shall mean 19.73684%.

   Provided, however, that the Capital Needed shall always be less than or equal to the Capital Available (as defined below).

5. ***"Capital Available"*** shall mean the sum of (i) the total Premium and (ii) the Barrier NAV Amount (each as defined in the Option Transaction).

6. ***"Maximum Gross Notional"*** shall mean the lesser of (i) USD 6,000,000,000 and (ii) 16 times the Capital Available, as may be adjusted from time to time by mutual consent of the Client and the Advisor.

7. ***"Current Barrier"*** shall mean, initially, USD 270,000,000 (the "Barrier"), and thereafter, an amount equal to the product of (a) the Barrier NAV Index Level minus the Expiration Price times (b) the Notional Amount divided by 100 (each as defined in the Option Transaction).

8. ***"Maximum Security Position"*** shall mean the lesser of:

   a) 40% of the Current Barrier, as may be adjusted from time to time by mutual consent of the Client and the Advisor;

   b) 3% of an issuer's total outstanding shares (and 2% in the case of ADR's, GDR's or similar of U.K. issuers); and

c) the greater of (i) three (3) times the daily trading volume as measured over the ten Exchange Business Days' trailing volume in all the related securities of any Issuer and (ii) 5% of Capital Available.

If the Maximum Security Position is greater than or equal to 50% of the Current Barrier, the Calculation Agent (as defined in the Option Transaction), in good faith and in a commercially reasonable manner, shall have the right, but not the obligation, to require the Advisor to reduce the Maximum Security Position to less than 50% of the Current Barrier in a commercially reasonable manner.

9. When the Total Gross Notional is: (i) greater than USD 300,000,000.00, the total number of Issuers in this Subaccount shall not be less than **50** for the "long" side and **50** for the "short" side and (ii) greater than USD 800,000,000.00, the total number of Issuers in this Subaccount shall not be less than **100** for the "long" side and **100** for the "short" side

10. ***"Maximum Dollar Value per Industry"*** shall mean, with respect to each industry group to which the relevant securities are allocated (as defined by Barra E3), the absolute value of the difference between the long share values and the short share values for each security allocated to such industry group; provided, however, that the Maximum Dollar Value per Industry shall not exceed 100% of the Current Barrier.

11. ***"Maximum Dollar Value per Sector"*** shall mean, with respect to each sector group to which the relevant securities are allocated (as defined by Barra E3), the absolute value of the difference between the long share values and the short share values for each security allocated to such sector group; provided, however, that the Maximum Dollar Value per Sector shall not exceed 125% of the Current Barrier.

B. Benchmark Subaccount: Investment Guidelines

1. This Subaccount will be comprised of Long US Equity Securities--i.e., no Short side positions shall be permitted to be established in this Subaccount-- and shall be composed of the following types of equities only:

   Equity securities traded on recognized U.S. securities exchanges, NASDAQ and U.S. Index Futures.

Notwithstanding anything to the contrary contained in this Agreement or these Investment Guidelines, any Share transactions in, or any other Advisor-initiated change in the composition of, this Subaccount shall only be effected by mutual consent of the Client and the Advisor.

2. The Notional Amount for this Subaccount (only Long Equity positions permitted) shall not exceed USD 6,000,000,000, as may be adjusted from time to time by mutual consent of the Client and the Advisor.

3. The total assets within this Subaccount in a particular issuer shall not exceed 50% of the Current Barrier.

4. The anticipated average of each securities position shall not exceed three (3) times the daily trading volume as measured over the ten Exchange Business Days' trailing volume.

C. Additional Trading Restrictions Applicable to the Trading Basket

1. Restricted List – As provided by Deutsche Bank's Compliance Department

Restriction Level	Category	Permissible Activities
1.	***Full Restriction***	*As quickly as practicable (but no later than the close of business on the second day after a security initially appears on the Trade Restricted List), Advisor is permitted, upon notice to the Client Service Representative, to eliminate exposure to the issuer of such security by selling all or any pre-existing long position or buying-in all or any pre-existing short position, at then-current market prices, (a) in ordinary market transactions or (b) in a transaction with an Unaffiliated Account, defined below, provided that securities transferred in (b) are not transferred back to the MAPS account in a single transaction or series of transactions. After two business days following notice of the restriction, the position will be frozen and the Advisor will be prohibited from trading the security until it is removed from the Trade Restricted List.*
2.	**Offering**	No trades are permitted without prior approval of the Client Service Representative (for the periods required by Regulation M, and other applicable laws, rules and regulations and policies of Deutsche Bank AG and its affiliates).
5.	***Affiliate Related***	*Advisor, defined below, may, upon notice to the Client Service Representative, sell a pre-existing long position, sell short and/or buy-in a pre-existing short position. Such transactions should be executed at then-current market prices in accordance with the provisions of (a) and (b) in "Full Restriction".*
7.	**DB Investment**	No trades are permitted from the time the security goes on the Trade Restriction List.

Definitions:

Advisor: The investment advisor that has been retained by DBAG (London Branch) to manage a particular MAPS Account.

Unaffiliated Account: An account managed by Advisor in which no Deutsche Bank entity has any beneficial interest.

2. Hot Issues - Advisor shall not invest for the Account in securities the offering of which constitute "hot issues," in accordance with NASD IM-2110-1.

APPENDIX II

March 14, 2002

Renaissance Technologies Corp.
800 Third Avenue
New York, NY 10022

Dear Sirs:

With respect to the Investment Advisory Agreement between **Deutsche Bank AG, London Branch**, ("Client") and **Renaissance Technologies Corp.** (the "*Advisor*"), dated March 14, 2002 (the "*Agreement*"), the Advisor will receive a management fee of **USD 100,000** (the "*Fee*").

The Fee shall be paid three (3) Exchange Business Days after the execution of the Agreement.

Very truly yours,

DEUTSCHE BANK AG LONDON

By:____________________________
Name:
Title:

Agreed and Accepted:

RENAISSANCE TECHNOLOGIES CORP.

By:____________________________
Name:
Title:

APPENDIX III

[List of Third Party Brokers pursuant to Section 3(c)]

Instinet
Island
REDI
BRUT
Helfant
Bloomberg
DOT
Archipelago

Weiss Enterprise Audit Organizational Overview

May 23, 2012

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on Investigations

George Weiss

- Background

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Permanent Subcommittee on Investigations

- Before founding George Weiss Associates, Inc. in 1978, George became a successful trader at several securities firms

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on Investigations

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George Weiss (cont.)

- Entities in which George Weiss holds a direct interest

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- George Weiss Associates, Inc.
  - Formed in 1978
  - Formerly a registered broker/dealer
  - Managed proprietary capital until 1997; provided investment advisory services from 1997 until 2005; from 2006 provided office space and technology equipment to Weiss Multi-Strategy Advisers LLC and Weiss Special Operations LLC

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on Investigations

GWA, LLC - History & Purpose

- Holding company
- Formed in 1996 as a Connecticut LLC
- Formed to provide key employees investment opportunities in proprietary portfolio
  - Proprietary fund previously managed by George Weiss Associates, Inc.
- Majority owned by Weiss Family Interests LLC
- Has no employees
- George Weiss is managing member
-
- Redacted by the Permanent Subcommittee on Investigations

GWA, LLC - Related Entities

- As of 2009, the following entities were held by GWA, LLC (collectively with GWA, LLC, the "Firm"):

Entity Name	Year Formed	State of Organization	Disregarded Entity
Weiss Multi-Strategy Advisers LLC	2005	CT	No
Weiss Special Operations LLC	2005	CT	Yes
Weiss Transportation Services LLC	2007	CT	Yes
Weiss Investment Management Services LLC	2003	NY	Yes
OGI Associates LLC	1994	CT	Yes

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on Investigations

GWA, LLC - Related Entities (cont.)

- OGI Associates LLC
  - Wholly-owned by GWA, LLC, disregarded entity
  - Conducts proprietary trading
  - Assets managed by Weiss Multi-Strategy Advisers LLC
  - Accrual method taxpayer; section 475(f) mark-to-market election in place

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on Investigations

From: Joe Sclafani <jsclafani@wimsllc.com>
Sent: Friday, July 11, 2008 3:09 PM
To: Jennifer DeBeatham <jdebeatham@gweiss.com>; Wilfer Zuleta <wzuleta@gweiss.com>; Carmen Del Monaco <cdelmonaco@gweiss.com>
Cc: Pierce Archer <parcher@gweiss.com>; Rick Doucette <rdoucett@gweiss.com>; WIMS - Rick Grimes <rgrimes@wimsllc.com>
Subject: RE: Crosses required

After speaking with ACT, we have determined that our (WIMS) costs incurred for executing yesterday's crosses are deminimus, therefore we are going to change all commissions to $25 ticket charges from the current .003 a share.

From: Jennifer DeBeatham [mailto:jdebeatham@gweiss.com]
Sent: Thursday, July 10, 2008 2:04 PM
To: Joe Sclafani
Cc: Pierce Archer
Subject: RE: Crosses required

What comm. are we doing on the crosses??

Thanks
Jen

From: Joe Sclafani [mailto:jsclafani@wimsllc.com]
Sent: Thursday, July 10, 2008 2:00 PM
To: Jennifer DeBeatham
Subject: RE: Crosses required

that sounds high, especially for the ones that are under a dollar.

From: Jennifer DeBeatham [mailto:jdebeatham@gweiss.com]
Sent: Thursday, July 10, 2008 1:59 PM
To: Joe Sclafani
Subject: RE: Crosses required

I was told 3 cents, but lets check with Pierce

From: Joe Sclafani [mailto:jsclafani@wimsllc.com]
Sent: Thursday, July 10, 2008 1:29 PM
To: Jennifer DeBeatham
Cc: Susan Sevigny
Subject: RE: Crosses required

Jen,

Here are the cross prices executed today.

BTC	4.48
PGIC	.89
CT	18.57
TOH/WS	.5
AIS	.71
EPEX	4.54
GAIA	11.35
SSP	3.34

ZILG	2.94
UTH	134.2
MHLD	5.71
BXXX	.67
APP	6.28
SRZ	20.11

There is one more on the Jeff correspondant desk, ITIG, because its a pinksheet. I will be back to you with that one shortly. One question, what commission on these? I have a call into Pierce, if you see him can you ask?

Joe

From: Susan Sevigny [mailto:scsevigny@gweiss.com]
Sent: Wednesday, July 09, 2008 3:44 PM
To: Joe Sclafani
Subject: Crosses required

Joe...pls open the attached and cross the securities listed under Rule 11 and Rule 12. I understand you will have to charge a commission. We are selling in MAPS, buying in OG. Tks, Susan

Susan C. Sevigny
Assistant Treasurer
George Weiss Associates, Inc.
One State Street-20th floor
Hartford, CT 06103
860-240-8954
scsevigny@gweiss.com

From: Apollo Wong
Sent: Wednesday, July 09, 2008 3:36 PM
To: Pierce Archer; Susan Sevigny
Subject: FW: George Weiss MAPS Investment Guidelines- PLEASE READ

Susan,
Please transfer all the positions mentioned in Rule 11 and Rule 12 to OGI account from the MAPS account. Thanks.
Apollo

From: Enrique Espinoza [mailto:enrique.espinoza@db.com]
Sent: Tuesday, July 08, 2008 11:57 AM
To: Apollo Wong
Cc: Satish Ramakrishna; Rafael Rojas; Joe Genovese
Subject: George Weiss MAPS Investment Guidelines- PLEASE READ

Hi Apollo,

Hope everything is fine. We see that your MAPS book is breaching some investment guidelines. We need you to comply with the investment guidelines as soon as possible.
Thanks.

Kind Regards,
Enrique

Enrique Espinoza, CFA
Deutsche Bank Securities Inc.
Global Markets Equity
Global Prime Finance Risk
60 Wall Street, 13th Floor
New York, NY 1005-2836
+1 212-250-2152
+44-(0)-20754-52644
enrique.espinoza@db.com

MASTER NETTING AGREEMENT

Master Netting Agreement, dated as of June 16, 2003 (as amended, modified and supplemented from time to time, this "Master Agreement") between **GWA, LLC** and **OGI Associates, LLC** (its "Affiliate"), (collectively, the "Counterparty") and **Deutsche Bank AG**, on behalf of itself and the other DB Entities ("Deutsche Bank"). Capitalized terms used herein and not otherwise defined shall have the meaning set forth in Section 13 hereof.

This Master Netting Agreement amends and restates in its entirety the Master Netting Agreement between Counterparty and Deutsche Bank dated April 18, 2003.

WITNESSETH:

WHEREAS, Deutsche Bank and the Counterparty have entered, or may from time to time enter, into transactions and Agreements to govern such transactions;

WHEREAS, Deutsche Bank and the Counterparty desire to (i) reduce operational expense and credit risk in respect of the Agreements and (ii) set forth the rights of each party to cause the termination or liquidation of Agreements in the event of the occurrence of certain circumstances affecting the other party.

NOW, THEREFORE, in consideration of the foregoing premises and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

1. Cross Margining and Netting

(A) Calculation of Deficit and Excess

With respect to each Agreement, Deutsche Bank shall use reasonable efforts to determine all amounts of Deficit and Excess by marking to market all Transactions under such Agreement (including any securities, currencies or other assets held as collateral or margin) as often as is reasonably practicable by Deutsche Bank. The source and method for determining market value for each Transaction under each Agreement shall be as provided in such Agreement. If, with respect to a Transaction, there are no provisions in the Agreement for determining such market value, then Deutsche Bank shall follow such procedures for determining market value as it shall determine in its reasonable discretion are commercially reasonable and in accordance with industry practice.

(B) Application of Excesses to Deficits

(i) In the event that there are both Excesses and Deficits, Deutsche Bank shall, subject to the provisions of Section 1(D) of this Agreement, use its reasonable efforts to apply such Excesses to reduce such Deficits by transferring all or a portion of such Excesses to the DB Entity or Entities having a Deficit, *provided that* Deutsche Bank shall not be required to make any such transfer if such transfer would materially prejudice the legal or commercial position of the relevant DB Entities. In

Independent Amount" means, with respect to Party B: an amount in the Base Currency equal to the sum of (1) for Derivatives Transactions, the aggregate of the amounts specified in the Confirmations for such Transactions or as otherwise agreed by the parties, and (2) for Foreign Exchange Transactions, an amount equal to the sum of (a) the product of the Standard Net Open Position multiplied by the Standard Independent Amount Ratio, (b) the product of the Exotic Net Open Position multiplied by the Exotic Independent Amount Ratio and (c) the Forward Risk Adjustment Amount, and (3) an amount (the "Exposure Amount"), determined by Party A on each Valuation Date, equal to an exposure amount determined by Party A based on a risk calculation using Party A's internal models, of Transactions entered into under the Agreements (as such term is defined in this Master Agreement). Party A shall in no event be required to disclose to the Fund any information regarding its internal models.

IN WITNESS WHEREOF, the parties hereto have caused this Master Agreement to be duly executed by their respective authorized officers as of the date first above written.

Authorization and Signature Verified:	Yes
Name:	K Yohe
Date:	6/19/03

GWA, LLC

By:____________________
Title: Manager

OGI ASSOCIATES, LLC

By:____________________
Title: Manager

DEUTSCHE BANK AG,
on behalf of itself and each of the DB Entities

By: Katt Yohe
Title: VP

By:____________________
Title: Steven Kessler
Director

Marcus Peckman

Frank
Peter
Sateesh
Parag

From: Jeffrey Dillabough

Sent: Monday, August 16, 2010 5:05 PM

To: 'Peter Brophy'; 'frank.x.nelson@db.com'

Cc: 'Satish Ramakrishna'; 'Parag Patel'; 'joe.genovese@db.com'; Rick Doucette; Marcus Peckman; Steve Kleinman; Pierce Archer; Robert Gendreau

Subject: RE: New MAPs Term Sheet

Gentlemen,

Thank you for the term sheet. We have had a number of internal business conversations over the draft and our tax lawyers have had ongoing conversations with your tax lawyers on discrete issues. We are left with the following preliminary comments on the draft. This remains subject to any comments of our ISDA counsel after the next turn. Please let us know your availability to discuss.

1. We propose to add a provision that in the event the IMA is terminated, financing will be on an "as invested" basi s, subject to minimum financing over the life-to-date of the option.
2. The breach of agreement provision would appear to provide for a 30 day cure period under ISDA (i.e. failure to pay). This is unacceptable. We think a one-day cure is appropriate.
3. We would like the common cross-default provision under ISDA so that if DB default s on agreements with other clients it triggers a default for us.
4. The draft currently provides that if the IMA is terminated for any reason other than DB terminating without cause, Weiss loses the option premium. We would prefer a formulation which states that if IMA is terminated for cause by DB or without cause by Weiss, we lose the option premium, otherwise we retain the option premium.
5. With respect to cross collateralization of the OGI prime brokerage account, the 25% maximum should be based on Cash Settlement Scenario B instead of Scenario A.
6. With respect to "Limits on Account Transfers", the draft states that this is only permissible between MAPS subaccounts. We assume that this means we can roll the options from one to another, but DB needs to confirm.
7. The draft states that "transfers during the life of the deal are permitted only if in the best interests of [DB]". We need DB to clarify what is meant by this language—are you referring to rebalancing?
8. DB needs to send over a valuation methodology with respect to the asset class haircut matrix in connection with the 3rd party custody account.
9. 3rd party collateral threshold should be set to the 5 year subordinated CDS spread (or nearest maturity) instead of senior spread.
10. 3rd party collateral threshold should apply to surviving entity in the event that DB merges with another entity and that entity assumes the obligations under the option.
11. In the draft, the 3rd party collateral amount is calculated based on the intrinsic value. Instead, we believe it should be calculated on the entire premium minus invested balances in OGI. Scenario B - cross collateralized amor.
12. As the draft is written, the failure to fund the collateral does not trigger our ability to terminate the IMA and the option. In our view it should, and if we terminate in this scenario, we should be entitled to the time premium.
13. Cure periods for breach of investment guidelines—instead of what is in the draft, the cure period should be 10 trading days except in the case of multiple leverage violations, in which case the cure period should be 5 trading days.
14. There should be a statement in the investment guidelines that the portfolio may be invested in cash, and the portion that is not invested in cash shall managed according to the investment guidelines. We need the ability to go to cash without triggering an investment guideline violation.
15. The description in the investment guidelines of a "barrier" should be recharacterized as a "deleveraging factor".
16. The compliance guidelines should be revised to provide for at least a 10 day trading day cure for the client's determination to liquidate positions in the account because of "recommendations of regulatory authorities, internal policies or risk management requirements of [DB]"

Best,

Jeff Dillabough

Cross-collateralized

Jeffrey D. Dillabough
General Counsel
Weiss Multi-Strategy Advisers LLC
320 Park Avenue, 21st Floor
New York, NY 10022

From: Ross, Steven [mailto:sross@AKINGUMP.COM]
Sent: Friday, June 27, 2014 4:50 PM
To: Roach, Bob (HSGAC); Katz, David (HSGAC)
Cc: Bruce E. Clark (clarkb@sullcrom.com); O'Connor, Constance; Moyer, Thomas; Ross, Steven
Subject: My response to your emailed questions

Bob,

Pursuant to your additional requests of Barclays related to the Colt transaction and following up on our discussion earlier this week, the Bank remains hard at work compiling information responsive to the Subcommittee's follow-up requests. Below, I have included information responsive to several of the questions the Subcommittee has provided, as well as additional clarification on some of the issues we discussed on Tuesday. We continue to track down answers to other questions and expect to be able to provide you with additional information next week.

First, with respect to the historical option data you requested, please find attached a chart that reflects the relevant data. Please note that this chart reflects our best understanding of the information presently available, and we reserve the right to update or amend the data provided as necessary.

With respect to the specific considerations that impacted Palomino's structuring, as we discussed on Tuesday, more than twelve years have passed since Barclays began developing a structure to support the Colt trade. This reality has inherently and substantially limited the Bank's available institutional knowledge regarding these considerations. However, to the best of our understanding, from the time that the Colt transaction was first set up at Barclays, it has been conducted through Palomino, a wholly-owned subsidiary of BBPLC. The use of this wholly-owned subsidiary was primarily driven by operational limitations in Barclays' prime brokerage system. In 2002, when the Colt transaction began at Barclays, the Bank's prime brokerage operation was still very young, and it lacked much of the technological infrastructure enjoyed by older, established investment banks. To this end, Barclays' proprietary synthetic system lacked the capacity to handle the volume of trading activity that would likely be called for by the Colt transaction.

Barclays' client-facing prime brokerage system could handle such volume, but trades run through this system could only be booked on behalf of clients. This added additional complexity, as the longs and shorts associated with the Colt trade are fully owned by BBPLC and are not client positions. Additionally, it is our understanding that booking the transaction directly in Barclays' prime brokerage system may have triggered an obligation to report all trades in real time—a requirement that would have created substantial logistical issues in light of the heavy volume of trading activity related to the Colt transaction. Hence, for ease of accounting and execution, Palomino was created as an operating entity to execute the transaction, and the entity was booked in BBPLC's prime brokerage system as a client. Although we have been unable to identify the specific considerations that caused Palomino to be established as a foreign entity, it is our understanding that this decision was not driven by U.S. income tax considerations. As a wholly-owned subsidiary of Barclays' NY branch from its inception, we believe Palomino's income and expenses were reported on Barclays' U.S. federal return.

With respect to your questions regarding the deconsolidation, it is our understanding that Barclays deconsolidated Palomino for accounting purposes in the BBPLC consolidated IFRS accounts because deconsolidation reduced the assets on Barclays' consolidated balance sheet, and then-applicable U.K. accounting rules, specifically IAS-27 (relating to operating companies) and SIC-12 (relating to special purpose entities), permitted deconsolidation if Palomino was a special purpose entity ("SPE").

There were many individuals who worked on this matter. It appears that Hamish MacPherson and Rafal Medak worked on the question of deconsolidation in 2008. Decision-making in 2009, when deconsolidation occurred, would have involved senior management at Structured Capital Markets ("SCM"), Prime Brokerage and Finance, including notification through the SCM Approvals Committee process.

In the process of deconsolidating Palomino, it is our further understanding that Barclays sought to confirm its analysis of the transaction with PwC, the Bank's auditor. PwC would ultimately have to sign off on the accounting treatment as reflected in Barclays' year-end financial statements. We believe that Barclays received confirmation of its analysis from PwC in June 2009. Consultations with PwC occurred when deconsolidation was first considered in 2008, and again in 2009. Barclays also reviewed the deconsolidation with its external counsel, Orrick Herrington & Sutcliffe LLP.

These consultations occurred in the second quarter of 2009.

It is our understanding that during this deconsolidation process, Barclays was also engaged with Renaissance and its counsel. In the second quarter of 2009, Barclays had a series of telephone calls and e-mail and letter exchanges, and also exchanged drafts of documents, with Renaissance and their counsel that dealt with amendments to the Articles of Association and the drafting of a side letter. Mark Silber of Renaissance signed the Side Letter, and at least Jim Rowen and Renaissance outside counsel Ed Cohen of Winston & Strawn were participants in these exchanges. While Barclays cannot identify a written communication that actually used the word "deconsolidation," Barclays believes it made clear during these communications that its objective was to change the accounting treatment of Palomino, and Barclays believed that Renaissance understood that an accounting deconsolidation would be the logical result of these changes. In this respect, and in the context of discussing Barclays' orphan policy, which comes into play when an entity owned by Barclays will not be consolidated on any balance sheet, it is our understanding that RenTec confirmed to Barclays that it did not intend to consolidate Palomino under the applicable accounting standards.

In connection with these discussions, Renaissance requested that Barclays confirm that its prior representations regarding the transaction were still true and correct, which Barclays did. Moreover, Renaissance cooperated with Barclays in negotiating and executing the required documents.

You have also asked a series of questions regarding the Side Letter between Barclays and Renaissance and the amendments to Palomino's Articles of Association, including why Barclays amended the Articles to limit Palomino's ability to hire investment advisors and open additional prime brokerage accounts. The restriction in the Articles confirmed that Palomino was a SIC-12 entity for IFRS accounting purposes. As a result, it was possible to apply an SPE accounting analysis to Palomino under which Barclays concluded BBPLC should not consolidate Palomino under IFRS. In 2008, there were discussions between Barclays and PwC that concluded that although SPE analysis could result in the deconsolidation of Palomino, Palomino itself then was an IAS-27 operating company, and so the SPE analysis could not apply to it. The Articles amendments and the restriction in the Side Letter implemented in 2009 effectively changed Palomino from an IAS-27 entity to a SIC-12 entity. It is our understanding that Renaissance agreed to Barclays' request for these amendments. After being advised of

Barclays' proposed amendments, Renaissance and their counsel reviewed the proposed amendments and confirmed that they had no issues. As described above, Barclays consulted with PwC throughout this period regarding what would be required to make Palomino a SIC-12 entity and achieve deconsolidation, and it also consulted with its counsel at Orrick.

With respect to the Side Letter and its provision that Renaissance consent to any further changes of the Articles, this requirement was part of the accounting conditions required to ensure that Palomino would be considered a SIC-12 entity, i.e., so that Barclays could not freely change the articles back. Based on our understanding of the events, Barclays initially proposed that the provision relating to consent to further amendments to the Articles be included in the Articles. Renaissance and its counsel provided Barclays with an initial draft of a letter that requested certain representations by Barclays, and the provision regarding amendments later was included in that Side Letter. This provision was originally drafted by Barclays' counsel at Orrick to be included as part of the Articles. Renaissance and its counsel, however, had separately requested a side letter which covered representations to be made by Barclays in connection with the amendments, and subsequently the consent provision also was included in the Side Letter. Barclays required the provision regarding amendment to the Articles to comply with the IFRS accounting analysis required by Barclays' accounting office and PwC.

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As I indicated above, Barclays is continuing to diligently compile additional information related to your requests, and I expect to have further information for you next week. Please let me know if you have any questions.

Thanks--Steve

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History of COLT Options

		Trade Date	Valuation Date	Expiry Date	Term	Premium ($m)	Pay Out ($m)	Gain/Loss ($m)
I		30-Sep-02	13-Jan-04	30-Sep-05	1.3	$131.2	$523.3	$392.1
II		9-May-03	28-May-04	8-May-06	1.1	$256.8	$736.6	$479.8
III	A	14-Jan-04	30-Sep-04	13-Jul-06	0.7	$40.8	$54.4	$13.6
	B	14-Jan-04	30-Sep-04	15-Jan-07	0.7	$40.8	$54.4	$13.6
IV	C	1-Jun-04	30-Sep-04	1-Sep-05	0.3	$125.0	$152.5	$27.5
	D	1-Jun-04	30-Sep-04	15-Jan-06	0.3	$125.0	$152.5	$27.5
	E	1-Jun-04	30-Sep-04	1-Feb-07	0.3	$125.0	$152.5	$27.5
	F	1-Jun-04	30-Sep-04	31-May-07	0.3	$125.0	$152.5	$27.5
V	AA	1-Oct-04	21-Dec-05	15-Mar-06	1.2	$125.7	$406.1	$280.4
	BB	1-Oct-04	21-Dec-05	15-Jul-06	1.2	$125.8	$406.1	$280.3
	CC	1-Oct-04	16-Aug-06	15-Jan-07	1.9	$126.1	$734.1	$608.0
	DD	1-Oct-04	6-Dec-06	15-Aug-07	2.2	$126.4	$962.1	$835.7
VI	EE	21-Dec-05	13-Mar-07	15-Apr-08	1.2	$30.6	$106.3	$75.7
	FF	21-Dec-05	13-Mar-07	15-Jul-08	1.2	$40.9	$141.7	$100.8
	GG	21-Dec-05	22-Jun-07	15-Oct-08	1.5	$30.7	$144.1	$113.4
	HH	21-Dec-05	22-Jun-07	15-Jan-09	1.5	$71.9	$336.1	$264.2
VII	II	6-Dec-06	14-Dec-07	15-Apr-09	1.0	$125.1	$420.8	$295.7
	JJ	6-Dec-06	14-Dec-07	15-Jul-09	1.0	$160.1	$538.7	$378.6
	KK	6-Dec-06	21-Apr-08	15-Oct-09	1.4	$205.1	$1,270.6	$1,065.5
	LL	6-Dec-06	14-Dec-07	15-Jan-10	1.0	$410.3	$1,380.4	$970.1
VIII	MM	13-Mar-07	13-Oct-08	13-Mar-10	1.6	$100.3	$776.2	$675.9
IX	NN	22-Jun-07	17-Aug-07	22-Jun-10	0.2	$275.0	$278.1	$3.1
X	OO	9-Aug-07	7-Oct-08	9-Aug-09	1.2	$200.0	$1,319.5	$1,119.5
XI	PP	14-Dec-07	24-Dec-08	14-Dec-10	1.0	$280.0	$1,378.0	$1,098.0
XII	QQ	21-Apr-08	30-Dec-09	21-Apr-11	1.7	$280.5	$1,733.5	$1,453.0
XIII	RR	13-Jun-08	26-Jun-09	13-Jun-11	1.0	$265.0	$935.4	$670.4
XIV	SS	3-Nov-08	4-Dec-09	3-Nov-11	1.1	$250.0	$737.6	$487.6
XV	TT	12-Dec-08	12-Feb-09	12-Dec-11	0.2	$250.0	$299.8	$49.8
XVI	UU	5-Jun-09	16-Dec-10	20-Jan-12	1.5	$300.0	$930.9	$630.9
XVII	VV	5-Jun-09	16-Dec-10	20-Jun-12	1.5	$200.0	$620.5	$420.5
XVIII	WW	7-Oct-09	15-Mar-11	7-Oct-12	1.4	$400.0	$1,269.8	$869.8
XIX	XX	24-May-10	15-Sep-11	28-May-13	1.3	$100.0	$307.8	$207.8
XX	YY	27-Sep-10	11-Oct-11	30-Sep-13	1.0	$250.0	$717.5	$467.5
XXI	ZZ	3-Dec-10	20-Dec-11	6-Dec-13	1.0	$450.0	$1,483.8	$1,033.8
XXII	AAA	11-Mar-11	14-Dec-12	14-Mar-14	1.8	$250.0	$1,360.8	$1,110.8
XXIII	BBB	13-Oct-11	19-Dec-12	14-Oct-14	1.2	$100.0	$264.5	$164.5
XXIV	CCC	12-Dec-11	20-Dec-12	13-Dec-14	1.0	$200.0	$444.2	$244.2
XXV	DDD	18-Apr-12	17-Dec-13	19-Apr-15	1.7	$300.0	$970.7	$670.7
XXVI	EEE	19-Jun-12	3-Apr-14	22-Jun-15	1.8	$300.0	$1,129.0	$829.0

Unexercised Options

		Trade Date	Valuation Date	Expiry Date	Term	Premium ($m)	Pay Out ($m)	Gain/Loss ($m)
XXVII	FFF	9-Oct-12	N/A	10-Oct-15		$250.0		
XXVIII	GGG	27-Nov-12	N/A	28-Nov-15		$250.0		
	HHH	27-Nov-12	N/A	28-Nov-15		$150.0		
XXIX	III	29-Jan-14	N/A	10-Dec-14		$150.0		

From: Ross, Steven [mailto:sross@AKINGUMP.COM]
Sent: Tuesday, July 15, 2014 3:47 PM
To: Roach, Bob (HSGAC); Katz, David (HSGAC)
Cc: Bruce E. Clark (clarkb@sullcrom.com); Moyer, Thomas; O'Connor, Constance; Ross, Steven
Subject: Additional responses to your questions

Bob,

Per my email earlier today, please find additional responses below.

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<u>*Barclays Response to Question 10 (Fees)*</u>

> *In describing the composition of the fees for the years 2002 – 2012 reported in_BARCLAYS-PSI-748595, Barclays writes: "Please note that these figures represent the profits earned by Barclays through execution, securities lending, financing and clearing fees relating to the underlying positions in the prime brokerage accounts." Does this imply that there are other fees that are not included in the figures presented in BARCLAYS-PSI-748595? If so, please describe what they are, and the amounts.*

The figures provided are Barclays' view of the entirety of the income it earned through the transaction, although specific figures for 2012 (year-end) and 2013 can be found below.

> *There are other documents that suggest that the £322.8 million (about $550 million) figure cited in BARCLAYS-PSI-748595 is too low. In BARCLAYS-PSI-016951, there is a representation that "Trading activity in the Accounts generates income for Prime Services (approx. $100m per year)". In addition, on BARCLAYS-PSI-748581, it is also reported that "Barclays earns execution, securities lending, financing and clearing frees from providing prime services under the Accounts of approximately $100 m per year." Why is there such a difference and what is the correct amount?*

With respect to suggestions that the Colt transaction generates "approximately $100m per year" for Barclays, the two documents you referenced in support of this proposition date to 2012 and 2013, respectively. It is our understanding that this statement is accurate with respect to contemporaneous revenue earned by Barclays during those years. The exchange rate between the U.S. Dollar and the British Pound was approximately 1.6 in October 2012. This would mean that revenue of £60.8m (reflecting the final total for 2012) was equal to roughly $97.3m, or approximately $100m.

Similarly, it is our understanding that Barclays' 2013 revenue from the Colt transaction totaled roughly £66.2m. As of December 2013, when we believe the document reflected in BARCLAYS-PSI-748581 was drafted, the U.S. Dollar to British Pound exchange rate remained at approximately 1.6. This would mean that revenue of £66.2m was equivalent to roughly $105.9m, or again approximately $100m.

Also, please include the 2013 figure.

Please see above.

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6. Did Barclays profit from the ticket charges or commissions passed on to Renaissance or any Renaissance related entity in connection with the COLT transactions? Please provide the total amount for ticket charges or commissions invoiced to Renaissance or any Renaissance related entity in connection with the COLT transactions, and the profits made from those charges, for each year since 2008.

As clarified above, the £322.8m of profits earned by Barclays under the transaction between 2002 and 2012 were earned through execution, securities lending, financing and clearing fees relating to the underlying positions in the prime brokerage accounts.

We believe that, for these purposes, the Subcommittee's term "ticket charges" is interchangeable with the term "clearing fees" used by Barclays, and the Subcommittee's term "commissions" is interchangeable with the term "execution fees" used by Barclays.

"Ticket charges" and "commissions" are therefore two of the sources through which Barclays earned profits under the transaction. As we note above with respect to the Subcommittee's questions relating to "designated positions," the number of trades booked to the prime brokerage accounts ran to the millions per annum. It is our understanding that Barclays does not organize its data in a way that would make breakdown of its profits between these sources readily available. Furthermore, we understand that, given that the number of transactions totals the many millions, producing this breakdown in an accurate fashion for the five-and-a-half-year period to which the Subcommittee refers would be an extremely onerous and time-consuming task.

Barclays has, however, performed some analysis with respect to April 2014, as a sample month, to provide the Subcommittee with the elements of Barclays' income in that month that were earned from "ticket charges" and "commissions." In April 2014, Barclays estimates that its total revenue from the transaction was £5.04m; £0.08m of that revenue was derived from "ticket charges" and £0.97m of that revenue was derived from "commissions."

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[1] Please note that we use the terms 'Palomino accounts' or the 'prime brokerage accounts' interchangeably and the terms refer to all of the accounts in Palomino Limited's name, the value of which is referenced by the options written to the fund. Those accounts include both those known internally by Barclays as 'prime brokerage accounts' in which securities positions are booked and as those known internally by Barclays 'contract for difference accounts' or 'synthetic accounts' in which equity derivative positions are booked.

Memo

Barclays

To Tax Risk Committee

From SCM US Approvals Committee
Date 3 October 2012
Subject COLT

BARCLAYS

On 1 October 2012, the SCM US Approvals Committee (the "**Committee**") approved the execution of the COLT XXVII option transaction (the "**New Option Transaction**" and, together with the prior COLT option transactions, the "**Option Transactions**"), subject to any comments that may be raised by additional members of senior management.

Background

- The Option Transactions were originally approved by the SCM Approvals Committee and the New Products Committee in 2002 and have been subject to regular review by the Committee (most recently in March 2011).

- In each Option Transaction, an affiliate of Renaissance Technologies LLC (together with its affiliates, the "**Client**") buys a call option from Barclays, which option references a set of prime brokerage accounts held by Barclays (the "**Accounts**"). The Client has been appointed the investment manager for the Accounts.

- Trading activity in the Accounts generates income for Prime Services (approx. $100m per year).

- Since 2002, the Client has purchased call options from Barclays 26 times (and subsequently exercised the options, except for the 5 most recent options which remain outstanding).

- The Client plans to enter into the New Option Transaction on 9 October 2012, which would increase the fair market value of the outstanding call options from $2.69bn to $2.94bn.

- The Internal Revenue Service (the "**IRS**") has been challenging the Client on the US tax treatment of the Option Transactions.
    - In 2010, the IRS issued a memo (the "**IRS Memo**") arguing that options like the ones in the Option Transactions should not be treated as options for tax purposes. Following a detailed review with outside counsel and the Client, the Committee approved the Option Transactions on 3 December 2010 and 10 March 2011.
    - The IRS and the Client may seek to litigate the matter in court.
    - Both the IRS and Her Majesty's Revenue and Customs reviewed Barclays' involvement in the Option Transactions and those reviews are complete with no issues currently outstanding.

- The tax risk is assumed by the Client.
    - [redacted]
    - Further, Barclays is entitled to a contractual tax indemnity from the Client.

- There is a reputation risk for Barclays, especially if the matter proceeds to court and the IRS's challenge and Barclays' role become publicly disclosed.
    - The Committee believes that the New Option Transaction does not meaningfully increase Barclays' reputation risk with respect to the Option Transactions, insofar as any court litigation would relate to prior years and as entering into the New Option Transaction should be viewed as the maintenance of a longstanding structure that has been in existence since 2002.
- Unwinding the Option Transactions may not decrease Barclays' reputation risk, but the Option Transactions could be unwound with 2 months' notice.

The New Option Transaction

On 1 October 2012, the principal issue considered by the Committee was the reputation risk associated with the IRS's challenge of the Client's tax treatment of the Option Transactions (which challenge may be litigated in court) and the entry into the New Option Transaction in the current environment.

The IRS's challenge of the Client's tax treatment was previously considered in detail in 2010 when the IRS Memo was issued, and at that time, the Committee concluded that it was appropriate to approve the execution of additional Option Transactions for various reasons:

- The Client bears all the tax risk, is sophisticated, well advised, clearly understands the risk, and wishes to continue the Option Transactions. The Client considers that the Option Transactions provide significant benefits, including enhanced leverage that would make the transaction structure attractive even without tax benefits.
- [redacted]
- Any court litigation would relate to prior years, and in that respect, it was felt that unwinding the Option Transactions currently would not reduce Barclays' reputation risk.

The Committee felt the above reasons continued to apply and also noted that Barclays has entered into 26 Option Transactions since 2002 and that entering into the New Option Transaction should be viewed as the maintenance of a longstanding structure. However, the Committee also felt that other members of senior management may desire to be informed of the Option Transactions in the context of the current internal and external reviews at Barclays (Project Mango and the Salz Review).

As a result, the Committee felt the right approach was to approve the New Option Transaction but require that the Option Transactions be reviewed and tabled at the Tax Risk Committee before year-end when the outcome of Project Mango and the Salz Review is clearer. The Committee also felt that the Tax Risk Committee should be promptly made aware of the Committee's decision to approve the New Option Transaction and be given the opportunity to direct a more immediate or different action.

Thus, the Committee decided that the Option Transactions should be raised to your attention on an expedited basis, prior to the execution of the New Option Transaction on 9 October 2012.

Memo

Barclays

To **Tax Risk Committee**

From SCM
Date 12 October 2012
Subject COLT

BARCLAYS

This memo explains the background to an investment structure which has been in place for 10 years and explains why, notwithstanding the publicity risk that Barclays is subject to as a witness to the case if the Client proceeds to litigate in court, we believe it remains an appropriate transaction for Barclays to be a party to.

The COLT XXVII option transaction (the "**New Option Transaction**" and, together with the prior COLT option transactions, the "**Option Transactions**") was executed on 9 October 2012. The SCM US Approvals Committee approved the New Option Transaction on 1 October 2012, the chair of the CIB Reputational Risk Committee (Larry Wieseneck) was notified of the New Option Transaction on 4 October 2012, and the Tax Risk Committee discussed the Option Transactions on 8 October 2012.

The Option Transactions were originally approved by the SCM Approvals Committee and the New Products Committee in 2002 and have been subject to regular review by the SCM US Approvals Committee (prior to October 2012, most recently in March 2011).

Background

Investment Structure

In each Option Transaction, an affiliate of Renaissance Technologies LLC (together with its affiliates, the "**Client**") buys a call option from Barclays, which option references a set of prime brokerage accounts held by Barclays (the "**Accounts**"). Further, the Client has been appointed the investment manager for the Accounts.

Barclays has benefited from the Option Transactions primarily from the revenue generated for Prime Services by the trading activity in the Accounts. Since 2002, the revenue has totalled £322.7m. The Option Transactions are the principal structure by which the Client deals with Barclays.[1]

[1] Outside of the Option Transactions, Barclays has received approximately £12m from the Client for the period January 2011 through September 2012.

Revenue for Prime Services from the Accounts (£m)			
2002	£7.0	2008	£53.4
2003	£7.2	2009	£37.5
2004	£15.9	2010	£29.8
2005	£20.0	2011	£56.7
2006	£16.8	2012	£59.9[2]
2007	£18.6		
Total			**£322.8m**

Tax Risk

The Internal Revenue Service (the "**IRS**") has been auditing the Client's US tax treatment of the Option Transactions. In 2010, the IRS issued a memo (the "**IRS Memo**") arguing that options like the ones in the Option Transactions should not be treated as options for tax purposes, and that the option owner should be treated as the owner of the referenced accounts. The IRS and the Client may seek to litigate the matter in court. Before going to court, we expect the Client to go to Appeals (which is an informal administrative forum where disagreements between taxpayers and the IRS can be resolved in private without the formality and publicity of a court trial).

On 9 October 2012, the IRS issued a summons requiring Barclays to provide certain documents (and we understand the IRS issued a similar summons to Deutsche Bank, which has entered into a similar investment structure with the Client), and therefore, we expect that Barclays (and Deutsche Bank) will be called as witnesses in due course.

Sophistication of the Client

The Client is a very sophisticated investment firm and one of the most successful hedge funds in the statistical arbitrage space with an almost uniquely successful track record. Since 2002, the Client has purchased call options from Barclays 27 times (and subsequently exercised those options, except for the 6 most recent options, which remain outstanding). The average premium paid for the Option Transactions has been approximately $190m. The substantial premiums for the Option Transactions have been funded by the Client's owners and employees, with no third-party investors.

It was the Client that originally approached Barclays with the idea of the Option Transactions, and the Client has implemented a similar investment structure with Deutsche Bank. The tax and reputational risks in the structure have been discussed with the Client. The structure is overseen by the Client's CFO and COO. (The CFO, who has been with the Client since 1983, is a former CPA with the firm of Seidman & Seidman (now BDO USA) and holds a law degree from NYU law school in tax law. The COO, who has been with the Client since 2008, was formerly the CFO of SAC Capital and the head of Deutsche Bank's Global Equity Finance and Prime Broker businesses.)

A major law firm (Winston & Strawn) has been advising the Client on the tax and legal issues with respect to the Option Transactions.

Why the Option Transactions Remain Appropriate Notwithstanding the IRS Challenge

- [redacted]

  The IRS has argued that the Client should be treated as the owner of the Accounts, because the value of the call options reflect all of the potential for gain on the Accounts and substantially all of the risk of loss. The IRS has argued that Barclays' gap risk, whereby the value of the Accounts falls by an amount in excess of the option premium, is remote and merely theoretical. However, Barclays assumes significant gap risk with respect to the leveraged long-short statistical arbitrage strategy followed by the Accounts. The Accounts

2 Annualized based on year-to-date revenue as of 30 September 2012.

have performed positively because of the Client's successful investment advice, rather than the Option Transactions' inherent structure.

For example, in August 2007, there was a high level of volatility in the statistical arbitrage industry, and several investment firms were effectively put out of business. The Client was not immune to the volatility, the trading activity in the Accounts came to close to breaching the risk parameters, and Barclays' senior management had to be alerted to the potential imminent financial loss faced by Barclays on the Accounts.

Moreover, the Option Transactions are in the form of options, are cash-settled, do not convey legal title, and permit the Client to access gains only upon exercise. Importantly, in contrast to an owner of the Accounts, the Client would have no claims on the Accounts in a bankruptcy of Barclays and would merely be a general creditor. This feature is ignored by the IRS Memo.

[redacted]

- Both the IRS and Her Majesty's Revenue and Customs reviewed Barclays' involvement in the Option Transactions and those reviews are complete with no issues currently outstanding. [redacted] Discussions regarding the Option Transactions with the IRS to date have had no impact on Barclays' relationship with the IRS, and there is no reason to expect a future impact.

- [redacted] Further, Barclays is entitled to a contractual tax indemnity from the Client.

- It is also important to note that the structure does not reduce the amount of the Client's taxable income; it merely changes the character of the income from short-term capital gains to long-term capital gains, which has a tax rate benefit. Accordingly, the structure can be viewed as having lower tax risk than other types of tax planning (e.g., completely mitigating taxable income).

- There is a reputation risk for Barclays, especially if the matter proceeds to court and the IRS's challenge and Barclays' role become publicly disclosed. However, continuing with the Option Transactions should not meaningfully increase Barclays' reputation risk, insofar as any court litigation would relate to the entire structure. Barclays' role will be that of a witness (alongside Deutsche Bank) and, provided Barclays fully cooperates with the process, there is no reason to expect damaging accusations from the IRS or the court. In particular, Barclays could not be considered to have sold a risky investment structure to an unsophisticated investor that did not understand the risk.

- The Client wishes to continue with the Option Transactions, and Barclays' relationship with the Client since 2002 has been primarily through the Option Transactions. Moreover, the Client's fundamental trading operations with Barclays have been integrated through the structure, and a rapid unwinding would disrupt the Client's activities. Further, the Client has asserted to Barclays and the IRS that it would like to maintain the structure regardless of the tax benefits. Accordingly, unwinding the transaction will be highly damaging to our relationship with the Client.

Appendix 1 – Transaction Description

Background

The COLT transaction was approved by the Approvals Committee on 2 September 2002 and by the New Product Committee on 30 July 2002 (the "**Original COLT Transaction**" or "**COLT Transaction**"). COLT I was executed on 30 September 2002. Renaissance Technologies LLC ("**Renaissance**") has purchased 28 COLT options from Barclays Bank PLC ("**Barclays**"), the latest being COLT XXVIII (executed 27 November 2012). Renaissance subsequently exercised 24 COLT options, leaving 5 COLT options outstanding (options XXV-XXVIII).[1]

In each of the Original COLT Transactions, an entity managed by Renaissance bought one or more call options from Barclays. In turn, Barclays bought call options with similar terms from Palomino Limited ("**Palomino**"), an entity wholly-owned by Barclays, which is consolidated for UK regulatory purposes, but not for IFRS accounting purposes. The call options referenced a set of prime brokerage accounts held by Palomino. Palomino has appointed Renaissance as trading manager for the accounts.

Each of the Original COLT Transactions has had a maturity of up to 3 years. Where the COLT options were exercised more than a year after purchase, US individual investors of Renaissance have been able to claim a 20 percentage point reduction in the US tax rate applied to income on the call option investments (i.e., taxation at long-term capital gain rates rather than short-term capital gain rates or ordinary income rates) (the "**Rate Differential Benefit**"). For future COLT transactions (the "**New COLT Transaction**") the maturity of the options will not be greater than 11 months. As a result, US individual investors of Renaissance would no longer claim the Rate Differential Benefit.

Commercial Drivers

Barclays

Barclays is expected to benefit from the New COLT Transaction through the spread earned on executing and financing the underlying equity transactions maintained in the Accounts (historically c. $100m per annum). In addition, the New COLT Transaction provides meaningful benefits to Barclays beyond what is achieved through an ordinary prime brokerage arrangement, including: (i) captive trade flows for up to 11 months, (ii) transparency into the trading activity in the Accounts, (iii) control over the investment criteria through the investment management agreement; (iv) rehypothecation rights for 100% of the collateral, and (v) the value of the Accounts is deemed to be zero if the value of the Accounts falls to an amount equal to 10% of the option premiums.

In addition to supporting a meaningful commercial activity, the COLT transaction also allows Barclays to maintain its long standing relationship with Renaissance, who has been a valuable client of the firm for over 10 years.

Renaissance

The New COLT Transaction enables Renaissance to build upon its successful track record in the statistical arbitrage space. The New COLT Transaction also provides Renaissance with committed balance sheet, liquidity and leverage from Barclays (including no margin calls) beyond the practice for other prime brokerage arrangements, given Barclays' transparency into and control of the trading activity in the Accounts.

Additional Background

In 2010, the Internal Revenue Service (the "**IRS**") released an advice memorandum describing their position on the treatment of a transaction similar to that of the Original COLT Transaction. In April 2012, Barclays was informed by Renaissance that the IRS has formally challenged Renaissance's position and that the challenge will be taken to Appeals within the IRS. In October 2012, the IRS issued a summons requiring Barclays to provide documents regarding the Original COLT Transaction. In early 2013, the United States Senate Permanent Subcommittee on Investigations (the "**Subcommittee**") initiated an investigation on options written on baskets of securities that result in a reduction of U.S. short term capital gains or withholding tax obligations, including the Original COLT Transaction. Later in mid 2013, Bloomberg published an article discussing the Original COLT Transaction.

[1] See Appendix 9

In 12 February 2013, Barclays announced the conclusion of its strategic review, TRANSFORM. As part of this review, it announced five tax principles which should be met when entering into tax planning activities for clients or for its own account. In 25 March 2013, Barclays' Tax Risk Committee (the "**Tax Risk Committee**") considered whether the Original COLT Transaction could be construed as inconsistent with Barclays' tax principle, "Be of a type that the tax authorities would expect." The Tax Risk Committee acknowledged that the question of whether the Original COLT Transaction should be continued was not straightforward, particularly where Barclays' view remains that the IRS analysis is incorrect. The Tax Risk Committee decided that the currently 5 outstanding COLT options should be permitted to expire under their terms. The currently 5 outstanding COLT options (options XXV-XXVIII), have a combined value of $2.8 billion at the end of September 2013 and which expire between April 2015 and November 2015. Barclays will retain its current ability to exit the currently outstanding COLT options on 60 days' notice.

In addition, the Tax Risk Committee agreed that Renaissance be permitted to enter into the New COLT Transaction. US individual investors of Renaissance would no longer claim the Rate Differential Benefit. US investors of Renaissance would continue to be taxed on any short term capital gains or losses in the year in which the New COLT options are exercised.

It is believed that the IRS and the Subcommittee have questioned the Original COLT Transaction because of the Rate Differential Benefit and that an offer to Renaissance to enter into the New COLT Transaction would remove much of the uncertainty as to whether the New COLT Transaction is consistent with Barclays' tax principles (see discussion under the heading, "US Tax Analysis" below).

Approvals

Prime Services and Market Structuring are requesting approval to enter into the New Term COLT Transaction. The purpose of the approval is to include all future New COLT options, subject to no material change to the terms of the New COLT Transaction and the status of the discussions with the IRS and the Subcommittee with respect to the Original COLT Transaction.

Consistent with the firm's new tax principles and the Tax Risk Committee's decision, it is noted that Barclays may wish to accelerate the termination or discontinuance of the New COLT Transaction, if: i) a litigation were decided against Renaissance, ii) Renaissance acquiesces to a proposed assessment, or iii) the Subcommittee concludes that banks should not engage in transactions similar to the New COLT Transaction.

Overview of the New COLT Transaction

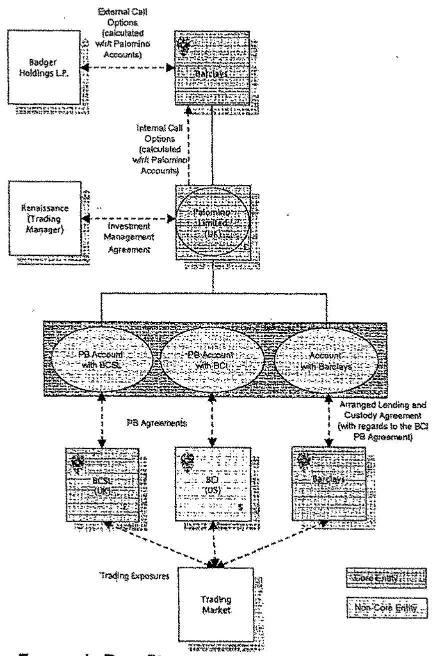
Except for the shorter maturity period, the structure of the New COLT Transaction will be identical to that of the recently executed COLT Transactions, as described below:

- Badger Holdings L.P. ("**Badger**"), an entity managed by Renaissance, will buy one or more call options from Barclays (the "**External Options**"). In turn, Barclays will buy one or more call options from Palomino (the "**Internal Options**"). The External Options and the Internal Options will reference a set of accounts held by Palomino, namely (i) a prime brokerage account with Barclays Capital Inc. ("**BCI**"), a regulated US broker dealer (the "**BCI Account**");[2] (ii) a prime brokerage account with Barclays Capital Securities Limited ("**BCSL**"), a regulated UK broker dealer (the "**BCSL Account**"); (iii) a custody account with Barclays (the "**Barclays Account**");[3] and (iv) synthetic accounts (together "**The Accounts**").
- Palomino will appoint Renaissance as trading manager for the Accounts (the "**Trading Manager**") in return for ongoing management fees. Renaissance will be subject to investment guidelines ("**Investment Guidelines**") under its Investment Management Agreement with Palomino ("**IMA**"), which will permit the Accounts to consist solely of (i) cash, (ii) long or short positions in equities, depository receipts, or similar equity-related instruments, and (iii) certain types of financial derivatives, as described in the Investment Guidelines (the "**Trading Strategy**" or "**Trading Activity**").

[2] The BCI Account is financed via the *Bank Prime Platform* structure, under which Palomino (i) refinances the short positions in the BCI Account through a stock loan arrangement with Barclay (the London Branch) and (ii) custodies its positions in the Barclays Account (New York Branch).
[3] The Barclays Account was established pursuant to an Arranged Lending and Custody Account agreement dated September 2011.

- ✓ Palomino can terminate the IMA on 60 calendar days' notice, for any reason, and Renaissance can terminate the IMA on 10 business days' notice, for any reason.
- ✓ Separately, Palomino can immediately terminate the IMA for a "Cause" or a "Material Cause" (as defined under the IMA).[4]

- The value of each option will be determined by reference to a relevant portion of the gains or losses on the Accounts according to the outstanding term and size of the upfront premium on each option.[5]
  - ✓ The Internal Options and external Options are freely exercisable by Barclays or Badger, respectively, upon 5 business days' notice.[6]
  - ✓ There is no legal requirement for the Internal Option to be exercised in the event an External Option is exercised.



Appendix 2 – Economic Benefit

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[4] See Appendix 9

[5] There will be a small negative spread between the premiums received by Barclays on the External Options and the premiums paid by Barclays to Palomino on the Internal Options (approximately \$0.5m-\$1.0m per year). The spread will be used to fund the ongoing management fees paid to Renaissance under the IMA and is offset against the income generated from the prime brokerage fees on the Accounts.

[6] It should be noted that there is no legal requirement for the Trading Manager to liquidate the positions in the Accounts upon exercise of any of the Internal Options or the External options.

Key financial data is set out below:

Estimated revenue (post costs, except legals)	Barclays earns execution, securities lending, financing and clearing fees from providing prime services under the Accounts of approximately $100m per annum from the Accounts.
RWAs	Assumed by Prime Services
Balance Sheet	Equal to the fair value of the options (as calculated based on the value of the Accounts)

Appendix 3 – Legal

Dodd Frank

[redacted]

Volker Rule

[redacted]

EMIR

[redacted]

Appendix 4 – Risk

- Market risk on Palomino's positions is hedged, in part, by the External Call Options.
- Renaissance is exposed to 100% of the risks from Palomino's Trading Activity up to a maximum of the call option premiums. Barclays, as a group, is exposed to the gap risk on the securities (i.e. the risk that the value of the positions in the Accounts falls by an amount greater than the aggregate of the call option premiums prior to the time when Palomino is able to cause an unwind of the positions in the Accounts) (the "**Gap Risk**"). The Investment Guidelines in the IMA impose limits on liquidity, sector exposure, size and leverage in order to substantially reduce the risk that any Gap Risk loss is greater than the call option premiums. The limits are such that Barclays Credit and Market Risk departments are comfortable the Gap risk is managed within acceptable limits.
- Risk Management Techniques

  The risks of the New COLT Transaction generally are reduced by the following risk management techniques:

  - ✓ An option expires with zero value if its value falls to 10% or less of the premium amount;
  - ✓ Should the equity value of the Accounts fall to an amount equal to 10% of the option premiums, Palomino will have the right to liquidate the positions;
  - ✓ Strict Investment Guidelines – ability to terminate the IMA if non adherence;

✓ Monitoring of trading by Risk to ensure adherence to Investment Guidelines;

✓ Trades outside of the Investment Guidelines being transferred out of the Accounts to Renaissance's own account;

✓ Ability to reduce leverage if Trading Strategy or risk profile changes;

✓ Palomino being able to terminate the IMA for any reason upon 60 calendar day notice.

Appendix 5 – Regulatory

Palomino

- Palomino (a core UK entity) is a wholly-owned subsidiary of Barclays, and is consolidated for regulatory purposes.
- The positions in Palomino are reported as trading book assets.

Barclays

- Barclays has an exposure to Palomino under the Internal Options. Whilst core-to-core exposures are not reported for external UK regulatory reporting purposes, a limit needs to be established in the GCIS2 system to capture the exposure. The limit will be updated periodically based on the NAV of the options.

Significant holdings of Financial Instruments

- Under the CRD IV / Basel III ("Non significant holdings of Financial Instruments"), there are limits on the proprietary holdings that Barclays can have in a financial sector entities capital (otherwise a deduction from capital is required).

  It is noted that the approval to the New COLT transaction is given based on the understanding that the New COLT options will not result in a capital deduction to Barclays as a result of the underlying equity holdings in the Accounts.

- Prime Services is currently considering several options, but in an extreme case, the IMA could be amended to limit the holdings in financial companies.

Appendix 6 – Tax Analysis

UK Tax Analysis

[redacted]

New COLT Transaction – TRC Appendices

[redacted]

US Tax Analysis

[redacted]

[redacted]

Appendix 7 – Accounting

Consolidation Analysis

Palomino will not be consolidated with Barclays for IFRS or US GAAP purposes:

- IFRS - in accordance with IAS 27, Palomino is controlled by Barclays through its ownership of 100% of the voting rights and the ability to appoint and remove directors. However, Palomino has a narrowly defined scope of activities (being its involvement in project COLT) and, as such, is considered a "special purpose entity" within the scope of SIC-12. Under a SIC-12 analysis, it has been concluded that Barclays should not consolidate Palomino on the basis that Renaissance controls the major activities of Palomino and is exposed to substantially all significant risks and rewards arising from the activities carried out through the Accounts.

- US GAAP (FAS 167) – Renaissance controls the major activities of Palomino and is exposed to substantially all significant risks and rewards arising from the activities carried out through the Accounts, being the only permitted activities of Palomino. Consequently, under FAS 167, Renaissance is the primary beneficiary and therefore Barclays should not consolidate Palomino for US GAAP purposes.

Palomino Solus (IFRS)

- The Internal Options and the Accounts will be fair valued through the income statement.

- Internal Options - the mark-to-market value of the Internal Options on the balance sheet will be captured based on the NAV of the Accounts and will be reported as "*Derivative Financial Instruments*".

- The Accounts - the Accounts will comprise of long/short equity positions and other types of financial derivatives (as allowed under the Investment Guidelines) and will be reported on the balance sheet as "*Held for Trading*" or other, depending upon the nature of the investments.

- Investment Management Fees (paid to Renaissance) - will show as an expense on Palomino's profit and loss.

Barclays Solus (IFRS)

- The shares issued by Palomino will be accounted for at cost as an investment in a subsidiary.

- External Options - will be reported on the balance sheet on a marked to market basis within 'Other Liabilities – Credit Balances arising from off balance sheet instruments'.

- Internal Options - will be reported on the balance sheet on a marked to market basis within 'Other Assets – Debit Balances arising from off balance sheet instruments'.

- The market value of the External Options and the Internal Options will net out in the P&L within 'Dealing Profits'.

- The call premium paid and received will be recorded on the balance sheet against the MTM values. [10]

Appendix 8 – Compliance

Compliance has been informed of the proposal.

No regulatory or other statutory approvals will be required for the transaction but a pre-notification letter to the Federal Reserve of New York ("**Fed**") should be submitted prior to execution.

Prime Services and Market Structuring have previously notified the Fed via a letter in June 2013 on the transfer of existing COLT options from Barclays New York Branch to London Branch.

Any compliance-related issues will be agreed with Compliance prior to execution in accordance with the normal course of business.

<u>Transaction Reporting</u>

- <u>External and Internal Options</u> – the External Options and the Internal Options are options over Accounts (which are not exchange listed), and as such they are not subject to Financial Conduct Authority ("**FCA**") transaction reporting requirements.

  However, there are some underlying securities in the Accounts that are exchange listed[11], and as such are subject to FCA transaction reporting requirements. The executing dealer will report the relevant securities as part of its ongoing business as usual reporting process.

- <u>Palomino</u> – Palomino is not a FCA regulated entity and as such is not subject to FCA transaction reporting requirements.

Appendix 9 – Miscellaneous

9.1 Summary Unwind Scenarios

<u>Scenario 1 – normal unwind</u>:

- Under a normal unwind, one or more External Options will be exercised by Badger. 4 Business Days later, the *Cash Settlement Amounts*[12] will be paid to Badger by Barclays.

<u>Scenario 2 - Knock Out Event</u>:

- If the Account Equity falls below the knock-out level (i.e. an amount equal to 10% of the option premiums) the External Options and the Internal Options will be exercised with a *Cash Settlement Amount* of zero.

<u>Scenario 3 - termination of the IMA for any reason by Palomino or by the Trading Manager</u>:

- Palomino can terminate the IMA, for any reason, on 60 calendar days' notice, and the Trading Manager can terminate the IMA, for any reason, on 10 business days notice.

- Although there is no legal requirement for the External Options or the Internal Options to be exercised upon termination of the IMA, it is expected that Badger and Barclays would exercise the External Options and Internal Options, respectively.

<u>Scenario 4 - termination of the IMA by Palomino for a Cause or Material Cause:</u>

[10] There will be a small negative spread between the premiums received by Barclays on the External Options and the premiums paid by Barclays to Palomino on the Internal Options (approximately $0.5m-$1.0m per year). The spread will be used to fund the ongoing management fees paid to Renaissance under the IMA and is offset against the income generated from the prime brokerage fees on the Accounts.

[11] Securities that are exchange listed in the European Union are subject to FCA reporting requirements.

[12] It is broadly calculated as the sum of the upfront premium plus or minus a relevant portion of the gains and losses on the positions in the Accounts

- Palomino can terminate the IMA immediately due to "Cause"[13] or "Material Cause"[14].
- Under termination for a "Material Cause", Palomino or a third party investment manager (on behalf of Palomino) may assume control of the Accounts and would conduct an orderly disposition of all positions in the Accounts.

9.2 Currently Outstanding COLT Options (Unexercised)

History of COLT Options (Unexercised)							
		Trade Date	Valuation Date	Term	Premium ($m)	Pay Out ($m)	Gain/Loss ($m)
XXV	DDD	18-Apr-12	Unexercised		$300.0	$810.4	$510.4 *
XXVI	EEE	19-Jun-12	Unexercised		$300.0	$744.1	$444.1 *
XXVII	FFF	9-Oct-12	Unexercised		$250.0	$496.4	$246.4 *
XXVIII	GGG	27-Nov-12	Unexercised		$250.0	$476.9	$226.9 *
	HHH	27-Nov-12	Unexercised		$150.0	$286.1	$136.1 *
Total					$1,250.0	$2,813.9	$1,563.9

*Values as of end of September 2013

[13] **"Cause"**: (1) change of law; and, in respect to the Trading Manager: (2) material violation of the law (3) material breach of the IMA (4) loss of licence (5) violation of the Investment Guidelines (6) Termination Event of Event of Default under PB Agreements (7) adversary proceeding against the Trading Manager without its consent.

[14] **"Material Cause"**: in respect to the Trading Manager: (1) material violation of the law as it relates to the Accounts (2) misconduct or negligence (3) none of the Key Men is employed by the Trading Manager (4) the Trading Manager is prevented, for any reason, from effectively managing any of the Accounts (5) the value of the Accounts, or Accounts Equity and/or Net Sector Positions are different than allowed in the Investment Guidelines (6) adversary proceeding against the Trading Manager with its consent.

Memo

Barclays

To **Tax Risk Committee**

From SCM
Date 12 October 2012
Subject COLT

BARCLAYS

This memo explains the background to an investment structure which has been in place for 10 years and explains why, notwithstanding the publicity risk that Barclays is subject to as a witness to the case if the Client proceeds to litigate in court, we believe it remains an appropriate transaction for Barclays to be a party to.

The COLT XXVII option transaction (the "**New Option Transaction**" and, together with the prior COLT option transactions, the "**Option Transactions**") was executed on 9 October 2012. The SCM US Approvals Committee approved the New Option Transaction on 1 October 2012, the chair of the CIB Reputational Risk Committee (Larry Wieseneck) was notified of the New Option Transaction on 4 October 2012, and the Tax Risk Committee discussed the Option Transactions on 8 October 2012.

The Option Transactions were originally approved by the SCM Approvals Committee and the New Products Committee in 2002 and have been subject to regular review by the SCM US Approvals Committee (prior to October 2012, most recently in March 2011).

Background

Investment Structure

In each Option Transaction, an affiliate of Renaissance Technologies LLC (together with its affiliates, the "**Client**") buys a call option from Barclays, which option references a set of prime brokerage accounts held by Barclays (the "**Accounts**"). Further, the Client has been appointed the investment manager for the Accounts.

Barclays has benefited from the Option Transactions primarily from the revenue generated for Prime Services by the trading activity in the Accounts. Since 2002, the revenue has totalled £322.7m. The Option Transactions are the principal structure by which the Client deals with Barclays.[1]

[1] Outside of the Option Transactions, Barclays has received approximately £12m from the Client for the period January 2011 through September 2012.

Revenue for Prime Services from the Accounts (£m)			
2002	£7.0	2008	£53.4
2003	£7.2	2009	£37.5
2004	£15.9	2010	£29.8
2005	£20.0	2011	£56.7
2006	£16.8	2012	£59.9[2]
2007	£18.6		
Total			**£322.8m**

Tax Risk

The Internal Revenue Service (the "**IRS**") has been auditing the Client's US tax treatment of the Option Transactions. In 2010, the IRS issued a memo (the "**IRS Memo**") arguing that options like the ones in the Option Transactions should not be treated as options for tax purposes, and that the option owner should be treated as the owner of the referenced accounts. The IRS and the Client may seek to litigate the matter in court. Before going to court, we expect the Client to go to Appeals (which is an informal administrative forum where disagreements between taxpayers and the IRS can be resolved in private without the formality and publicity of a court trial).

On 9 October 2012, the IRS issued a summons requiring Barclays to provide certain documents (and we understand the IRS issued a similar summons to Deutsche Bank, which has entered into a similar investment structure with the Client), and therefore, we expect that Barclays (and Deutsche Bank) will be called as witnesses in due course.

Sophistication of the Client

The Client is a very sophisticated investment firm and one of the most successful hedge funds in the statistical arbitrage space with an almost uniquely successful track record. Since 2002, the Client has purchased call options from Barclays 27 times (and subsequently exercised those options, except for the 6 most recent options, which remain outstanding). The average premium paid for the Option Transactions has been approximately $190m. The substantial premiums for the Option Transactions have been funded by the Client's owners and employees, with no third-party investors.

It was the Client that originally approached Barclays with the idea of the Option Transactions, and the Client has implemented a similar investment structure with Deutsche Bank. The tax and reputational risks in the structure have been discussed with the Client. The structure is overseen by the Client's CFO and COO. (The CFO, who has been with the Client since 1983, is a former CPA with the firm of Seidman & Seidman (now BDO USA) and holds a law degree from NYU law school in tax law. The COO, who has been with the Client since 2008, was formerly the CFO of SAC Capital and the head of Deutsche Bank's Global Equity Finance and Prime Broker businesses.)

A major law firm (Winston & Strawn) has been advising the Client on the tax and legal issues with respect to the Option Transactions.

Why the Option Transactions Remain Appropriate Notwithstanding the IRS Challenge

[redacted]

2 Annualized based on year-to-date revenue as of 30 September 2012.

The IRS has argued that the Client should be treated as the owner of the Accounts, because the value of the call options reflect all of the potential for gain on the Accounts and substantially all of the risk of loss. The IRS has argued that Barclays' gap risk, whereby the value of the Accounts falls by an amount in excess of the option premium, is remote and merely theoretical. However, Barclays assumes significant gap risk with respect to the leveraged long-short statistical arbitrage strategy followed by the Accounts. The Accounts have performed positively because of the Client's successful investment advice, rather than the Option Transactions' inherent structure.

For example, in August 2007, there was a high level of volatility in the statistical arbitrage industry, and several investment firms were effectively put out of business. The Client was not immune to the volatility, the trading activity in the Accounts came to close to breaching the risk parameters, and Barclays' senior management had to be alerted to the potential imminent financial loss faced by Barclays on the Accounts.

Moreover, the Option Transactions are in the form of options, are cash-settled, do not convey legal title, and permit the Client to access gains only upon exercise. Importantly, in contrast to an owner of the Accounts, the Client would have no claims on the Accounts in a bankruptcy of Barclays and would merely be a general creditor. This feature is ignored by the IRS Memo.

[redacted]

- Both the IRS and Her Majesty's Revenue and Customs reviewed Barclays' involvement in the Option Transactions and those reviews are complete with no issues currently outstanding. [redacted] Discussions regarding the Option Transactions with the IRS to date have had no impact on Barclays' relationship with the IRS, and there is no reason to expect a future impact.

- [redacted] Further, Barclays is entitled to a contractual tax indemnity from the Client.

- It is also important to note that the structure does not reduce the amount of the Client's taxable income; it merely changes the character of the income from short-term capital gains to long-term capital gains, which has a tax rate benefit. Accordingly, the structure can be viewed as having lower tax risk than other types of tax planning (e.g., completely mitigating taxable income).

- There is a reputation risk for Barclays, especially if the matter proceeds to court and the IRS's challenge and Barclays' role become publicly disclosed. However, continuing with the Option Transactions should not meaningfully increase Barclays' reputation risk, insofar as any court litigation would relate to the entire structure. Barclays' role will be that of a witness (alongside Deutsche Bank) and, provided Barclays fully cooperates with the process, there is no reason to expect damaging accusations from the IRS or the court. In particular, Barclays could not be considered to have sold a risky investment structure to an unsophisticated investor that did not understand the risk.

- The Client wishes to continue with the Option Transactions, and Barclays' relationship with the Client since 2002 has been primarily through the Option Transactions. Moreover, the Client's fundamental trading operations with Barclays have been integrated through the structure, and a rapid unwinding would disrupt the Client's activities. Further, the Client has asserted to Barclays and the IRS that it would like to maintain the structure regardless of the tax benefits. Accordingly, unwinding the transaction will be highly damaging to our relationship with the Client.

PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP

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June 27, 2014

By Electronic Mail

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Committee on Homeland Security and Governmental Affairs
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Re: Deutsche Bank Subpoena EO2994

CONTAINS CONFIDENTIAL BUSINESS AND PROPRIETARY INFORMATION

Dear Bob:

I write to follow up on my letter of June 20, 2014, providing responses to questions three, four, eight and nine from your June 13, 2014 email. I address the remaining questions below, with the exception of your second question regarding legal opinions. As we have discussed, I will respond to that question separately in a meeting with you next week.

Question 1
With respect to each option that Franconia / Mosel purchased from Deutsche Bank, please provide the following information:

a. the name and the date purchased;
b. the expiry date;
c. the premium paid;
d. the date exercised; and
e. the cash settlement amount paid to the option holder, and the amount of cash taken out at exercise (i.e. not rolled into another option).

Please see the enclosed chart, bearing Bates numbers DB-PSI 00052583-00052585. Please note that due to the passage of time and changes in internal systems, the data from pre-2008 is subject to greater uncertainty than the more recent data. We have provided the most accurate data available. In addition, we note that in response to the question of "the cash settlement amount paid to the option holder, and the amount of cash taken out at exercise (i.e. not rolled into another option)," the cash settlement amount is the same as the amount of cash taken out at exercise. To our knowledge, cash was never "journaled" from one account to another, so even if one option was settled the same day as a new option was opened, there would be two separate transactions—one, the wire to the client equal to the cash settlement value of the option account and two, a separate payment from the client of whatever the premium amount was for the new option.

Question 5
For each year, what fees and other income did Deutsche Bank earn through its participation in the barrier option transactions with Renaissance (excluding gains in the referenced accounts and other accounts used to hedge/offset the gains of the option holder)?

Please see the attached chart, bearing Bates numbers DB-PSI 00052586-00052587.

Question 6
For each year, what fees and other income did Deutsche Bank earn through its participation in the barrier option transactions with GWA, LLC?

Please see the attached chart, bearing Bates numbers DB-PSI 00052586-00052587. We note that while all George Weiss MAPS options terminated in 2010, a nominal amount of revenue was recognized in 2011 due to post-closing adjustments.

Question 7
For each year, what fees and other income did Deutsche Bank earn through its participation in the barrier option transactions with other entities?

Please see the attached chart, bearing Bates numbers DB-PSI 00052586-00052587. We note that certain options generated a nominal amount of revenue in the year after they closed due to post-closing adjustments. We further note that, due to the passage of time, we have only been able to obtain historic revenue data for the years 2000 to present.

Should you have any additional questions about these issues, please do not hesitate to contact me.

Sincerely,

H. Christopher Boehning /KAR

H. Christopher Boehning

Description	Start Date	Expiration Date	Exercise/Settlement Date (if different)	Premium	SETTLEMENT AMOUNT
(RenTech) Franconia Equities Ltd.	July 17, 2000	September 5, 2005		83,333,333.00	124,798,811.59
(RenTech) Franconia Equities Ltd.	March 14, 2002	March 15, 2005		333,333,333.00	391,518,930.67
(RenTech) Franconia Equities Ltd.	June 26, 2003	July 31, 2005	December 10, 2004	104,166,666.00	237,414,625.45
(RenTech) Franconia Equities Ltd.	June 26, 2003	January 31, 2006	July 20, 2004	104,166,666.00	320,463,703.03
(RenTech) Franconia Equities Ltd.	June 26, 2003	July 31, 2006	June 5, 2005	104,166,666.00	465,239,842.00
(RenTech) Franconia Equities Ltd.	June 26, 2003	January 31, 2007	December 31, 2005	104,166,666.00	465,812,500.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	January 15, 2007	June 23, 2006	27,000,000.00	113,766,120.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	July 16, 2007	June 23, 2006	40,500,000.00	170,649,175.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	January 15, 2008	June 23, 2006	27,000,000.00	113,766,120.00
(RenTech) Franconia Equities Ltd.	June 16, 2005	July 15, 2008	June 23, 2006	40,500,000.00	170,649,175.00

(RenTech) Franconia Equities Ltd.	December 16, 2005	January 15, 2008	December 21, 2006	116,600,000.00	423,262,912.49
(RenTech) Franconia Equities Ltd.	December 16, 2005	July 15, 2008	December 27, 2006	174,900,000.00	634,894,373.72
(RenTech) Franconia Equities Ltd.	December 16, 2005	April 15, 2009	December 27, 2006	174,900,000.00	634,894,373.72
(RenTech) Franconia Equities Ltd.	December 16, 2005	January 15, 2009	May 10, 2007	116,600,000.00	691,030,320.75
(RenTech) Franconia Equities Ltd.	December 22, 2006	October 15, 2009	January 4, 2008	90,000,000.00	338,985,067.39
(RenTech) Franconia Equities Ltd.	December 22, 2006	July 15, 2009	January 4, 2008	116,600,000.00	1,506,600,299.80
(RenTech) Franconia Equities Ltd.	December 22, 2006	July 15, 209	January 4, 2008	180,000,000.00	677,970,133.09
(RenTech) Franconia Equities Ltd.	December 22, 2006	January 15, 2010	June 27, 2008	50,000,000.00	453,093,854.10
(RenTech) Franconia Equities Ltd.	May 8, 2007	May 10, 2010	June 27, 2008	243,000,000.00	1,350,124,280.00
(RenTech) Franconia Equities Ltd.	November 19, 2007	November 28, 2008	December 3, 2008	300,000,000.00	1,834,512,282.76
(RenTech) Mosel Equities LP.	December 18, 2007	June 16, 2011	January 5, 2010	130,000,000.00	2,054,103,445.00
(RenTech) Mosel Equities LP	December 18, 2007	December 26, 2008	December 30, 2008	270,000,000.00	1,765,282,524.35

(RenTech) Mosel Equities LP (IA1)	December 15, 2008	December 22, 2009		150,000,000.00	554,291,533.83
(RenTech) Mosel Equities LP (IA2)	June 9, 2009	June 29, 2010	July 2, 2010	350,000,000.00	279,942,512.00
(RenTech) Mosel Equities LP (IA3)	October 8, 2009	December 18, 2010	December 23, 2010	400,000,000.00	320,565,504.00
(RenTech) Mosel Equities LP (IA4)	November 20, 2009	December 28, 2010	December 31, 2010	300,000,000.00	722,101,787.27
(RenTech) Mosel Equities LP (IA5)	May 24, 2010	December 19, 2011	December 22, 2011	100,000,000.00	444,152,969.75
(RenTech) Mosel Equities LP (IA6)	September 23, 2010	December 27, 2011	November 30, 2011	300,000,000.00	766,549,541.94
(RenTech) Mosel Equities LP (IA7)	November 15, 2010	June 28, 2012	July 3, 2012	300,000,000.00	1,491,674,872.52
(RenTech) Mosel Equities LP (IA8)	April 24, 2012	March 22, 2013	December 5, 2012	300,000,000.00	385,392,877.03
(RenTech) Mosel Equities LP (IA9)	June 7, 2012	December 14, 2012	December 18, 2012	200,000,000.00	326,932,172.36
(RenTech) Mosel Equities LP (IA10)	November 29, 2012	November 14, 2013	November 22, 2013	225,000,000.00	467,062,733.81
(RenTech) Mosel Equities LP (IA11)	December 11, 2012	November 26, 2013	December 5, 2013	225,000,000.00	490,361,992.49
(RenTech) Mosel Equities LP (IA12)	December 21, 2012	December 6, 2013	December 16, 2013	200,000,000.00	507,781,293.62
(RenTech) Mosel Equities LP (IA13)	November 14, 2013	July 7, 2014		350,000,000.00	
(RenTech) Mosel Equities LP (IA14)	December 6, 2013	November 17, 2014		200,000,000.00	

MAPS Historic Revenue

Client	2000	2001	2002	2003	2004	2005	2006
Renaissance	$ 4,726,760	$ 17,828,662	$ 23,781,472	$ 21,871,034	$ 22,498,736	$ 22,166,560	$ 27,360,875
GW	$ -	$ -	$ -	$ 1,415,541	$ 1,675,661	$ 489,723	$ 5,835,679
Other entities	$ 26,762,276	$ 28,733,455	$ 15,764,347	$ 18,431,802	$ 7,675,326	$ 3,948,783	$ 1,225,549

Client	2007	2008	2009	2010	2011	2012	2013	2014
Renaissance	$ 35,322,024	$54,659,417	$ 51,805,542	$ 54,995,287	$ 28,761,126	$ 31,216,720	$ 27,649,232	$ 14,757,080
GW	$ 6,746,835	$ 7,099,640	$ 3,059,322	$ 967,756	$ 1,602	$ -	$ -	$ -
Other entities	$ 1,063,588	$ 877,179	$ 90,611	$ -	$ -	$ -	$ -	$ -

EXCERPT

Renaissance Technologies LLC

February 26, 2013

Renaissance

History of the Firm

- **1988 – Medallion:** Renaissance's original fund, Medallion, employs leveraged trading strategies in many different kinds of instruments in markets all over the world.
- **2005 – Renaissance Institutional Equities (RIEF):** As a long-biased investment fund, RIEF is designed to exceed the performance of U.S. equity market indices, with less risk and a relatively low beta versus the S&P 500, over the long term.
- **2007 – Renaissance Institutional Futures (RIFF):** Using a global futures and forwards strategy, RIFF is designed to provide risk-adjusted returns to investors with low correlation to U.S. and global equity markets, and with medium to low correlation to other asset classes.
- **2012 – Renaissance Institutional Diversified Alpha (RIDA):** Using alpha signals, RIDA employs a quantitative global investment strategy with exposure to a diversified universe of equity securities, futures, and forwards. RIDA seeks to maximize risk-adjusted return over long time periods, with low correlation to the U.S. and global equity markets and medium-to-low correlation to other asset classes.

WILMERHALE

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June 27, 2014

By Hand Delivery

Hon. Carl Levin, Chairman
Hon. John McCain, Ranking Member
Permanent Subcommittee on Investigations
Committee on Homeland Security and Governmental Affairs
United States Senate
SR-199 Russell Senate Office Building
Washington, D.C. 20510-6262

Dear Chairman Levin and Ranking Member McCain:

We represent Renaissance Technologies LLC ("Renaissance") and submit this letter on Renaissance's behalf in response to the Permanent Subcommittee on Investigations' ("PSI") subpoena dated December 20, 2012 and follow-up questions asked by Subcommittee staff on June 13, 2014.

* * *

By providing the enclosed document, Renaissance does not waive, and does not intend to waive, any applicable privileges or other legal basis under which various other documents may not be subject to production, including the attorney-client privilege or work product privilege. If it were found that any of the information provided by Renaissance constitutes disclosure of otherwise protected matters, such disclosure would be inadvertent.

The enclosed document contains sensitive and proprietary business information, including highly confidential intellectual property. We respectfully request that such information, including, but not limited to, confidential taxpayer information, be accorded special protection from disclosure. Such treatment would be consistent with the policies underlying 26 U.S.C. § 6103 which affords special protections for tax returns and return information. We respectfully request that the produced documents be maintained confidentially under Senate Rule XXIX.5 and not be released publicly without a majority vote of the PSI. We further request that the PSI staff provide the undersigned with notice and an opportunity to be heard in the event the PSI determines that it will disclose any information from this production or letter to a third party. Such treatment would be consistent with the respect for privileged and confidential information that the Subcommittee has shown in the past. We particularly point out the response to questions 2a and b.

Hon. Carl Levin, Chairman
Hon. John McCain, Ranking Member
June 27, 2014
Page 2

Please contact me (202-663-6430), Sarah Pfuhl (212-295-6305) or Ross Kirschner (202-663-6021) if you have any questions.

Sincerely,

Reginald J. Brown
Sarah Pfuhl
Ross Kirschner

Enclosure

Responses to Renaissance Follow Up Questions
June 27, 2014

1. a. The following chart provides the percentage and amount, on an annual basis, of fees paid to Renaissance Technologies LLC or Renaissance Technologies Corp. by Palomino and Deutsche Bank.

Year	Deutsche Bank Rate	Deutsche Bank Amount Paid	Palomino Rate	Palomino Amount Paid
2000	Fixed Fee	$110,000	N/A	N/A
2001		$0	N/A	N/A
2002	Fixed Fee	$100,000	Fixed Fee	$100,000
2003	Fixed Fee	$1,200,000	Fixed Fee	$350,000
2004		$0	Fixed Fee	$350,000
2005	Fixed Fee	$3,590,000	Fixed Fee	$615,384
2006	Fixed Fee	$3,600,000	Fixed Fee	$615,384
2007	Fixed Fee	$4,716,200	Fixed Fee	$615,384
2008		$0	Fixed Fee	$615,384
2009	2.00%	$11,317,888	Fixed Fee	$615,384
2010	2.00%	$35,259,712	Fixed Fee	$615,384
2011	2.00%	$26,334,407	Fixed Fee	$615,384
2012	2.00%	$18,020,412	Fixed Fee	$615,384
2013	2.00%	$18,420,338	Fixed Fee	$615,384

None of the Renaissance-related entities that purchased the barrier options paid a fee to Renaissance Technologies LLC or Renaissance Technologies Corp.

b. At your request, Renaissance previously provided you with information regarding all journaling that took place in accordance with the procedures set forth under the investment advisory agreement entered into between Renaissance Technologies LLC and Deutsche Bank AG London dated December 15, 2008. See Bates RT-PSI-00384763 and Bates RT-PSI-00384764 to RT-PSI-00384777. Journaling was not used in the Barclays options at any time, or Deutsche Bank options prior to December 15, 2008, because each such option referenced a proportionate part of a single notional portfolio. When such options were entered into or exercised, the proportionate amount of the single notional portfolio referenced by other options was adjusted accordingly. This did not involve the transfer of reference assets from one notional portfolio to another.

c. Cash was never transferred from the notional portfolio referenced by one option to the notional portfolio referenced by another option.

d. Renaissance is not aware of any instance where a leverage or other investment guideline breach would have occurred but for the purchase of any option from Deutsche Bank or Barclays.

▬ = Redacted by the Permanent Subcommittee on Investigations

2. a & b [redacted] The number of trades that Renaissance recommends each day for each of the Barclays and Deutsche Bank notional portfolios varies significantly, both from day to day and from year to year. A reasonable average would be in the range of 100,000 to 150,000 recommendations a day for each entity. When considering these numbers, one should be aware that when Renaissance seeks to create a large position in a particular stock in one of the notional portfolios, it typically does so by recommending a series of small trades so that hedging transactions executed in accordance with these recommendations will not have an undue impact on the stock's price. Renaissance considers holding time and trading information to be highly confidential intellectual property, and is particularly concerned that holding time information not be publicly disclosed. Renaissance asks that the Subcommittee speak with us further regarding any portion of this response that it would like to make pubic in order to avoid inadvertently publishing proprietary information that would be useful for Renaissance's many competitors who are trying to copy its strategy.

c. Excluding the first Deutsche Bank option, which was held for only a few weeks in 2000, as well as any options not yet exercised, the average duration for Deutsche Bank options initiated during 2000-2009 was 455 days, the average duration for Barclays options initiated during 2000-2009 was 399 days, the average duration for Deutsche Bank options initiated during 2010-present was 378 days, and the average duration for Barclays options initiated during 2010-present was 493 days.

d. 100% of the cash settlement value of each option was paid or credited to the option purchaser at exercise or expiration. Please see the response to question 1.b. regarding journaling.

e. Excluding options that terminated during or before 2003, for which data is not readily accessible, the average difference between the gross market value (the value of long positions plus the absolute value of short positions) of the notional portfolio, or proportionate part of a notional portfolio, referenced by a particular option 30 days prior to such option's final valuation date and such gross market value on the option's valuation date is approximately $2.316 billion for the Deutsche Bank options and $2.770 billion for the Barclays options.

f. In the case of the Barclays options and pre-December 15, 2008 Deutsche Bank options, 100% of each such option's proportionate share of the relevant notional portfolio as of its date of exercise continued to be included in the relevant notional portfolio.

Page(s)
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Permanent Subcommittee
on Investigations

	94150053	94150301	94150305	94150310	94150315	94150320	94150325	94150330	94150335	94150340	94150345	94150350
	AmOp	EurOp 1	EurOp 2	EurOp 3	EurOp 4	EurOp 5	EurOp 6	EurOp 7	EurOp 8	EurOp 9	EurOp 10	EurOp 11
Trade Date	12/17/2007	12/15/2008	6/9/2009	10/8/2009	11/20/2009	5/24/2010	9/23/2010	11/15/2010	4/24/2012	6/7/2012	11/29/2012	12/11/2012
Exercise / Expiry	12/30/2009	12/22/2009	6/29/2010	12/18/2010	12/28/2010	12/19/2011	9/28/2011	6/26/2012	12/3/2012	12/14/2012	11/14/2013	11/26/2013
Journal Entry Dates	FET4	SA01	SA02	SA03	SA04	SA05	SA06	SA07	SA08	SA09	SA10	SA11
1A - close Amer hedge into SA# 3												
12/29/2009	746,860,185.71			746,860,185.71								
12/30/2009	21,044,847.14			21,044,847.14								
1B - close hedge SA#1 into 2 & 3												
12/14/2009		23,638,126.80		23,638,126.80								
12/15/2009		2,034,780.29		2,034,780.29								
12/21/2009		3,418,151,418.86	2,152,764,894.86	1,265,386,524.00								
2 - close hedge SA# 2 into 3 & 4												
6/15/2010			339,745.12		339,745.12							
6/17/2010			3,256,081.89		3,256,081.89							
6/22/2010			246,545.05		246,545.05							
6/25/2010			511,916,403.85	305,217,778.66	206,698,625.19							
6/28/2010			6,217,267,836.63	4,761,058,879.00	1,456,208,957.63							
3 - open hedge SA# 6 from 3 & 4												
9/24/2010				2,022,229,925.00	517,433,010.00		2,539,662,935.00					
4 - open hedge SA# 7 from 3 & 4												
11/15/2010				1,608,451,449.00	1,063,992,463.00			2,672,443,912.00				
5 - close hedge SA# 3 & 4 into 5, 6 &7												
11/17/2010				10,117,722.97	10,271,162.07			20,388,885.04				
11/23/2010				49,575,517.30	24,896,771.16		24,896,771.16	49,575,517.30				
11/29/2010				149,103,631.83	99,391,787.26		98,737,930.56	149,757,488.52				
12/10/2010				497,476,411.05	480,932,321.26	6,623,242.39	465,029,972.23	506,755,517.70				
12/13/2010				241,311,421.37	193,040,733.70	4,514,075.44	186,995,007.11	242,843,072.52				
12/14/2010						798,171.87	991,131.60	1,789,303.46				
12/17/2010				2,642,037,709.89		402,576,651.89	1,473,024,829.89	766,436,228.11				
12/28/2010					2,755,912,969.81	948,954,521.00	818,839,004.60	988,119,444.71				
6 - close hedge SA# 6 into 5 & 7												
9/30/2011						221,285,826.01	742,029,816.84	520,743,990.79				
10/3/2011						891,850,265.83	2,983,381,571.79	2,091,531,305.96				
11/16/2011							-	-				
7 - close hedge SA# 5 into 7												
12/5/2011						50,128,063.64		50,128,063.64				
12/6/2011						95,774,942.12		95,774,942.12				
12/7/2011						426,212.90		426,212.90				
12/8/2011						713,027,197.72		713,027,197.72				
12/16/2011						3,004,731,374.37		3,004,731,374.37				
8 - close hedge SA# 7 into 8 & 9												
6/11/2012								175,957,068.43		175,957,068.43		
6/12/2012								74,756,149.09		74,756,149.09		
6/15/2012								528,022,510.71	290,394,672.54	237,627,838.15		
6/25/2012								218,480,755.30		218,480,755.30		
6/28/2012								3,195,303,401.36	1,722,976,143.00	1,472,327,258.36		
6/29/2012									39,284,400.00	39,284,400.00		
9 - close hedge SA# 8 into 10												
11/29/2012									3,455,964,556.11		3,455,964,556.11	
10 - close hedge SA# 9 into 11												
12/11/2012										3,408,854,432.28		3,408,854,432.28

Your e-mail dated June 18, 2013, asks for a chronology which "shows the shifting, reallocation or rebalancing of positions between live options, as well as the rolling over of positions from an exercised option to a newly created option." Please note that each option is simply a contract between the option purchaser and the option seller that entitles the option purchaser, in certain circumstances, to receive a cash payment from the option seller. That payment is based, in part, on the performance over time of notional positions generated by the Renaissance algorithm. However, the options do not contain, or provide ownership rights with respect to, any "positions," and therefore no such positions could have been, or ever were, "shifted" or "reallocated" from one option to another.

To hedge its obligations with respect to the options, each option seller (or an affiliate of such option seller) owned and maintained one or more accounts managed by Renaissance pursuant to an investment advisory agreement ("IAA") between Renaissance, as investment advisor to such account, with the option seller or its appropriate affiliate as client. Because each such account hedged all of the then-outstanding options written by the relevant option seller,[1] there was no need for any "shifting, reallocation or rebalancing of positions" in the accounts.

When Deutsche Bank established a new hedge account in December 2008 to hedge its obligations under its European-style options, it began a practice of establishing individual sub-accounts of that hedge account and assigning to each sub-account the positions held to hedge a particular option. Beginning in December 2008, Renaissance and Deutsche Bank entered into individual sub-advisory agreements corresponding to each European-style option; the notional portfolio referenced by each such option was based on Renaissance's recommendations pursuant to the corresponding sub-advisory agreement, and Deutsche Bank recorded the positions it held as hedges of that option in the corresponding sub-account. Pursuant to these sub-advisory agreements, Renaissance recommended, in certain circumstances, that positions that had been recorded in one sub-account be removed from that sub-account record and entered into the record for another sub-account. The resulting journal entries would be made at the then-current market prices of the affected positions; thus, this process did not result in the shifting of any profit or loss from one sub-account to another. No cash was transferred between sub-accounts in connection with this process.

The journal recommendations described above were only made during a period around the termination date for the relevant option or when a new option was purchased (at which time a new sub-account would be established with the purpose of tracking the hedge to that option). The following chronology provides details regarding these journal entries between sub-accounts.

---

[1] Note that Deutsche Bank owned separate sets of accounts to hedge its American-style options and its European-style options.

Chronology

1.	December 2009	Close hedge Sub-Account underlying Option 94150053 Close hedge SA1 underlying Option 94150301
2.	June 2010	Close hedge SA2 underlying Option 94150305
3.	September 2010	Open hedge SA6 underlying Option 94150325
4.	November 2010	Open hedge SA7 underlying Option 94150330
5.	December 2010	Close hedge SA3 underlying Option 94150310 Close hedge SA4 underlying Option 94150315
6.	September 2011	Close hedge SA6 underlying Option 94150325
7.	December 2011	Close hedge SA5 underlying Option 94150320
8.	June 2012	Close hedge SA7 underlying Option 94150330
9.	November 2012	Close hedge SA8 underlying Option 94150335
10.	December 2012	Close hedge SA9 underlying Option 94150340

1a. December 2009 - Close hedge Sub-Account underlying Option 94150053

Rebalance Event
Option reference # 94150053 was exercised
Exercise Date 12/30/2009

Source Option reference # 94150053

Trade Date	12/17/2007
Premium	$130,000,000
Initial Leverage	n/a
Notional	$1,170,000,000
Cash Settlement Amount	$2,054,103,445

Source Sub-Account reference "S"
S maximum GMV at Trade Date $2,340,000,000
S peak GMV 30 days prior to Exercise ("Peak GMV") $3,511,000,000

Description of Rebalancing:
22% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
587 US positions

Market	Positions
Total	587
USD	587

Destination Option reference # 94150310

Destination Sub-Account reference # SA3

1b. December 2009 - Close hedge SA1 underlying Option 94150301

Rebalance Event
Option reference # 94150301 was exercised
Exercise Date 12/22/2009

Source Option reference # 94150301

Trade Date	12/15/2008
Premium	$150,000,000
Initial Leverage	$1,100,000,000
Notional	$1,350,000,000
Cash Settlement Amount	$554,291,534

Source Sub-Account reference "S"
S maximum GMV at Trade Date $2,700,000,000
S peak GMV 30 days prior to Exercise ("Peak GMV") $3,646,866,575

Description of Rebalancing:
94% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
4,566 US positions
167 International positions in 7 currencies

Market	Positions
Total	4,733
AUD	7
CAD	14
CHF	2
EUR	22
JPY	111
NOK	6
SEK	5
USD	4,566

Destination Option reference # 94150305 and 94150310

Destination Sub-Account reference # SA2 and SA3

2. June 2010 - Close hedge SA2 underlying Option 94150305

Rebalance Event
Option reference # 94150305 was exercised
Exercise Date 6/29/2010

Source Option reference # 94150305

Trade Date	6/9/2009
Premium	$350,000,000
Initial Leverage	$2,475,000,000
Notional	$3,150,000,000
Cash Settlement Amount	$788,621,554

Source Sub-Account reference # SA2
SA2 maximum GMV at Trade Date $6,300,000,000
SA2 peak GMV 30 days prior to Exercise ("Peak GMV") $6,733,026,612

Description of Rebalancing:
100% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
4,599 US positions
1,215 International positions in 8 currencies

Market	Positions
Total	5,814
CAD	23
CHF	97
DKK	35
EUR	806
JPY	8
NOK	66
SEK	170
ZAR	10
USD	4,599

Destination Option reference # 94150310 and 94150315

Destination Sub-Account reference # SA3 and SA4

3. September 2010 - Open hedge SA6 underlying Option 94150325

Rebalance Event
Option reference # 94150325 was acquired
Trade Date 9/23/2010

Source Option reference # 94150310 and 94150315

Trade Date	10/8/2009	11/20/2009
Premium	$ 400,000	$ 300,000,000
Initial Leverage	$ 2,825,000,000	$ 2,490,000,000
Notional	$ 3,600,000,000	$ 2,700,000,000
Cash Settlement Amount	$ 1,066,064,569	$ 722,101,787

Source Sub-Account reference # SA3 and SA4
SA3 maximum GMV at Trade Date $ 7,200,000,000
SA3 peak GMV 30 days prior to Exercise ("Peak GMV") $ 10,716,000,000

SA4 maximum GMV at Trade Date $5,400,000,000
SA4 peak GMV 30 days prior to Exercise ("Peak GMV") $ 7,437,000,000

Description of Rebalancing:
14% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
6,390 US positions

Market	Positions
Total	6,390
USD	6,390

Destination Option reference # 94150325

Destination Sub-Account reference # SA6

4. November 2010 - Open hedge SA7 underlying Option 94150330

Rebalance Event
Option reference # 94150330 was acquired
Trade Date 11/15/2010

Source Option reference # 94150310 and 94150315

Trade Date	10/8/2009	11/20/2009
Premium	$ 400,000	$ 300,000,000
Initial Leverage	$ 2,825,000,000	$ 2,490,000,000
Notional	$ 3,600,000,000	$ 2,700,000,000
Cash Settlement Amount	$ 1,066,064,569	$ 722,101,787

Source Sub-Account reference # SA3 and SA4
SA3 maximum GMV at Trade Date $ 7,200,000,000
SA3 peak GMV 30 days prior to Exercise ("Peak GMV") $ 8,979,000,000

SA4 maximum GMV at Trade Date $5,400,000,000
SA4 peak GMV 30 days prior to Exercise ("Peak GMV") $ 7,200,000,000

Description of Rebalancing:
17% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
4,286 US positions

Market	Positions
Total	4,286
USD	4,286

Destination Option reference # 94150330

Destination Sub-Account reference # SA7

5a. December 2010 - Close hedge SA3 underlying Option 94150310

Rebalance Event
Option reference # 94150310 was exercised
Exercise Date 12/18/2010

Source Option reference # 94150310

Trade Date	10/8/2009
Premium	$ 400,000,000
Initial Leverage	$ 2,825,000,000
Notional	$ 3,600,000,000
Cash Settlement Amount	$ 1,066,064,569

Source Sub-Account reference # SA3
SA3 maximum GMV at Trade Date $ 7,200,000,000
SA3 peak GMV 30 days prior to Exercise ("Peak GMV") $ 7,790,000,000

Description of Rebalancing:
46% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
3,431 US positions
3,004 International positions in 9 currencies

Market	Positions
Total	6,435
AUD	209
CAD	485
CHF	92
DKK	32
EUR	708
JPY	1,212
NOK	43
SEK	131
ZAR	92
USD	3,431

Destination Option reference # 94150320, 94150325 and 94150330

Destination Sub-Account reference # SA5, SA6 and SA7

5b. December 2010 - Close hedge SA4 underlying Option 94150315

Rebalance Event
Option reference # 94150315 was exercised
Exercise Date 12/28/2010

Source Option reference #94150315

Trade Date	11/20/2009
Premium	$ 300,000,000
Initial Leverage	$ 2,490,000,000
Notional	$ 2,700,000,000
Cash Settlement Amount	$ 722,101,787

Source Sub-Account reference # SA4
SA4 maximum GMV at Trade Date $ 5,400,000,000
SA4 peak GMV 30 days prior to Exercise ("Peak GMV") $ 6,365,000,000

Description of Rebalancing:
56% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
3,801 US positions
2,901 International positions in 9 currencies

Market	Positions
Total	6,702
AUD	143
CAD	455
CHF	94
DKK	32
EUR	755
JPY	1,146
NOK	49
SEK	136
ZAR	91
USD	3,801

Destination Option reference # 94150320, 94150325 and 94150330

Destination Sub-Account reference # SA5, SA6 and SA7

6. September 2011 - Close hedge SA6 underlying Option 94150325

Rebalance Event
Option reference # 94150325 was exercised
Exercise Date 9/28/2011

Source Option reference #94150325

Trade Date	9/23/2010
Premium	$ 300,000,000
Initial Leverage	$ 2,490,000,000
Notional	$ 2,700,000,000
Cash Settlement Amount	$ 766,549,452

Source Sub-Account reference # SA6
SA6 maximum GMV at Trade Date $ 5,400,000,000
SA6 peak GMV 30 days prior to Exercise ("Peak GMV") $ 7,879,000,000

Description of Rebalancing:
47% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
3,500 US positions
2,685 International positions in 9 currencies

Market	Positions
Total	6,185
AUD	187
CAD	316
CHF	116
DKK	33
EUR	699
JPY	1,092
NOK	38
SEK	114
ZAR	90
USD	3,500

Destination Option reference # 94150320 and 94150330

Destination Sub-Account reference # SA5 and SA7

7. December 2011 - Close hedge SA5 underlying Option 94150320

Rebalance Event
Option reference # 94150320 was exercised
Exercise Date 12/19/2011

Source Option reference #94150320

Trade Date	5/24/2010
Premium	$ 100,000,000
Initial Leverage	$ 575,000,000
Notional	$ 900,000,000
Cash Settlement Amount	$ 444,152,970

Source Sub-Account reference # SA5
SA5 maximum GMV at Trade Date $ 1,800,000,000
SA5 peak GMV 30 days prior to Exercise ("Peak GMV") $ 3,915,000,000

Description of Rebalancing:
99% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
3,556 US positions
3,208 International positions in 9 currencies

Market	Positions
Total	6,764
AUD	221
CAD	462
CHF	116
DKK	35
EUR	733
JPY	1,327
NOK	48
SEK	129
ZAR	137
USD	3,556

Destination Option reference # 94150330

Destination Sub-Account reference # SA7

8. June 2012 - Close hedge SA7 underlying Option 94150330

Rebalance Event
Option reference # 94150330 was exercised
Exercise Date 6/26/2012

Source Option reference #94150330

Trade Date	11/15/2010
Premium	$ 300,000,000
Initial Leverage	$ 1,950,000,000
Notional	$ 2,700,000,000
Cash Settlement Amount	$ 1,491,674,873

Source Sub-Account reference # SA7
SA7 maximum GMV at Trade Date $ 5,400,000,000
SA7 peak GMV 30 days prior to Exercise ("Peak GMV") $ 13,649,000,000

Description of Rebalancing:
31% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
2,618 US positions
2,731 International positions in 9 currencies

Market	Positions
Total	5,349
AUD	277
CAD	491
CHF	80
DKK	27
EUR	660
JPY	858
NOK	56
SEK	127
ZAR	155
USD	2,618

Destination Option reference # 94150335 and 94550340

Destination Sub-Account reference # SA8 and SA9

9. November 2012 - Close hedge SA8 underlying Option 94150335

Rebalance Event
Option reference # 94150335 was exercised
Exercise Date 12/3/2012

Source Option reference #94150335

Trade Date	4/24/2012
Premium	$ 200,000,000
Initial Leverage	$ 1,150,000,000
Notional	$ 1,800,000,000
Cash Settlement Amount	$ 385,392,877

Source Sub-Account reference # SA8
SA8 maximum GMV at Trade Date $ 3,600,000,000
SA8 peak GMV 30 days prior to Exercise ("Peak GMV") $ 3,446,000,000

Description of Rebalancing:
100% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
2,996 US positions
2,555 International positions in 9 currencies

Market	Positions
Total	5,551
AUD	293
CAD	294
CHF	94
DKK	24
EUR	400
JPY	1,164
NOK	40
SEK	79
ZAR	167
USD	2,996

Destination Option reference # 94150345

Destination Sub-Account reference # SA10

10. December 2012 - Close hedge SA9 underlying Option 94150340

Rebalance Event
Option reference # 94150340 was exercised
Exercise Date 12/14/2012

Source Option reference #94150340

Trade Date	6/7/2012
Premium	$ 200,000,000
Initial Leverage	$ 1,150,000,000
Notional	$ 1,800,000,000
Cash Settlement Amount	$ 326,932,172

Source Sub-Account reference # SA9
SA9 maximum GMV at Trade Date $ 3,600,000,000
SA9 peak GMV 30 days prior to Exercise ("Peak GMV") $ 3,436,000,000

Description of Rebalancing:
99% of Peak GMV was journaled between sub-accounts
"Monetary Assets" represented 0% of the journal
"Referenced Assets" represented 100% of the journal:
All "Referenced Assets" were exchange listed equity positions
Notional positions were both long and short
3,090 US positions
2,557 International positions in 9 currencies

Market	Positions
Total	5,647
AUD	235
CAD	352
CHF	82
DKK	23
EUR	383
JPY	1,211
NOK	40
SEK	63
ZAR	168
USD	3,090

Destination Option reference # 94150350

Destination Sub-Account reference # SA11

From: Brown, Reginald [mailto:Reginald.Brown@wilmerhale.com]
Sent: Friday, August 30, 2013 1:10 PM
To: Katz, David (HSGAC)
Cc: Kirschner, Ross K.; Hall, Stephanie (HSGAC)
Subject: per our discussion

David,

Thanks for giving Renaissance the time to respond to the follow-up questions from earlier this month. The folks there have been working diligently to answer your questions. As I mentioned on the phone, I am sending you this today and will call to discuss on Tuesday when you have more time.

You asked for greater detail concerning the journal transfers of securities positions between Deutsche Bank sub-accounts, noting that the chronology* provided to you on July 31, 2013 "does not contain the details on how large each transfer was, the dates they occurred on, nor does it include a description of the journaled transactions." Attached please find a chart** which provides the date of each journal transfer and the gross dollar value of the long and short positions (that is, the value of the long positions, plus the absolute value of the short positions) journaled into or out of each sub-account on that date. I hope this information is helpful and provides what you need. As we have previously discussed, the chart shows that journal recommendations were only made during a period around the termination date for an option or when a new option was purchased (at which time a new sub-account would be established with the purpose of tracking the hedge to that option).

You also asked that we provide "the same information for similar activities/transactions that are taking place with respect to the assets referenced in the Renaissance options corresponding to those sub-accounts, and why the activities/transactions involving the options took place." Please note that the relevant Deutsche Bank options were owned by Mosel Equities L.P., and not by Renaissance. Further, there are not two sets of transactions that take place, one with respect to the hedge accounts and one with respect to the options. The investment recommendations generated by the algorithm are automatically included in the notional portfolio referenced by the options (provided they are consistent with the investment guidelines and other requirements of the investment advisory agreement ("IAA") between Renaissance and Deutsche Bank), whether or not they are executed in Deutsche Bank's hedge sub-accounts. These same recommendations are reflected in Deutsche Bank's hedge sub-accounts (including, where appropriate, by means of journal entries) provided that Deutsche Bank wishes to hedge the inclusion of these recommendations in the notional portfolio referenced by the options. Deutsche Bank has consistently chosen to execute

Subcommittee Note:
* Chronology referred to is RT-PSI-00384764-777.
** Chart referred to is RT-PSI-00384762 and attached to this email.

such hedging transactions.

You also asked for information concerning "transfers related to Renaissance's options with Barclays." As a threshold matter, please note that the Barclays options were owned by Badger Holdings L.P., and not by Renaissance. In response to your question, no transfers comparable to the journal transfers between Deutsche Bank hedge sub-accounts described above took place with respect to the Barclays options. The reason is that no such transfers were necessary given the structure of the Barclays options and Renaissance's investment management agreement ("IMA") with Palomino Limited, Barclays' affiliate. In this regard, pursuant to the IMA, Renaissance provided Palomino with a single set of investment recommendations. Each option referenced a percentage of the performance of the single notional portfolio that would result from these investment recommendations. These percentages were adjusted, under a formula set forth in the option confirmations, whenever an option was exercised or a new option was entered into. The options were hedged by executing the investment recommendations in a set of hedge accounts that were not segregated by option.

You also asked for information about "any loan withdrawals from any option." We understand you to be asking whether the option holders (or anyone related to them) ever received cash or property with respect to an option prior to the scheduled payment date following the exercise or maturity of the option. Although the topic was discussed, this never occurred.

Your final question asked for "the section(s) of the option agreements that address or permit this activity." There does not need to be, and there is not, any provision in the Deutsche Bank option confirmations relating to Renaissance's ability to recommend that securities positions be journaled from one sub-account to another. This is because, as previously discussed, each option references the notional portfolio resulting from Renaissance's recommendations for an individual Deutsche Bank sub-account, and it is irrelevant, from the standpoint of the option, whether Renaissance recommends that a position be removed from the sub-account by means of a journal to another sub-account or by means of a sale into the market.

Separate from the option agreements, note that section 6 of the December 15, 2008 IAA between Renaissance and Deutsche Bank confirms that "[f]or the avoidance of doubt, the Advisor [Renaissance] may at any time effect bilateral transfers of cash or securities between Sub-Accounts (i.e., journals)."

With respect to the Barclays options, as explained above there were no transfers in the Palomino hedge accounts comparable to the journal transfers between Deutsche Bank sub-accounts. The formula pursuant to which the performance of the notional portfolio is apportioned among the Barclays options outstanding from time to time is set forth under the definitions of "Calculation Date," "Calculation Period" and "Calculation Period Factor" in each option confirmation.

I hope this information is helpful to you in confirming that Renaissance respected both the form and spirit of its option agreements. We look forwarding to speaking with you on Tuesday.

Reg

	94150053	94150301	94150305	94150310	94150315	94150320	94150325	94150330	94150335	94150340	94150345	94150350
	AmOp	EurOp 1	EurOp 2	EurOp 3	EurOp 4	EurOp 5	EurOp 6	EurOp 7	EurOp 8	EurOp 9	EurOp 10	EurOp 11
Trade Date	12/17/2007	12/15/2008	6/9/2009	10/8/2009	11/20/2009	5/24/2010	9/23/2010	11/15/2010	4/24/2012	6/7/2012	11/29/2012	12/11/2012
Exercise / Expiry	12/30/2009	12/22/2009	6/29/2010	12/18/2010	12/28/2010	12/19/2011	9/28/2011	6/26/2012	12/3/2012	12/14/2012	11/14/2013	11/26/2013
Journal Entry Dates	FET4	SA01	SA02	SA03	SA04	SA05	SA06	SA07	SA08	SA09	SA10	SA11
1 - close Amer hedge into SA# 3												
12/29/2009	746,860,185.71			746,860,185.71								
12/30/2009	21,044,847.14			21,044,847.14								
2 - close hedge SA# 2 into 3 & 4												
6/15/2010			339,745.12		339,745.12							
6/17/2010			3,256,081.89		3,256,081.89							
6/22/2010			246,545.05		246,545.05							
6/25/2010			511,916,403.85	305,217,778.66	206,698,625.19							
6/28/2010			6,217,267,836.63	4,761,058,879.00	1,456,208,957.63							
3 - open hedge SA# 6 from 3 & 4												
9/24/2010				2,022,229,925.00	517,433,010.00		2,539,662,935.00					
4 - open hedge SA# 7 from 3 & 4												
11/15/2010				1,608,451,449.00	1,063,992,463.00			2,672,443,912.00				
5 - close hedge SA# 3 & 4 into 5, 6 & 7												
11/17/2010				10,117,722.97	10,271,162.07			20,388,885.04				
11/23/2010				49,575,517.30	24,896,771.16		24,896,771.16	49,575,517.30				
11/29/2010				149,103,631.83	99,391,787.26		98,737,930.56	149,757,488.52				
12/10/2010				497,476,411.05	480,932,321.26	6,623,242.39	465,029,972.23	506,755,517.70				
12/13/2010				241,311,421.37	193,040,733.70	4,514,075.44	186,995,007.11	242,843,072.52				
12/14/2010						798,171.87	991,131.60	1,789,303.46				
12/17/2010				2,642,037,709.89		402,576,651.89	1,473,024,829.89	766,436,228.11				
12/28/2010					2,755,912,969.81	948,954,521.00	818,839,004.60	988,119,444.21				
6 - close hedge SA# 6 into 5 & 7												
9/30/2011						221,285,826.01	742,029,816.84	520,743,990.79				
10/3/2011						891,850,265.83	2,983,381,571.79	2,091,531,305.96				
11/16/2011							-	-				
7 - close hedge SA# 5 into 7												
12/5/2011						50,128,063.64		50,128,063.64				
12/6/2011						95,774,942.12		95,774,942.12				
12/7/2011						426,212.90		426,212.90				
12/8/2011						713,027,197.72		713,027,197.72				
12/16/2011						3,004,731,374.37		3,004,731,374.37				
8 - close hedge SA# 7 into 8 & 9												
6/11/2012								175,957,068.43		175,957,068.43		
6/12/2012								74,756,149.09		74,756,149.09		
6/15/2012								528,022,510.71	290,394,672.54	237,627,838.15		
6/25/2012								218,480,755.30		218,480,755.30		
6/28/2012								3,195,303,401.36	1,722,976,143.00	1,472,327,258.36		
6/29/2012									39,284,400.00	39,284,400.00		
9 - close hedge SA# 8 into 10												
11/29/2012									3,455,964,556.11		3,455,964,556.11	
10 - close hedge SA# 9 into 11												
12/11/2012										3,408,854,432.28		3,408,854,432.28

Deutsche Bank

Deutsche Bank AG London[1]
c/o Deutsche Bank Securities Inc.
60 Wall Street
New York, NY 10005
Telephone: 1-212-250-2500

December 17, 2007

RENAISSANCE TECHNOLOGIES LLC
800 Third Avenue
New York, NY 10022
Attn: Mark Silber / Carla Volpe Porter
Tel: (212) 486-6780
Fax: (212) 758-7136

First Amendment
to the
Amended & Restated Investment Advisory Agreement

The purpose of this letter agreement is to set forth the terms and conditions of the First Amendment (the "Amendment") to the Amended & Restated Investment Advisory Agreement, (the "Agreement") entered into on November 16, 2007 between Deutsche Bank AG, acting through its London Branch (the "Client") and Renaissance Technologies LLC (the "Advisor").

Capitalized terms used but not defined herein shall have the meanings set forth in the above-referenced Agreement.

The Client and the Advisor have agreed to amend the Agreement as follows:

1. Table 1 contained in Appendix I of the Agreement shall be deleted in its entirety and replaced with the following:

	A	B	C	D
Sub Account (M)	8.4382%	90,000,000	18	32,490,000
Sub Account (N)	37.5031%	400,000,000	18	126,400,000
Sub Account (O)	16.8764%	180,000,000	18	43,920,000
Sub Account (P)	4.6879%	50,000,000	18	9,950,000
Sub Account (Q)	13.9689%	243,000,000	18	76,788,000
Sub Account (R)	8.3402%	300,000,000	18	138,000,000
Sub Account (S)	3.3102%	130,000,000	18	53,950,000
Sub Account (T)	6.8750%	270,000,000	18	112,050,000

[1] Deutsche Bank AG is regulated by the FSA for the conduct of designated investment business in the UK, is a member of the London Stock Exchange and is a limited liability company incorporated in the Federal Republic of Germany HRB No. 30 000 District Court of Frankfurt am Main; Branch Registration No. in England and Wales BR000005, Registered address: Winchester House, 1 Great Winchester Street, London EC2N 2DB, Telephone: +44 20 7545 8000.

2. Except as expressly modified by this Amendment, the Agreement shall remain in full force and effect.

If the foregoing correctly states your understanding of these matters, please indicate your agreement to this Amendment by signing in the space provided below for that purpose and returning this Amendment by facsimile to Adam Tolchinsky, telephone (212) 250-2537, facsimile (212) 797-4562.

Regards,

DEUTSCHE BANK AG LONDON

By: ______________________
Name: Satish Ramakrishna
Title: Attorney-in-Fact

By: ______________________
Name:
Title: Attorney-in-Fact

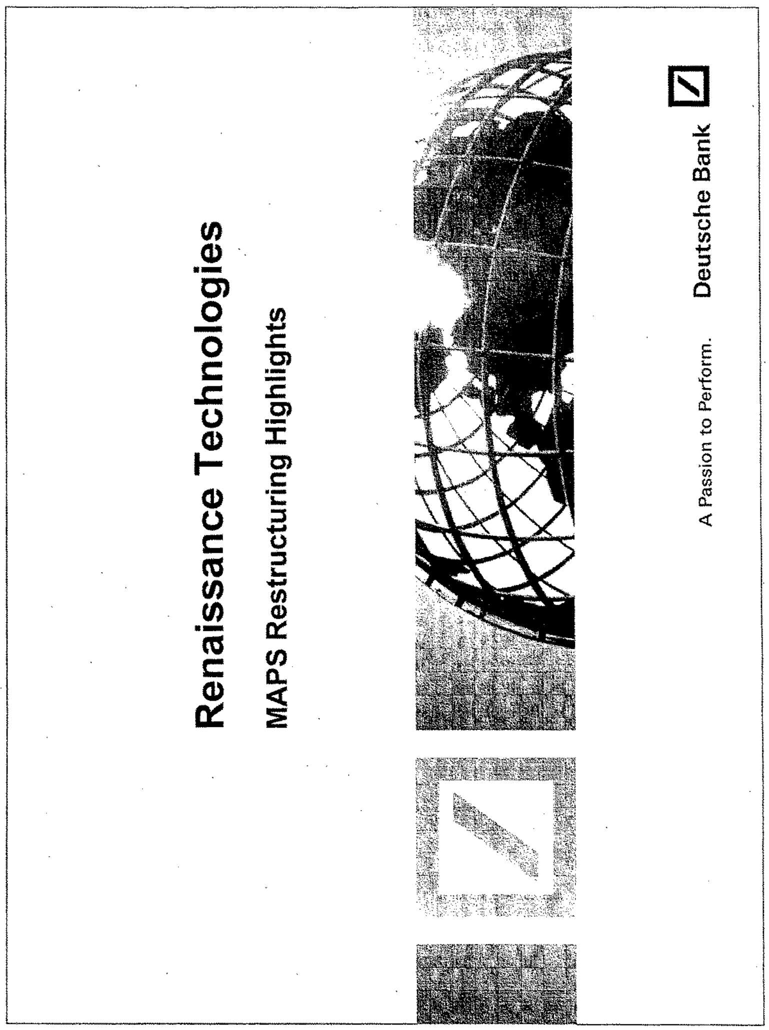
DEUTSCHE BANK SECURITIES INC.
acting solely as Agent in connection with the Transaction

By: ______________________
Name: Satish Ramakrishna
Title: Managing Director

By: ______________________
Name:
Title:

RENAISSANCE TECHNOLOGIES LLC

By: ______________________
Name: Mark Silber
Title: Vice President


Renaissance Technologies
MAPS Restructuring Highlights
A Passion to Perform.
Deutsche Bank

Revised Structure Element 1 –The OTC Option

- Structured as an "in-the-money" European style option
  - Early exercise or termination at the options holder's discretion is not possible.
  - However, option holder may request option seller to make a good faith price.
- Premium will be made up of two elements
  - **Time Value or "Optionality Value"** - established as a consequence of considering:
    - The *pre-paid funding facility* based on the anticipated minimal notional amount.
    - The *term interest rate* for the pre-paid funding facility.
    - The NPV of the amount owed for the pre-paid facility (which includes the risk premium of the transaction).
    - The tenor of the transaction.
  - **Intrinsic Value** - will be the residual of the total premium after subtracting the Time Value
    - The total premium required will be driven by the desired initial maximum notional amount of the option consistent with current practice.
- Initial NAV Index Level - will be set to reflect the initial intrinsic value of the option (ITM)
  - Barrier NAV Index Level is locked in at 97.7% of the Initial NAV Index Level
  - Strike is always 100.
- Valuation - will be the sum of the intrinsic value as it changes from day-to-day based on trading performance, dividends, financing, etc.
- Settlement – Cash Settlement
  - Cash Settlement Scenario A - valuation based solely on intrinsic value
  - Cash Settlement Scenario B - valuation based on intrinsic value plus the residual time value
- Knock Out Event – in the event of a barrier breach the option holder is only entitled to the intrinsic value of the option and forfeits all remaining time value.

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Revised Structure Element 2 - Investment Advisory Agreements

- Master Investment Advisory Agreement
  - Covers relationship between the Advisory and Client generally – powers, duties, obligations, etc
  - Sets general Investment Guidelines and Compliance Restrictions for Account and Sub-Accounts
- Supplemental Investment Advisory Agreements
  - Allows for staggered infusions and liquidity
  - Sets out specific Investment Guidelines, Compliance Restrictions and Cure periods for Sub-Account
- Tiered Balance Financing
  - DB will first fund the account with an amount equal to the initial intrinsic value. All purchases by the manager in the managed account will first go against this amount.
  - Further purchases will not create a chargeable indebtedness until such purchases exceed the amount of funding covered by the pre-paid facility. All indebtedness over this amount will accrue interest charges at the floating rate specified in the agreement (e.g., Fed + bps).
  - For all shorts up to a market value equivalent to the value of the pre-paid funding facility, the benchmark rate shall be equivalent to the term interest rate charges for the facility. For all short market value above the pre-paid funding facility value, the benchmark used shall be Fed funds.
- Designated Positions
  - Allows for Advisor's positions & performance to be tracked on securities they instructed to be traded but DB has rejected their execution or liquidated the holding for various business (ie hedging) reasons
- Investment Advisory Fees shall be charged to the Sub-Account periodically based on either the managed account's AUM and/or performance.

3

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Revised Risk Terms

- Barrier levels
- Investment Guidelines
  - –Capital Needed shall always be less than Capital Available
- Position Guidelines
  - –4% of issuers total outstanding shares
  - – Tiered multiple of Liquidity Measure (avg Trade Volumes)
- Compliance Restrictions
  - –Not more than 5% of any class of voting securities (13D)
- Cure Periods
- Leverage - Allowable implicit leverage will be based on the full value of the option.

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Revised Infrastructure

- Geneva – new Cash PB portfolio accounting engine allows for Global trading in MAPs.
- GFC – global financing calculator for tiered balance financing structures
- ESS – new bullet swap functionality allows matching of swap & MAP option tenor
- Tracer – enhanced functionality for high volume strategies including
  - Trade compression to the front and back-office
  - Processing of allocated trade to multiple MAPs options / Sub-Accounts (ie 5X Rentec volumes)
- dbX / PEAS – enhanced risk functionality at the Master and Supplemental IA level
- CPortDW – consolidated warehouse for reporting

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Key Deal Maker (Breaker) Concepts for Rentec

- Advisor controlled liquidation
  - –Potential impact to other funds of the Advisor
  - –Longer liquidation periods due to size and models
  - –Equity Portfolio Analysis / Market Bid Level
  - –Early Settlement Amount
- Material Client Support Breaches
- Material Advisor Breaches
- Designated Positions
  - –DMA linked complexities
- Investment Advisory Fees
  - –Market competitive fees for hedge funds generally versus Institutional relationships such as DB or RIEF
- Intra-Day execution files every hour
  - –At the allocated to each Sub-Account level

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Termination Rights

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- Without cause on 20 days notice
- Regulatory / Tax Change
- Advisor Investment /Compliance Violation
- Advisor failure to provide
  - Trade files
  - Locates
  - 3rd party broker executions
- Representations & Warranties

Rentec

- DB 5yr Senior Debt CDS spreads widen to 325 – 450
- Fundamental change to Investment Guidelines / Compliance Restrictions
- Client failure to provide
  - Reporting
  - DMA access
  - Short sale liquidity
- DB breaches Confidentiality clause
- Representations & Warranties

Key Terms

Option Type	European
Option Buyer	Mosel Partners
Option Seller	Deutsche Bank
Number of options	6, staggered every six months
Tenor	Typically 13-18 months
Maximum notional	$32B
Maximum leverage	18:1 (Gross Market Value)
Financing rates: US - PB Non-US – Swaps	 Fed Open +23/-23 One-Mth LIBOR +35/-60
Expiration-date pricing period	The earlier of the first pricing day immediately following the expiration date and the 14th business day immediately following the expiration date.

Deutsche Bank

EXECUTION VERSION

AMENDED AND RESTATED INVESTMENT MANAGEMENT AGREEMENT

BETWEEN

PALOMINO LIMITED

AND

RENAISSANCE TECHNOLOGIES CORPORATION

Effective as of
October 1, 2004
as amended and
restated with effect
on December 6, 2006

Palomino Limited
c/o Barclays Bank PLC, New York Branch
200 Park Avenue
New York NY 10166

Tel: +1 (212) 412 4000

BARCLAYS

October 1, 2004 as amended and restated
December 6, 2006

Renaissance Technologies Corporation
800 Third Avenue
New York, New York 10022

Attention: Mark Silber

Gentlemen:

This letter together with the accompanying Fee Schedule and Investment Guidelines (this "Agreement") sets forth our agreement regarding the engagement of Renaissance Technologies Corporation (the "Manager") to manage a securities trading portfolio for the account of Palomino Limited, an exempted company incorporated in the Cayman Islands (the "Client"), effective as of the date hereof (the "Effective Date"). This Agreement further amends and restates, in its entirety, that certain Investment Management Agreement dated October 1, 2004 between the Manager and the Client as such agreement was amended and restated with effect on December 21, 2005 (the "Original Agreement"). Upon execution of this Agreement, the Original Agreement shall be replaced and superceded in its entirety by this Agreement.

1. **Appointment.**

The Client hereby appoints the Manager on the terms reflected in this Agreement as discretionary account manager with respect to the Accounts (as defined below) on the terms and conditions contained herein, and the Manager hereby accepts such appointment.

2. **The Accounts.**

(a) For purposes of this Agreement, the term "Accounts" means (i) the prime brokerage account established by and in the name of the Client with Barclays Capital Securities Limited ("BCSL"), account no. 400262, pursuant to the Prime Brokerage Agreement, dated September 26, 2002, as it may be amended by the parties thereto from time to time (the "BCSL Agreement"), (ii) the prime brokerage account established by and in the name of the Client with Barclays Capital Inc. ("BCI"), account no. [redacted] pursuant to the Prime Broker Margin Account Agreement, dated September 26, 2002, as it may be amended by the parties thereto from time to time (the "BCI Agreement", and together with the BCSL Agreement, the "Prime Brokerage Agreements"), and (iii) a record (the "Reference Positions Account") prepared by Barclays Bank PLC, on behalf of the Client, and titled "Reference Synthetic Positions", identifying, at all times, (A) the outstanding Synthetic Positions, as defined in the investment guidelines attached hereto as Annex A (as they may be amended by the parties hereto from time to time, the "Investment Guidelines") and (B) all other outstanding Permitted

▬ = Redacted by the Permanent Subcommittee on Investigations

Securities, including derivative financial instruments, entered into in accordance with the Investment Guidelines and designated by the Manager to be included within the Reference Positions Account. (For purposes of this Agreement, the term "Account" shall mean any of the Accounts).

(b) The Accounts shall initially consist of cash of the Client in the amount of USD 5,000 million that has been placed under the Manager's supervision in the Accounts pursuant to this Agreement (the "Initial Accounts Assets"). The term "Accounts Assets" means (i) the Initial Accounts Assets, (ii) any assets, property, securities and other financial positions (whether long or short, actual or synthetic) that will become part of the Accounts as a result of transactions therein, (iii) any dividends, interest, distributions or other income earned or deemed earned in respect of, and any proceeds received in respect of dispositions or other terminations of, assets, property, securities and other financial positions (whether long or short, actual or synthetic) credited to, included or deemed included within the Accounts and (iv) all other assets included in any of the Accounts from time to time.

(c) The Accounts will focus on (actual or synthetic) short and long positions in exchange-traded and over-the-counter-traded equity securities in Permitted Equity Markets, as defined in the Investment Guidelines. The Manager will carry out the Accounts' trading strategy in accordance with the Investment Guidelines, as may be amended in writing from time to time (the "Trading Strategy").

(d) Until the termination of this Agreement the Client shall ensure, whether by obtaining credit or making capital calls, that Accounts Assets (including cash but excluding Synthetic Positions) shall at all times be sufficient to permit the Manager to trade on behalf of the Client up to the limits contemplated by the Investment Guidelines.

3. **Custody and Brokerage.**

(a) The Accounts Assets are owned by Client and shall be held in the Accounts with BCSL and BCI, prime brokerage divisions of Barclays Bank PLC, as the prime broker (the "Custodians"). Neither party shall cause or permit Accounts Assets to be held by any person other than a Custodian, or to be commingled with assets of any person other than the Client or with any other assets of the Client.

(b) The Manager shall not use any brokers through whom any transaction in respect of the Accounts shall be executed (each an "Executing Broker") unless such Executing Broker has been pre-approved by the Client and the Custodians. Each Executing Broker shall be required to enter into an agreement with the Manager and the Custodians (the "Executing Broker's Agreements") detailing such Executing Broker's responsibilities and restrictions with respect to executing trades for the Accounts which agreement or the material terms thereof, as determined by Client, shall be approved by Client.

(c) The Client shall notify the Manager in writing promptly upon receipt of actual knowledge of any noncompliance of the Accounts with the Investment Guidelines or with any law (including U.S. and U.K. securities and banking laws) applicable to the Client ("Notice of Noncompliance"). The Client may, in its reasonable discretion, specify in such Notice of Noncompliance specific trades effected by the Manager during the day on which the noncompliance occurs that are to be assumed by the Manager to the extent, and only to the extent, necessary to bring the Accounts back into compliance with the Investment Guidelines or such applicable laws, as the case may be, and that such specified trades are chosen by the Client based on commercially reasonable judgment and in good faith ("Noncompliant Trades"). The Client may move all Noncompliant Trades immediately to a separate account of the Manager (the "DK Account"). The Manager will have the right to review and object, not later than the close of business on the first Business Day following the day on which it receives the relevant Notice of Noncompliance, to such determinations and to the transfer of any trade to the DK Account. In the event of such an objection by the Manager, the parties will agree in good faith on the specific Noncompliant Trades, if any, to be assumed by the Manager and those, if any, to be moved back to the Accounts. No Noncompliant Trades shall be moved back to the Accounts unless and until such an agreement has been reached by the Client and the Manager.

Without limiting the foregoing, as soon as reasonably practicable after receipt of a Notice of Noncompliance, the Manager shall take such action, after taking into account the effect of its potential assumption of specific Noncompliant Trades pursuant to the immediately preceding paragraph, to the extent it reasonably determines necessary to bring the Accounts back into compliance with the Investment Guidelines or applicable laws, as the case may be.

(d) In the course of selecting brokers, dealers, banks and intermediaries to effect transactions in respect of the Accounts, the Manager may negotiate such commissions, fees and other charges on behalf of the Client as the Manager shall deem to be commercially reasonable in the circumstances taking into account all such factors as it deems relevant, including the quality of research and other services made available to it (even if such services are not for the exclusive benefit of the Client) provided that such commissions, fees and other charges shall be subject to the approval of Client. It is understood that the costs of such services will not necessarily represent the lowest costs available and that the Manager is under no obligation to combine or arrange orders so as to obtain reduced charges.

(e) Except as contemplated by Section 9 of this Agreement, the Manager shall not be responsible for any acts, omissions or errors of the Custodians or Executing Brokers in executing its trading instructions or otherwise.

4. **Authority of the Manager.**

(a) Subject to the provisions of Sections 3(a), 3(b), 3(d), 4(b), 4(e), 4(g) and 7 of this Agreement, the Investment Guidelines and any other investment restrictions or guidelines that may from time to time be communicated in writing by the Client (such provisions, the Investment Guidelines and such restrictions and guidelines, being the "Manager Restrictions"), the Manager shall have full discretion and authority, without obtaining the Client's prior approval, to manage the investment and trading of the Accounts, and shall use its best efforts to increase the value of the Accounts. In furtherance of the foregoing, the Client hereby designates and appoints the Manager as its agent and attorney-in-fact, with full power and authority, subject to the Manager Restrictions, and without further approval of the Client (except as expressly provided herein or as may be required by law), to carry out the following with respect to the Accounts, in the name and on behalf of the Client: (i) to designate for execution and to execute any and all transactions related to securities (as that term is defined in the Securities Act of 1933, as amended) and other Permitted Securities; to make short-sales and to purchase and write options; and to obtain credit from the Custodians (or affiliates thereof) pursuant to the Prime Brokerage Agreements; (ii) to make all decisions relating to the manner, method and timing of investment transactions, and to select brokers, subject to the terms of this Agreement, for the execution, clearance and settlement of any transactions; (iii) to provide any clearing broker with such information regarding the Client as is necessary to enable such clearing broker to open and maintain an account for the benefit of the Client; (iv) to direct the Custodians to deliver Accounts Assets for the purpose of effecting transactions on a delivery versus payment basis; (v) to exercise or abstain from exercising any privilege or right (other than voting and consent rights, which are subject to the provisions of Section 4(g)) attaching to Accounts Assets, or to direct the Custodians with respect to any such privilege or right; (vi) to hold temporary cash balances in the Accounts, with interest thereon credited to the Accounts; (vii) to transfer any part of cash balances and securities or other property or financial positions (whether long or short) in one of the Accounts to the other Account; and (viii) to make and execute all such additional documents and to take all such other actions which the Manager reasonably considers necessary or advisable to carry out its duties hereunder, provided, however, that the Manager may not, except as otherwise provided herein, including subsection (iii) above, open securities accounts in the name of the Client. This power-of-attorney is a continuing power and shall remain in full force and effect until revoked by the Client in writing or subject to Section 13 hereof until this Agreement is terminated, but any such revocation shall not affect any transaction initiated prior to receipt of such notice of revocation. Notwithstanding the foregoing, (i) subject to paragraph A(iii) of the Investment Guidelines, the Client may, prior to execution, reject the purchase or sale of securities designated for execution by the Manager and (ii) the Manager shall not have the authority to retain any sub-advisors for the Client or the Accounts or invest Accounts Assets in any collective investment vehicle without the prior written consent of the Client. The Manager shall be permitted to effect transactions between any of the Accounts and any other account for which the

Manager acts as investment adviser. In connection with such transactions, the Manager may act as broker for, receive commercially reasonable commissions from, and have a potentially conflicting division of loyalties and responsibilities regarding both parties to such transactions;

(b) Without the prior written consent of the Client (which may be given with respect to specific transactions or generic classes of transactions), the Manager shall not cause the Client or the Accounts to:

(i) borrow or use other forms of leverage in excess of that permitted by or pursuant to the Investment Guidelines;

(ii) make or give any indemnity, guarantee, warranty or other contractual commitment with respect to the Accounts or the Accounts Assets (other than customary undertakings and commitments regarding settlement of trades and customary warranties as to ownership of Accounts Assets); or

(iii) enter into any new agreement (or make any material change to any existing agreement) with any third party service provider, including brokers, dealers, banks and intermediaries to effect transactions in respect of the Accounts.

(c) For the avoidance of doubt, it is agreed that any cash balances in the Accounts will accrue interest at the rate and pursuant to the terms provided under the Prime Brokerage Agreements.

(d) The Manager further acknowledges its certain other duties and responsibilities set forth in Section 3.3 of the Prime Brokerage Agreements.

(e) In the event that the Custodians determine that the limitation under Section C.3 to the Investment Guidelines is not complied with, the Manager shall sell, transfer, realize or otherwise deal with the Accounts Assets or the Collateral (as defined in the Prime Brokerage Agreements) standing to the credit of the Accounts, to the extent necessary for such limitation to be complied with as soon as reasonably practicable.

(f) The Client represents that BCI and BSCL (or affiliates thereof) will provide within the Accounts, at all times, all of the credit (or, at the Client's discretion, cash) that will be required to effect within the Accounts all of the transactions that are in compliance with the Investment Guidelines, and agrees to take, or cause to be taken, all actions and to do, or cause to be done, all things necessary to cause BCI and BSCL (or affiliates thereof) to provide within the Accounts such level of credit (or, at the Client's discretion, cash) at all times.

(g) At the direction (and only at the direction) of Client, the Manager shall exercise voting or consent rights attaching to Accounts Assets and shall direct the Custodians with respect to any such rights.

5. **Fees and Expenses.**

(a) For all of the Manager's services hereunder, the Client agrees to pay to the Manager, in advance, $153,846.00 for each three month period, payable on the third Business Day after the Effective Date and on the same date of each third month to occur thereafter (or, if such day is not a Business Day, on the first succeeding Business Day).

(b) All customary expenses incurred directly in connection with the transactions effected for positions held in the Accounts on behalf of the Client pursuant to this Agreement (including, without limitation, trading losses, custodial fees, brokerage commissions and income, withholding or transfer taxes) shall be debited or paid directly from the Accounts. The Manager shall not be obligated to advance any such expense provided that if Manager should choose to advance any such expense it shall be reimbursed out of funds in the Accounts and, to the extent there are insufficient funds in the Accounts, by the Client. Any such customary expenses attributable to the Client and one or more other accounts managed or advised by the Manager or any of its affiliates shall be allocated on an equitable basis among all such accounts.

(c) Any expenses arising in connection with the Manager's services to the Client, other than those specified above and the fees payable to the Manager, shall be reimbursed by Client.

(d) It is understood that the fees and commissions that will be imposed pursuant to the Prime Brokerage Agreements in connection with transactions effected within the Accounts on behalf of the Client pursuant to this Agreement shall be as set forth in Annex B to this Agreement.

6. **Investments for the Accounts of Others.**

The Client understands and agrees that nothing herein shall restrict the ability of the Manager to engage in any transactions for its own account and for the account of other clients except as provided in Section 7. The Manager shall be under no obligation to account to the Client in respect of (or share with the Client or inform the Client of) any such transaction or any benefit received by the Manager from any such transaction (including, for the avoidance of doubt, management and/or incentive fees).

7. **Allocation of Opportunities.**

The Manager shall act in a fair and reasonable manner in allocating investment and trading opportunities between the Accounts and any other account over which the Manager or an affiliate exercises investment discretion (collectively with the Accounts, the "Renaissance Accounts"). In furtherance of the foregoing, the Manager may consider participation by the Accounts in all appropriate opportunities within the purpose and scope of the Accounts' objectives, and the Manager may evaluate such factors as it considers relevant in determining whether a particular situation or strategy is suitable and feasible for the Accounts (which factors may, but need not, include the capital available for investment at any particular time, the nature of the opportunity in the context of the Accounts' other positions at the time, the liquidity of the investment relative to the needs of the Accounts, the transaction and borrowing costs involved and the tax consequences of the investment). When the Manager determines that it would be appropriate for the Renaissance Accounts to participate in an investment opportunity, the Manager shall, to the extent practicable, execute orders on a basis which is equitable.

8. **Access to Information.**

(a) The Manager will arrange for the Client to be furnished with confirmations for all transactions for the Accounts.

(b) Daily trades sheets with a summary of the day's trades must be sent to the Client each day (in electronic or other written form) regardless of the activity in the Accounts.

(c) Within three (3) Business Days after the end of each calendar month, the Manager shall transmit to the Client at its principal office a monthly valuation report stating as of the close of business on the last Business Day of such calendar month the value of Accounts Assets and any associated liabilities in the Accounts.

(d) The Manager shall give immediate written notice to the Client in the event that none of Jim Simons, Henry Laufer, Peter Brown and Bob Mercer (the "Key Men") remains actively involved in the daily supervision of transactions and positions in the Accounts.

(e) The Manager shall furnish such information as the Client may reasonably request to monitor compliance with the Investment Guidelines, subject to the Manager's fiduciary and legal obligations (including obligations having the force of law).

(f) The Manager shall furnish the additional information required pursuant to this Agreement, subject to the Manager's fiduciary and legal obligations (including obligations having the force of law).

(g) The Manager shall retain, for a period of at least two years, copies of any documents generated or received by the Manager in the ordinary course of business pertaining to the financial condition of the Accounts or to the compensation payable to the Manager under this Agreement. At the request of the Client, the Manager shall afford to the Client's independent auditors reasonable access to such documents during customary business hours and shall permit the Client's auditors to make copies thereof or extracts therefrom at the expense of the Client.

(h) Promptly following termination of the Agreement, the Manager shall furnish to the Client a copy of all relevant documentation in the Manager's possession concerning rights, privileges and obligations relating to any open Accounts positions at the time of such notice of termination.

9. Scope of Liabilities.

Notwithstanding anything to the contrary herein, the Manager shall not be liable to the Client for any act or omission in connection with the performance of the Manager's services hereunder, other than as a result of its gross negligence, bad faith, material violation of applicable law or material breach of any of the terms of this Agreement (including the Investment Guidelines). Nothing herein shall be construed to limit the provisions of Section 3(c) above.

10. Agent.

For all purposes of this Agreement, the Manager shall be an agent and not an employee of the Client and nothing in this Agreement shall be construed as making the Client a partner or co-venturer with the Manager or any of its affiliates or other clients. Except as provided in this Agreement, the Manager shall not have any authority to bind, obligate or represent the Client.

11. Confidentiality.

Subject to the Manager's duty to comply with any demand of any self-regulatory, regulatory, judicial or taxing authority having jurisdiction over it, or as necessary in dealing with trading counterparties for the Accounts, neither the Manager nor the Client shall disclose or use for any purpose unrelated to this Agreement, and each shall preserve the confidentiality of, all information pertaining to the Accounts, the terms of this Agreement, the Manager's advice with respect to the Accounts and other non-public information furnished by the Manager to the Client or by the Client to the Manager, in either case, hereunder, and the Manager's other actions in respect thereof; provided, however, that (i) the Manager's composite performance record may include the results of the Accounts' trading and (ii) Client and Manager may disclose such information to their respective lawyers or accountants (or similar professional, but not a financial or investment advisor), on a "need-to-know" basis, in connection with advice directly related to the entry, operation or enforcement of this Agreement provided that such person agrees, in writing, not to disclose such information. Notwithstanding anything to the contrary herein, any party to this Agreement (and any employee, representative, or other agent of any party to this Agreement) may disclose to any and all persons, without limitation of any kind, the tax treatment and tax structure of the transactions contemplated herein and all materials of any kind (including opinions or other tax analyses) that are provided to it relating to such tax treatment and tax structure (but no other details regarding matters covered by this Agreement, including, without limitation, the identities of the parties).

12. Representations and Warranties.

(a) Each of the parties to this Agreement hereby represents that it is duly authorized and empowered to execute, deliver and perform this Agreement and that such action does not conflict with or violate any provision of law, rule or regulation, contract, deed of trust, or other instrument to which it is a party or to which any of its property is subject, and that this Agreement is a valid and binding obligation of such party, enforceable against it in accordance with its terms.

(b) The Manager represents and covenants that it has and will maintain all necessary governmental and regulatory licenses, approvals and/or exemptions to provide the services contemplated herein and such memberships in self-regulatory organizations as may be required by law.

(c) Client is not, and at all times during the term hereof shall not be, (i) an employee benefit plan (an "ERISA Plan"), as defined in Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), subject to Title I of ERISA or Section 4975 of the Internal Revenue Code of 1986, as amended or (ii) a person acting on behalf of an ERISA Plan, and where the Client accepts ERISA Plan assets, the aggregate of the interests in the Client's assets held by the employee benefit plans will always be less than the threshold at which the Client will be deemed to hold assets of an ERISA Plan.

(d) Client represents and covenants that it is and will remain for the term of this Agreement a "qualified eligible person," as such term is defined in Rule 4.7 under the Commodity Exchange Act. Client hereby consents to the Accounts being treated as "exempt accounts" pursuant to the provisions of Rule 4.7.

13. Termination.

(a) This Agreement shall commence as of the Effective Date and shall continue in effect until the date on which the Agreement is terminated.

(b) This Agreement shall be subject to termination by the Manager for any reason upon ten (10) Business Days prior written termination notice to the Client, and by the Client for any reason upon the later of (i) the sixtieth (60^{th}) calendar day, and (ii) the twentieth (20^{th}) Exchange Business Day immediately following the date on which the Client delivers a prior written termination notice to the Manager.

(c) The Client will have the right to terminate this agreement: (x)(i) for Cause (as defined below), or (ii) upon a Change in Tax Law (as such term is defined in the ISDA Master Agreement – (Multicurrency – Cross Border)) effected by a U.S. federal taxing authority, materially and adversely affecting the Client's interest in the Accounts managed under this Agreement, in each case at any time, by a written notice to the Manager specifying the grounds for such immediate termination, or (y) upon the occurrence of a Triggering Violation (as defined herein), by a written notice to the Manager specifying the grounds for termination for a Triggering Violation (as defined herein), provided that such notice pursuant to this clause (y) is delivered to the Manager not later than the close of business on the fifth Business Day immediately following the day on which the relevant Triggering Violation (as defined herein) occurs. This Agreement shall terminate immediately after a written notice pursuant to subsections 13(c)(x) or (y) above is delivered to the Manager.

(d) "Cause" means with respect to the Manager (i) a material violation of law, rule or regulation, (ii) intentional misconduct or gross negligence, (iii) a material breach of this Agreement (other than the Investment Guidelines), (iv) none of the Key Men is employed by the Manager, (v) the loss of any material license or revocation or involuntary removal of any regulatory authority of the Manager for any reason, (vi) a material violation by the Manager of the Investment Guidelines, (vii) a Termination Event or an Event of Default as defined under the Prime Brokerage Agreements between the Client and the Custodians which causes liquidation of the Accounts' positions, (viii) the Accounts Equity, as defined in the Investment Guidelines, is less than or equal to One Hundred Seven Million Dollars (US$107,000,000), or (ix) any proceeding is instituted against the Manager, either by the Manager or any other party, with or without its consent, seeking to adjudicate it bankrupt or insolvent, or seeking dissolution, liquidation, winding up, reorganization, arrangement, adjustment, protection, relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, custodian or other similar official for the Manager, or for any substantial part of its property or an order for relief shall be entered against the Manager, under any applicable bankruptcy or insolvency laws.

(e) "Triggering Violation" means the last Trading Violation in a series of non-material Trading Violations occurring during any continuous six-month period, which series of Trading Violations, when considered as a whole, constitutes, in the reasonable judgment of the Client, a material violation of the Investment Guidelines. (For purposes of this Section 13(e), the term "Trading Violation" means a violation by the Manager of the Investment Guidelines resulting solely by reason of, and at the time of, the execution of any specific transaction within the Accounts and notwithstanding that any such violation may have been cured pursuant to Section 3(c) or otherwise.)

(f) Upon termination of this Agreement, the Manager, at the written request of the Client, shall conduct an orderly disposition of all Accounts positions (other than any positions that have been withdrawn from the Accounts following termination), with the objective of minimizing market impact in preserving the remaining equity value of the Accounts using reasonable best efforts, given the market conditions existing at the time. Solely for the purpose of complying with such a request (but not for the purpose of making new purchases or commitments which are not intended to reduce risk with respect to Accounts Assets), the authority granted to the Manager hereunder shall remain in effect for the duration of any period during which the Manager is winding up the Accounts. Termination of this Agreement shall be without prejudice to the completion of transactions already initiated. The Manager shall make any individual identified in Section 8(d) hereof, who is employed by the Manager at that time, reasonably available to consult periodically with the Client regarding the disposition of remaining Accounts positions.

(g) The Manager hereby acknowledges that in the event the Client terminates this Agreement for Cause or a Triggering Violation, then immediately upon such termination, the Client may elect in its sole discretion to replace the Manager with another investment manager with respect to the Accounts, which investment manager shall have all the rights and obligations of the Manager under this Agreement.

(h) Notwithstanding termination of this Agreement, (i) except as otherwise expressly provided herein, the provisions of this Agreement shall remain in effect for as long as any positions remain in the Accounts for disposition by the Manager at the Client's request or by Client pursuant to subsection 13(i) below, and (ii) the provisions of Sections 9 and 11 hereof shall survive such termination and disposition of all Accounts positions.

(i) If (i) the Client replaces the Manager with another investment manager with respect to any of the Accounts, (ii) the Client otherwise assumes management of any of the Accounts, or (iii) the Manager is prevented, for any reason, from effectively managing any of the Accounts and, in each case, unless otherwise agreed to in writing by the Manager (which for the avoidance of any doubt does not refer to any replacement manager appointed by the Client), the Client shall cause the commencement of an orderly liquidation and reduction to USD cash of the assets and financial positions (whether long or short and including Synthetic Positions) then credited to, included or deemed included within the Accounts (the "Designated Positions") commencing on the date any of the foregoing events first occurs (the "Trigger Date") and ending on the Valuation Date, with the objective of minimizing risk and preserving the equity value of the assets and financial positions then credited to, included or deemed included within the Accounts and in the manner set forth below (the "Liquidation" and the "Liquidation Period", respectively). The Liquidation shall be effected in an "equal dollar weighted" manner in approximately equal proportions over the Liquidation Period, such that approximately 25% of the financial positions credited to, included or deemed included within the Accounts at the beginning of the Liquidation Period are liquidated on each Valuation Exchange Business Day during such period, and with due regard to effecting proportionate reductions of "long" positions and corresponding "short" positions, provided, however, that the Client may effect such liquidation in a different commercially reasonable manner that would minimize risk and preserve the equity value of the Designated Positions, if and to the extent so consented to by the Manager (which for the avoidance of any doubt does not refer to any replacement manager appointed by the Client); provided however, that no such consent of the Manager will be required in the event that on the Trigger Date the Accounts Equity, as defined in the Investment Guidelines, is less than or equal to One Hundred Seven Million Dollars (US$107,000,000).

14. Certain Definitions.

(a) "Business Day" means any day on which banks are open for business in New York City.

(b) "Exchange" means each exchange or quotation system, if any, which constitutes with respect to any of the Designated Positions, the principal exchange or quotation system on which such Designated Position is actively traded, as reasonably determined by the Client.

(c) "Exchange Business Day" means any day that is (or, but for the occurrence of a Trading Suspension would have been) a trading day on each Exchange other than a day on which trading on any such Exchange is scheduled to close prior to its regular weekday closing time.

(d) "Valuation Date" means the earlier of (i) the 4th Valuation Exchange Business Day after the Trigger Date and (ii) the 9th Business Day after the Trigger Date.

(e) "Valuation Exchange Business Day" means an Exchange Business Day during which there has not been (i) a Trading Suspension in securities that comprise, on the commencement of such day, more than 20 percent in value of (A) the long Designated Positions, or (B) the short Designated Positions, in each case, then credited to, included or deemed included within the Accounts, or (ii) an event of force majeure beyond the control of the Client (or any Affiliate thereof) occurring after the date hereof, preventing the execution of transactions within the Accounts or making the execution of such transactions impossible or impracticable.

(f) "Trading Suspension" means, with respect to any security, a suspension of trading (by reason of movements in price exceeding limits permitted by the relevant Exchange or otherwise) on the relevant Exchange for a period of more than one (1) hour.

15. **Notices.**

Any communications or notices provided for in this Agreement shall be sent to the Manager and to the Client in writing to the following addresses, or to such other addresses as the parties may direct by written notice hereunder:

If to the Manager:

Renaissance Technologies Corporation
800 Third Avenue
New York, NY 10022

Attention: Mark Silber

Telephone: (212) 486-6780
Telecopier: (212) 758-7136
E-mail: silber@rentec.com
with copies to:
sdaffron@rentec.com
carla@rentec.com

mercer@rentec.com
mikeo@rentec.com
tkerns@rentec.com

with a copy to:

Renaissance Technologies Corporation
600 Route 25A
East Setauket, NY 11733

Attention: Peter Brown

Telephone (631) 444-7010
Telecopier: (631) 689-4495
E-mail: peter@rentec.com

If to the Client:

Palomino Limited
c/o Barclays Bank PLC, New York Branch
200 Park Avenue
New York, New York 10166

Attention: John Stracquadanio

Telephone: (212) 412-2180
Telecopier: (212) 412-7463

All communications or notices sent to the addresses or telecommunication numbers provided above (or as otherwise directed by the parties by notice hereunder) shall be deemed to have been duly given on (i) the date of receipt if delivered by hand; (ii) the date five (5) Business Days after posting if transmitted by first class mail, postage prepaid; (iii) the date of receipt if transmitted by telecopier or electronic mail; or (iv) the date one (1) Business Day after delivery to an internationally recognized courier service, whichever shall first occur.

16. Assignment.

This Agreement may not be assigned, nor may any obligations hereunder be transferred or delegated, by either party without the prior written consent of the other party.

17. Modification; Waiver.

Except as otherwise expressly provided herein, this Agreement shall not be supplemented or amended, nor shall any provision of this Agreement be considered modified or waived, unless evidenced by a writing signed by both parties.

18. Governing Law.

(a) This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

(b) All transactions for the Accounts shall be subject to all applicable rules, regulations and customs of any exchange or market and its clearinghouse on which transactions are executed and to all applicable government acts or statutes and to the rules and regulations thereunder. Except as expressly provided herein to the contrary, the Manager shall not be liable to the Client as a result of any actions taken to comply with such rules, regulations or customs.

19. Consent to Jurisdiction; Arbitration.

The parties hereto agree that any action or proceeding arising directly or indirectly in connection with, out of, related to or from this Agreement, any breach hereof or any transaction covered hereby, shall be resolved, whether by arbitration or otherwise, within the County of New York, City of New York and State of New York. Accordingly, the parties consent and submit to the jurisdiction of the federal and state courts and any applicable arbitral body located within the County of New York, City of New York and State of New York. The parties further agree that any such action or proceeding brought by either party to enforce any right, assert any claim or obtain any relief whatsoever in connection with this Agreement shall be brought by such party exclusively in federal or state courts, or, if appropriate, before any applicable arbitral body, located within the County of New York, City of New York and State of New York.

The Client hereby irrevocably appoints Barclays Bank PLC, New York Branch, at 200 Park Avenue, New York, NY 10166, to receive, for it and on its behalf, service of process in any proceedings.

20. Client Receipt of Manager's Brochure.

The Client hereby acknowledges receipt of the Manager's current Form ADV Part II or brochure statement in lieu thereof.

PURSUANT TO AN EXEMPTION FROM THE COMMODITY FUTURES TRADING COMMISSION IN CONNECTION WITH ACCOUNTS OF QUALIFIED ELIGIBLE PERSONS, THIS ACCOUNT DOCUMENT IS NOT REQUIRED TO BE, AND HAS NOT BEEN, FILED WITH THE COMMISSION. THE COMMODITY FUTURES TRADING COMMISSION DOES NOT PASS UPON THE MERITS OF PARTICIPATING IN A TRADING PROGRAM OR UPON THE ADEQUACY OR ACCURACY OF COMMODITY TRADING ADVISOR DISCLOSURE. CONSEQUENTLY, THE COMMODITY FUTURES TRADING COMMISSION HAS NOT REVIEWED OR APPROVED THIS TRADING PROGRAM OR THIS ACCOUNT DOCUMENT.

[Signature page follows]

Kindly confirm that this Agreement accurately reflects our entire understanding by signing and returning a counterpart of this letter.

Very truly yours,

PALOMINO LIMITED

By: ______________________
Name: LAUREN MALAFRONTE
Title: DIRECTOR

Confirmed as of the Effective Date:

RENAISSANCE TECHNOLOGIES CORPORATION

By: ______________________
Name:
Title:

Kindly confirm that this Agreement accurately reflects our entire understanding by signing and returning a counterpart of this letter.

Very truly yours,

PALOMINO LIMITED

By: ____________________________
Name:
Title:

Confirmed as of the Effective Date:

RENAISSANCE TECHNOLOGIES CORPORATION

By: ____________________________
Name: MARK SILBER
Title: VICE PRESIDENT

Annex A

Investment Guidelines

A. Permitted Investments:

The Accounts shall consist solely of:

(i) Cash;

(ii) Long and short positions in shares of stock, equity securities, American depository receipts, global depository receipts and similar equity-related financial instruments, and other derivative and financial positions as may be agreed upon by the Client and the Manager from time to time, actively traded in the countries listed below or in any other countries as may be permitted by the Client and the Custodians from time to time upon the recommendation of the Manager (collectively, and together with derivatives and other financial positions authorized pursuant to Section A(iv) hereof, "Permitted Securities" and "Permitted Equity Markets", respectively):

Argentina
Australia
Austria
Belgium
Brazil
Canada
Denmark
Finland
France
Germany
Hong Kong
Indonesia
Ireland
Italy
Japan
Malaysia
Mexico
Netherlands
New Zealand
Norway
Philippines
Portugal
Russia
Singapore
South Africa
South Korea
Spain
Sweden
Switzerland
Taiwan
Thailand
Turkey
United Kingdom
United States;

(iii) Any transaction that the Manager designates for execution in accordance with these Investment Guidelines and that is not timely executed, or is not executed, for any reason or for no reason whatsoever, will be treated, for purposes of this Agreement, as if it were actually timely executed in accordance with such designation of the Manager and, therefore, (i) any stock, securities and other financial positions (whether long or short) that would have been credited to or included in the Accounts if such transaction were actually timely executed in accordance with such designation of the Manager will be treated as included in the Reference Positions Account as of the date (and time) designated by the Manager for the execution of the relevant transaction (a "Synthetic Position") and will be treated as disposed of or otherwise terminated on the day (and time) so designated by the Manager, as applicable; (ii) any stock, securities and other financial positions (whether long or short) that would have been disposed of or otherwise terminated if such transaction were actually timely executed in accordance with such designation of the Manager shall be treated as if actually disposed of or otherwise terminated, and excluded from the relevant Account, on the day (and time) so designated by the Manager; and (iii) any dividend, interest or any other income that would have been received or accrued on or in respect of Synthetic Positions if such transaction were actually timely executed in accordance with such designation of the Manager will be credited to the relevant Account in which such transaction would have been executed.

(iv) Other derivatives and financial positions substantially relating or referring, directly or indirectly, to Permitted Securities, as may be agreed upon by the Manager and the Client in writing from time to time, which Permitted Securities so designated shall be deemed included in the Reference Positions Accounts for all purposes.

B. Position Limits:

The limitations set forth below shall apply to the aggregate position or positions, as applicable, credited to, included or deemed included in the Accounts.

1. The value of the aggregate position in any security, on any day that is a trading day on the principal exchange on which such relevant security is traded (a "Trading Day"), determined at the close of trading on such Trading Day, will not exceed the lesser of:

(i) The greater of (A) 3 (three) times the arithmetic mean of the Daily Trading Volumes (as defined below) during the first 10 Trading Days immediately preceding such day in the relevant security and in other related securities of the same issuer, and (B) 5% of the Accounts Equity, as defined below;

(ii) 1.5% (or such greater percentage as notified by the Client to the Manager from time to time) of the value of the total outstanding shares of stock and other related securities of the issuer of the relevant security; and

(iii) 55% of Accounts Equity.

For purposes of this Section B.1, the term Daily Trading Volume shall mean, with respect to any security and any Trading Day, the product of (A) the number of such securities traded on such Trading Day, multiplied by (B) the corresponding closing price for such security on such Trading Day.

2. The value of the aggregate long positions in securities of issuers with the ticker symbols listed on Schedule 1 attached hereto (as it may be amended from time to time by mutual agreement of the parties) shall not exceed on any day GBP 60 million or such other amount as may be agreed by the Client and the Manager.

3. No positions (whether long or short) in securities issued by Barclays Bank PLC or its affiliates, as listed in Annex A, Schedule 2 attached hereto, will be included in the Accounts. Client will be responsible for advising the Manager of any changes to the list of securities issued by Barclays Bank PLC or its affiliates which can not be traded.

4. Client will be responsible for advising the Manager, on a daily basis, in an electronic format that is accessible by the Manager, of any securities that are restricted to (i) liquidation only or (ii) no change in the current position, as listed by security and one of ISIN, SEDOL or CUSIP.

5. No positions that consist of equity in pass-through entities (for U.S. tax purposes), including passive foreign investment companies (as defined in Section 1297 of the Internal Revenue Code of 1986, as amended), listed (by security and ticker symbol) in Annex A, Schedule 3, will be included in the Accounts. Client will be responsible for advising the Manager, on a daily basis, of any changes to Annex A, Schedule 3, in an electronic format that is accessible by the Manager. Any additions to the list will cause the Manager to liquidate any positions in a reasonable period of time, as determined by the Manager in its sole discretion.

C. Trading Limits:

1. All borrowing, financing, or other leveraging transaction will be effected within the Accounts only with the Custodians (or any Affiliate thereof) pursuant to the Prime Brokerage Agreements (or any successor thereto).

2. The value of L + S, as defined below in Section C.3 to these Investment Guidelines, shall not be, at any time, greater than 500% of the Base Amount, as defined below in Section C.3 to these Investment Guidelines.

3. The Accounts Equity, as defined below, shall at no time be less than the greater of (i) 5% of L + S, and (ii) the sum of (A) 4.166% of L + S, plus (C) 20.833% of the absolute value of L - S, where:

"L" means, at any time, the sum of the absolute values of all long positions credited to, included or deemed included within the Accounts;

"S" means, at any time, the sum of the absolute values of all short positions credited to, included or deemed included within the Accounts;

"Base Amount" means USD 5,000 million; and

"Accounts Equity" means the sum of (i) USD 1,070 million, plus (ii) the cumulative profits, whether realized or unrealized, in respect of Permitted Securities, Synthetic Positions and other financial positions (whether long or short), credited to, included or deemed included within the Accounts at any time ("Accounts Positions"), minus (iii) the cumulative losses, whether realized or unrealized, in respect of Accounts Positions included in the Accounts at such time, minus (iv) the amount of any net profits withdrawn from the Accounts by the Client with the consent of the Manager.

D. Sector Limits:

1. The sum of (a) the absolute value of all long positions plus (b) the absolute value of all short positions, in each case credited to, included or deemed included within the Accounts which relate to one particular sector (a "Gross Sector Position") shall not exceed 32% of the sum of L plus S.

2. Subject to Section D.1. above, if any individual Gross Sector Position exceeds 27% of the sum of L plus S, then no other Gross Sector Position shall exceed 20% of the sum of L plus S. If the largest Gross Sector Position is less than or equal to 27% of the sum of L plus S, then each other Gross Sector Position shall not exceed 27% of the sum of L plus S.

For purposes of this section, the definitions in the US portion of the Global Barra model BIME2.1 shall be used to identify which positions belong to which "sector". Each position shall first be assigned to the single "industry" within its local market to which it has the highest exposure according to the Barra risk matrix and, in the case of non-U.S. securities, further mapped to one industry in the Barra USE3L Model. If a position is equally exposed to 2 or more industries and the amount of such exposures is higher than any other exposure for such position, then the position shall belong to the industry that ranks first alphabetically. Once identified with an industry, the position shall belong to the sector associated with that industry in the US portion of the Global Barra model BIME2.1.

E. Legal Limits:

All transactions will comply with applicable laws and regulations. The Manager shall not be in breach of these Investment Guidelines in respect of any law or regulation if Manager could not reasonably foresee, and Client has not notified Manager in writing, that such law or regulation would be applicable to Client.

F. General Strategy: Long/Short Statistical Arbitrage

SCHEDULE 1

The parties agree that the ticker symbols listed below comprise Annex A, Schedule 1 to the Amended and Restated Investment Management Agreement between Palomino Limited and Renaissance Technologies Corporation dated December 6, 2006 and replace any prior agreement related to the same subject matter.

sedol	prod_code	security
6097976	SA0007879113	ABBEY NATIONAL PLC 9.3375 PERPETUAL RG
2013233	US0103171056	ALLIED IRISH BANKS LTD EUR 0.32
6708289	INE428A01015	NORTHERN ROCK PLC GBP 0.25
0038614	GB0000386143	KENSINGTON GROUP PLC GBP 0.1
2825052	US0185351048	ANGLO IRISH BANK CORP ORD EUR0.32
2619578	US0192051037	BRADFORD & BINGLEY PLC GBP 0.25
4235864	GRS015013006	STANDARD CHARTERED PLC USD 0.5
4022624	DK0010116771	HSBC HOLDINGS PLC USD 0.5
2023492	US0239121082	PARAGON GROUP OF COMPANIES GBP 0.1
2024086	US0236131027	ROYAL BK OF SCOT GRP PLC GBP 0.25
2596950	US0277451086	STANDARD CHARTERED BANK 7.375 PERPETUAL RG
B0LX483	US02407E1047	LLOYDS TSB GROUP PLC GBP 0.25
2761543	US0243431055	BANCO SANTANDER CHILE SA CLP NPV
2935564	US03058P1093	BANK OF SOUTH CAROLINA USD NPV
2906850	US03074A1025	CITIZENS SOUTH BANKING CORPORATION USD 0.01
2029467	US0328391026	AMSOUTH BANCORP USD 1
6580368	INE434A01013	ALABAMA NATIONAL BANCORPORATION USD 1
0198789	IE0001987894	BBVA BANCO BHIF CLP NPV
2586780	US0358481002	AMCORE FINANCIAL USD 0.22
6045823	JP3106000007	AMERIANA BANCORP USD 1
2629179	US0376751055	IBT BANCORP INC USD 1.25
2051374	US0427441029	PLUMAS BANCORP USD NPV
6088334	MA0000010688	BANCO INTERNACIONAL DEL PERU PEN 1
2647256	US0504731078	ANCHOR BANCORP WISCONSIN INC USD 0.1
6065586	AU000000ANZ3	UNION BANKSHARES INC USD 2
6071668	BH0004648950	DIME COMMUNITY BANCSHARES INC USD 0.01
7128541	IT0001334587	FIRST SOUTH BANCORP INC/WASHINGTON NC USD 0.01
5528604	IT0001254884	SOUTH STREET FINANCIAL CORP USD NPV
5528596	IT0001254892	ABC BANCORP USD 1
4116099	IT0000066123	SKY FINANCIAL GROUP INC USD NPV
5586259	IT0000060878	FNB CORPORATION/PA USD 0.01
6432771	MA0000011173	PULASKI FINANCIAL CORP USD 0.01
7622225	IT0003487029	ARROW FINANCIAL CORP USD 1
5501906	ES0113211835	ASTORIA FINANCIAL CORPORATION USD 0.01
5777570	ES0113211835	BANCSHARES OF FLORIDA, INC. USD 0.01
5071517	IT0001007209	CAPITAL CROSSING BANK USD 1
5724587	IT0001073045	ASSOCIATED BANC-CORP USD 0.01
2078782	US05945F1030	BANCO DE CREDITO DEL PERU PEN 1
5812493	PTBCP0AM0007	BANCO DE CREDITO E INVERSIONES (BCI) NPV
2080174	PEP116001004	BANCO LATINOAMERICANO USD NPV
5458392	ES0113140133	BANK OF MONTREAL CAD NPV
2075039	COP092521006	BANK OF HAWAII USD 0.01

sedol	prod_code	security
5458411	ES0113243135	BANCORPSOUTH INC USD 2.5
2100845	CLP0939W1081	BBVA BANCO FRANCES SA ARS 1
5458433	ES0113381133	VENEZOLANO DE CREDITO SA BANCO UNIVERSAL VEB500
2067854	PEP120001008	BANCO DE BOGOTA COP 10
2069355	CLP321331116	BANK OF GRANITE USD 1
5457849	ES0113515136	BANCO SANTANDER COLOMBIA SA COP 525.11
2359380	ARP096691133	BANK OF MONTREAL CAD NPV
5721759	PTBPI0AM0004	BANK OF NOVA SCOTIA CAD NPV
5857836	ES0113790531	BANCO SUPERIOR S.A. COP 64
2107727	ARBRIO010194	BANCO UNION COLOMBIANO (BUC) COP 10
5620704	ES0113580239	NATIONAL BANK OF CANADA CAD NPV
2026769	PEP148001006	LAURENTIAN BANK OF CANADA CAD NPV
2069485	PAP169941328	BANCFIRST CORP USD 1
2080505	ARBANS010010	BANCO CONTINENTAL PERU 1
B05BRL7	US05969A1051	BANCO MACRO BANSUD SA ARS 1
2624668	US0596901076	BANKUNITED FINANCIAL CORP USD 0.01
2053369	US05976U1025	UNITY BANCORP INC USD NPV
2570482	US05978R1077	BANCO DE OCCIDENTE S.A. COP 30
5705946	ES0113900J37	BANK OF THE OZARKS USD 0.01
2000257	CLP1506A1070	NET BANK INC USD 0.01
2075675	COP150651083	BANESCO BANCO UNIVERSAL S.A.C.A. COM VEB100
2077273	COP356111056	BANKATLANTIC BANCORP INC USD 0.01
2077284	COP151631019	PARKE BANCORP INC USD 0.1
2102391	COB07AO00048	MERCANTIL SERVICIOS FINANCIEROS C.A. VEB150 CL'A'
6727121	ID1000096605	MERCANTIL SERVICIOS FINANCIEROS C.A. VEB150 CL'B'
B00ZNP0	ID1000098007	BNCCORP INC USD 0.01
5166758	PLBOS0000019	BANCO DE CHILE CLP NPV
6468022	JP3152400002	BANCOLOMBIA SA COP 500
6074991	JP3699200006	CAPITAL CORP OF THE WEST USD NPV
6116462	TW0002836004	BANCO RIO DE LA PLATA 'B' ARS1
6075756	JP3251200006	BOK FINANCIAL CORPORATION USD 0.00006
2761554	US0635541099	CAMDEN NATIONAL CORP USD NPV
2076009	CA0636711016	RIVERVIEW BANCORP INC USD 0.01
6101855	US0605051046	JACKSONVILLE BANCORP INC/FL USD 0.01
5860618	US0605051046	CENTER FINANCIAL CORPORATION USD NPV
2007708	US0650661020	PROVIDENT FINANCIAL HOLDINGS USD 0.01
2073174	CA0636711016	INTERVEST BANCSHARES CORP USD 1
B05HHR1	US06423T1025	FIRST MARINER BANCORP INC USD 0.05
2085856	US0639041062	PATRIOT NATIONAL BANCORP USD 2
6074968	PHY0967S1694	MAIN STREET BANKS INC USD NPV
6076351	JP3975000005	TIMBERLAND BANCORP USD 0.01
6545248	ID1000092703	SANDY SPRING BANCORP INC USD 1
4640048	US0644512065	NORTHWEST BANCORP INC USD 0.1
5473113	PLPEKAO00016	SYNOVUS FINANCIAL USD 1
B0K82Z2	US0658201027	LIBERTY BELL BANK USD 5
6986449	JP3955400001	CVB FINANCIAL USD NPV
B038282	US06643P1049	SOUTHCOAST FINANCIAL CORPORATION USD NPV
5107854	DE0008023227	CITY HOLDING COMPANY USD 2.5
2681492	US06646R1077	UNIONBANCAL CORPORATION USD 1
7153639	PLBZ00000044	CANADIAN IMPERIAL BANK OF COMMERCE CAD NPV
2088402	US0659085015	PROVIDENT FINANCIAL SERVICES USD 0.01

sedol	prod_code	security
6158118	TH0041010008	RADIAN GROUP INC USD 0.001
2081003	US06652B1035	CAPITOL BANCORP LTD. USD NPV
2346003	US06652V1098	COLUMBIA BANKING SYSTEMS INC USD NPV
2618111	US0668491006	THE SOUTH FINANCIAL GROUP INC USD 1
2964449	US05566T1016	CASCADE FINANCIAL CORPORATION USD 0.01
2100522	US0559361086	COMPASS BANCSHARES INC USD 2
2770442	US0966111082	COMMUNITY SHORES BANK CORP USD NPV
5324783	CH0007030890	CENTRAL VIRGINIA BANKSHARES INC USD 1.25
4149396	CH0001642682	CENTURY BANCORP INC USD 1
2763475	US1080301070	CAPITAL CITY BANK GROUP INC USD 0.01
2277556	US14149F1093	CANADIAN WESTERN BANK CAD NPV
2419820	US1452821093	CHEMICAL FINANCIAL CORP USD 1
2413026	US15346Q1031	COMMERCE BANCORP INC USD 1
6181459	TW0002827003	CHITTENDEN CORP USD 1
2492917	US19623P1012	CITIZENS BANKING CORPORATION USD NPV
2420736	US33741H1077	CITY NATIONAL CORPORATION/BEVERLY HILLS CA USD 1
2354051	US3025091048	SUMMIT BANCSHARES INC (TEXAS) USD 1.25
2041308	US3025201019	COMMUNITY BANKS INC USD 5
2441384	US3029301021	COMMERCIAL BANKSHARES INC/FL USD 0.08
2329327	US3025261088	COMERICA INC USD 5
2548616	US5528481030	COMMERCE BANCSHARES INC USD 5
6068961	JP3126800006	CLIFTON SAVINGS BANCORP INC USD 0.01
4076836	IT0000072618	FRANKLIN BANK CORPORATION USD 0.01
4076847	IT0000072626	COMMUNITY BANK SYSTEMS NY USD 1
2084916	COB23AO00045	HARBOR FLORIDA BANCSHARES USD 0.1
6523341	PHY0561Q1068	INDYMAC MORTGAGE HLDGS INC USD 0.01
7095388	ES0113860532	COMMUNITY BANK SHARES OF INDIANA USD 0.1
5679223	ES0113980330	INDEPENDENCE COMMUNITY BANK CORP USD 0.01
5458165	ES0113997136	COUNTRYWIDE FINANCIAL CORP USD 0.05
4115740	IT0001041000	CENTRAL PACIFIC FINANCIAL CORP USD NPV
5608636	IT0001281374	GREATER BAY BANCORP INC USD NPV
4072533	IT0001005070	CREDICORP LIMITED USD 5
2328595	BRBBASACNOR3	CULLEN FROST BANKERS USD 0.01
4072919	ES0113440038	NATIONAL BANK OF CANADA CAD NPV
4058061	PTBES0AM0007	INTERNATIONAL BANCSHARES CORP USD 1
2076281	CA0641491075	DOWNEY FINANCIAL CORPORATION COM USD0.01
2957665	CA0641491075	COBIZ INC USD 0.01
6657983	JP3194600007	DELTA FINANCIAL CORPORATION USD 0.01
6139652	TW0005818009	CATHAY BANCORP USD 0.01
6076243	AU000000BOQ8	FRONTIER FINANCIAL CORP USD NPV
6359933	TH0023010R10	STERLING FINANCIAL CORP(PA) USD 5
6075938	TH0023010000	SUSSEX BANCORP USD NPV
6075949	TH0023010018	POCAHONTAS BANCORP INC USD 0.01
6073341	BH0004659916	FIRST FINANCIAL BANKSHARES INC USD 10
6099778	INE028A01013	REPUBLIC BANCORP INC/MI NPV
6075648	HK0023000190	CARDINAL FINANCIAL CORPORATION USD 1
6075693	JP3804000002	FIRSTBANK NW CORP USD 0.01
2075589	US0624011047	NORTH CENTRAL BANCSHARES INC USD 0.01
7376492	GRS004013009	CRAZY WOMAN CREEK BANCORP USD 0.1
4083610	CH0001473559	SALISBURY BANCORP INC COM USD0.10
7097384	CH0009236461	BANK OF AMERICA CORPORATION USD 0.01

sedol	prod_code	security
B01C1N4	US07262L3096	FIRST BANCORP PUERTO RICO USD 1
2830904	US0549371070	PEAPACK GLADSTONE FINANCIAL CO USD NPV
7378261	IT0003262513	PROSPERITY BANCSHARES INC USD 1
2018131	CLP102411004	SANTANDER BANCORP USD 2.5
2074371	ARP125991090	FLAGSTAR BANCORP USD 0.01
2783462	US0733341046	FARMERS CAPITAL BANK CORP USD 0.125
B015LD3	US0845972027	BANCO DO BRASIL S.A. BRL NPV
2606570	US0846801076	FIRST FED BANCSHARES OF ARKANSAS USD 0.01
5565258	DE0008029000	FNB FINANACIAL SERVICES CORP USD 1
5679546	CH0009691608	FIRST FED FINANCIAL OF KENTUCKY USD 1
2436960	US0878661091	FANNIE MAE USD NPV
2113575	US0553842008	EPIC BANCORP USD NPV
4082491	AT0000625504	CORPBANCA ADR REP 5000 ORD
4132017	AT0000625538	FIFTH THIRD BANCORP USD NPV
4114468	AT0000624739	SYNERGY FINANCIAL GROUP INC USD 0.1
6536112	HK2388011192	FIRSTMERIT CORP USD NPV
7309681	FR0000131104	M&T BANK CORPORATION USD 0.5
2109091	US05561Q2012	TRUSTMARK CORP USD NPV
2081133	US1011191053	FIRSTFED FINANCIAL CORP USD 0.01
0222815	GB0002228152	FIRST FINANCIAL HOLDINGS INC USD 0.01
6673967	TW0005810006	FIRST MIDWEST BANCORP USD 0.01
2967675	US11373M1071	FIRST HORIZON NATIONAL CORP USD 0.625
2494515	US12466Q1040	FIRST REPUBLIC BANK SAN FRANCISCO USD 0.01
7138636	FR0000044547	FIRST SOURCE CORP USD NPV
2164517	US1326181096	WACHOVIA CORPORATION USD 3.333
2116659	US1330341082	FIRST MERCHANTS CORP USD NPV
2170525	CA1360691010	DORAL FINANCIAL CORP USD 1
2418872	CA1360691010	FIDELITY BANCORP INC/PENN USD 0.01
2188283	CA13677F1018	BANNER CORPORATION USD 0.01
6580012	INE476A01014	FLAG FINANCIAL CORP USD 1
2654030	US1397931031	FIDELITY SOUTHERN CORPORATION USD NPV
B017WP8	US1396741050	FIRST STATE BANCORPORATION USD NPV
2186759	US1396741050	FIRST CHARTER CORP USD NPV
2104096	US1400652020	BANK OF OAK RIDGE COM USD5
2676669	US1437851033	FIRST COMM'WTH FINL CORP PA USD 1
B058V38	US1442001020	FIRST WEST VIRGINIA BANCORP USD 5
2184236	US1471541086	FREMONT GENERAL CORP USD 1
2179179	US1472721083	FIRST FINANCIAL BANCORP USD NPV
2264235	US1491501045	FIRST NATIONAL LINCOLN CORP USD 0.01
B0LNTQ6	US1513453035	FMS FINANCIAL CORPORATION USD 0.1
2494485	US1514081017	FIRST CITIZENS BANCSHARES INC NRTH USD 1
2125224	US15146E1029	FIRST INDIANA CORP USD 0.01
2683313	US1556851004	FIRST MUTUAL BANCSHARES INC USD 1
2185552	US1557921046	FIRST OF LONG ISLAND CORP USD 0.1
2619675	US1524181096	FULTON FINANCIAL CORP USD 2.5
2185563	US1564321065	BANCO DE GALICIA Y BUENOS AIRES S.A DE C.V. 'B' ARS1
6187855	TW0002801008	FLUSHING FINANCIAL CORP USD 0.01
2287135	US12525D1028	FIRST FINANCIAL CORPORATION USD NPV
6198954	TW0002820008	FEDERAL AGRICULTURAL MORTGAGE CORPORATION USD 1
6190563	JP3511800009	GLACIER BANCORP USD 0.01
6190585	JP3512200001	GREAT AMERICAN BANCORP USD 0.01

sedol	prod_code	security
6431756	TW0002883006	GOLDEN WEST FINANCIAL CORPORATION USD 0.1
6310747	CN0005910772	GREATER DELAWARE VALLEY SAVINGS BANK USD 0.01
2194815	US1702281007	GOLD BANC CORP INC USD 1
6196594	JP3520000005	WILBER CORPORATION USD 0.01
6484493	HK0183011623	GREATER COMMUNITY BANCORP USD 0.5
2651592	US1746151042	FIRST REGIONAL BANCORP USD NPV
2740973	US17461R1068	MERCHANTS AND MANUFACTURERS BANCORPORATION INC USD
2618166	US1747151025	GREAT SOUTHERN BANCORPORATION INC USD 0.01
2644246	US17770A1097	S.Y. BANCORP INC USD NPV
2161778	US1778351056	HABERSHAM BANCORP USD 1
2619705	US1261281075	GRUPO AVAL ACCIONES Y VALORES COP 1
2837488	US1903541001	ATLANTIC SOUTHERN FINANCIAL GROUP INC USD 5
2257752	US1908971088	CAPITOL FEDERAL FINANCIAL USD 0.01
2619716	US1972311039	WEST BANCORPORATION USD NPV
2176608	US1972361026	FIRST FED BANCSHARES INC USD 0.01
2213204	US2005251036	CENTRAL FEDERAL CORPORATION USD 0.01
2655873	US2008451054	UNITED COMMUNITY FINANCIAL CORP USD NPV
2211598	US2016071084	MID-STATE BANKSHARES USD NPV
2003364	US20162L1052	HANCOCK HOLDING CO USD 3.33
6243898	EGS60121C018	ABIGAIL ADAMS NATL BANCORP USD 0.01
5975266	DE0005428007	COOPERATIVE BANKSHARES INCORPORATED USD 1
2493750	US2022171050	CARROLLTON BANCORP USD 1
2739034	US2208731032	META FINANCIAL GROUP INC USD 0.01
6215035	AU000000CBA7	CITIZENS & NORTHEN CORPORATION USD 1
6249799	HK0440001847	FIRST UNITED CORP USD 0.01
6367776	SG1J95892514	HARLEYSVILLE NATIONAL CORPORATION USD 1
6175203	SG1L01001701	GRUPO FINANCIERO BANORTE S.A. DE C.V. MXN NPV
2264116	US2479181057	NEW HAMPSHIRE THRIFT BANCSHARES USD 0.01
7255999	IE0072559994	FIRST NIAGARA FINANCIAL GROUP INC USD 0.01
2502559	US25037Y1091	PARK BANCORP INC USD 0.01
2496782	US2682531015	PAB BANKSHARES INC USD NPV
5654316	GRS323013003	PVF CAPITAL CORPORATION USD 0.01
B00K2L4	US2936681095	UNIONBANCORP INC (DEL) USD 1
5946842	FI0009008676	LAUREL CAPITAL GROUP INC USD 0.01
2334042	US2942501055	SUN BANCORP INC-NJ USD 1
6325279	PHY2299C1028	WESTBANK CORPORATION USD 2
5289837	AT0000652011	HF FINANCIAL CORP USD 0.01
7440621	AT0000652011	SUMMIT FINANCIAL CORP USD 2.5
2482468	US26884F1021	WINTRUST FINANCIAL CORP USD NPV
0019783	IE0000197834	HMN FINSANCIAL INC USD 0.01
4020684	IE0000197834	HINGHAM INSTITUTION FOR SAVINGS USD 1
2404172	US0488771041	COMMUNITY BANCORP INC USD 0.625
2590178	US0549481044	TEAM FINANCIAL INC USD NPV
2897211	US1537701021	INTEGRITY FINANCIAL CORP USD 1
2230946	US1547601021	PENNSYLVANIA COMMERCE BANCORP INC USD 1
2199111	US1785661059	HOME FEDERAL BANCORP USD NPV
2239556	US2298991090	BEVERLY HILLS BANCORP INC USD 0.01
6251147	JP3483800003	PEOPLES-SIDNEY FINL CORP USD 0.01
4267641	DE0008042003	HUDSON CITY BANCORP INC USD 0.01
4618023	DK0010018092	HORIZON FINANCIAL CORP USD 1
4263304	NO0010031479	FIRST M & F CORP USD 5

sedol	prod_code	security
2768889	US2937121059	FNB CORPORATION/VA USD 5
5526341	DE0008076001	METROCORP BANCSHARES INC USD 1
2552565	US29911Q2084	SLADE'S FERRY BANCORP USD 0.01
2604217	US3013091000	FOOTHILL INDEPENDENT BANCORP USD 0.001
6331867	TW0002822004	SECURITY BANK CORP USD 1
2328153	US3095621062	HUNTINGTON BANCSHARES USD NPV
6328450	TW0002845005	SOUTHWEST GEORGIA FINANCIAL CO USD 1
2363381	US3131483063	INDEPENDENT BANK CORP(MASS) USD 0.01
6139845	INE171A01011	IBERIABANK CORP USD 1
9750678	US3371621018	NORTH BAY BANCORP USD NPV
2444811	US3449051040	INTERCHANGE FINANCIAL SERVICES CP/NJ USD NPV
4346915	DK0010017011	CHESAPEAKE FINANCIAL SHARES, INC. USD 5
7266117	BE0003801181	IRWIN FINANCIAL CORP USD NPV
B0F0DZ0	US30254M1018	ITLA CAPITAL CORPORATION USD 0.01
2334150	US3134003017	MAINSOURCE FINANCIAL GROUP INC USD NPV
2356585	US3602711000	MIDWEST BANC HLDGS USD 0.01
2502140	US3614621049	CHESTER BANCORP INC USD 0.01
2502151	US3738651047	CENTRUE FINANCIAL CORPORATION COM USD0.01
7127935	PLGSPR000014	UMPQUA HOLDINGS CORP USD NPV
2375643	US3813171069	SUMMIT BANK CORP (GA) USD 0.01
2379957	US3799071085	SOUTHSIDE BANCSHARES INC USD 1.25
5675931	DE0005890503	PRIVATEBANCORP INC USD NPV
2647751	US3943571071	EAST WEST BANCORP INC USD 0.001
2964438	US3943612081	COMMUNITY WEST BANKSHARES USD NPV
4391090	DK0010230630	COWLITZ BANCORP USD NPV
2403942	COY29AO00044	WAYNE SAVINGS BANCSHARES INC USD 0.1
2421041	MXP370711014	FIRST BUSEY CORP USD NPV
2822398	MXP370641013	INDEPENDENT BANK CORP - MICHIGAN USD 1
2503035	US4007641065	COLONY BANKCORP INC USD 1
2502601	US40108P1012	CODORUS VALLEY BANCORP INC USD 2.5
6398088	JP3276400003	COMM BANCORP INC USD 0.33
2400697	US4044591091	COMMERCIAL NATIONAL FINANCIAL CORP/PA USD 2
2415497	US4101201097	UNITED TENNESSEE BANKSHARES INC USD NPV
6076470	KR7002860005	CENTER BANCORP INC USD NPV
6430582	KR7021960000	ECB BANCORP INC USD 3.5
2603526	US4104951052	MAYFLOWER CO-OP BK MOLBRO USD 1
2226837	US4119011017	ROME BANCORP INC USD 0.01
2420822	US4128501099	GB&T BANCSHARES INC USD NPV
2556125	US4128651076	GERMAN AMERICAN BANCORP USD NPV
2982894	US41383L1044	DESERT COMMUNITY BANK USD NPV
9750704	US4157811039	GUARANTY FEDERAL BANCSHARES INC USD 0.1
2424471	US4041721089	GREAT PEE DEE BANCORP INC USD 0.01
6432362	JP3851400006	GUARANTY BANCSHARES INC USD 1
6433086	JP3841000007	HERITAGE COMMERCE CORP USD NPV
6338879	AU000000HOM4	AETHER HOLDINGS INC USD 0.01
5859144	CH0008251750	GREENVILLE FIRST BANCSHARES INC USD 0.01
6006370	MA0000028003	WACCAMAW BANKSHARES INC USD NPV
2590219	US1495471013	PELICAN FINANCIAL INC COM USD0.01
2698652	US15201P1093	FNB CORP/NORTH CAROLINA USD 2.5
6251727	JP3483400002	UNION FINANCIAL BANCSHARES USD 0.01
2034148	US2539221083	COASTAL FINANCIAL CORP USD 0.01

sedol	prod_code	security
2122106	US4692491065	UCBH HOLDINGS INC USD 0.01
2714042	US4703381040	W HOLDING CO INC USD 1
6142917	INE168A01017	NATIONAL BANKSHARES INC USD 2.5
6479767	JP3394200004	MAN SANG HOLDINGS INC USD 0.001
6479983	JP3392600007	COMMUNITY BANKSHARES, INC. COM NPV
6480781	JP3206400008	LSB BANCSHARES INC USD 5
6480844	JP3207800008	LAKELAND FINSANCIAL CORP USD NPV
0166333	GB0001663334	WILSHIRE BANCORP INC USD NPV
6494287	JP3238200004	VIRGINIA COMMERCE BANCORP USD 1
2668592	US4829211030	WASHINGTON BANKING CO USD NPV
6498900	KR7010460004	EASTERN VIRGINIA BANKSHARES INC USD 2
5712021	DK0010253764	FEDERAL TRUST CORPORATION USD 0.01
6512770	JP3245300003	JEFFERSONVILLE BANCORP USD 0.5
2620020	US5021001004	PREMIER COMMUNITY BANKSHARES INC USD 1
4529363	DK0010201532	OHIO LEGACY CORP USD NPV
2423296	US5186291002	PREMIERWEST BANCORP USD NPV
2077347	CA51925D1069	PROVIDENT BANCORP INC USD 0.01
2159825	US5302331054	MGIC INVESTMENT CORP USD 1
6101026	INE115A01018	OHIO VALLEY BANC CORP USD 1
4517915	LI0000753264	MATRIX BANCORP INC USD 0.0001
6577508	ID1000093701	NORTH VALLEY BANCORP USD NPV
0870612	GB0008706128	NORTHWAY FINANCIAL INC USD 1
6525035	HK1111002544	NORWOOD FINANCIAL CORP USD 0.1
2653822	US5542251021	ST JOSEPH CAPITAL CORPORATION USD 0.01
2580373	US5603621054	VAIL BANKS INC USD 1
2565905	US5761521021	COMMUNITY CENTRAL BANK CORPORATION USD 5
2095156	VEV0019410A9	CRESCENT FINANCIAL CORPORATION USD 1
2095190	VEV0019410B7	EVANS BANCORP INC USD 0.5
2795285	US58734P1057	PENNS WOODS BANCORP, INC. USD 10
2620257	US5873761044	SOUTHERN COMMUNITY FINANCIAL CORPORATION USD NPV
2578389	US5874051015	MIDWESTONE FINANCIAL GROUP INC USD 5
2823238	US60037B1061	TEXAS UNITED BANCSHARES, INC. USD 1
2553933	US5985101055	VINEYARD NATIONAL BANCORP COMPANY USD NPV
6575881	JP3881200004	1ST CONSTITUTION BANCORP USD NPV
6429687	JP3908000007	WVS FINANCIAL CORP USD 0.01
2457808	US6574771050	HARLEYSVILLE SAVINGS FINANCIAL CORP USD 0.01
6755821	ZAE000024501	PEOPLES BANCORP/AUBURN IN USD 1
2822600	US8459051087	NORTHERN EMPIRE BANCSHARES USD NPV
2689441	US0126841065	MASSBANK CORP USD 1
B033TG4	US0484251022	SHORE FINANCIAL CORP USD 0.33
4072113	IT0000064441	SOBIESKI BANCORP INC USD 0.01
4072168	IT0000064482	TIB FINANCIAL CORP USD 0.1
4115223	IT0000784196	ROYAL BANCSHARES OF PENN-A USD 2
4072146	IT0000064300	BANCTRUST FINANCIAL GROUP INC USD 0.01
2352680	US3572881098	SOUTHERN MISSOURI BANCORP USD 0.01
2264257	US35907K1051	UNITED BANCORP INC USD 1
6460233	HK0636030667	MAF BANCORP INC USD 0.01
2550354	US42724R1077	MERCANTILE BANKSHARES CORP USD 2
2503916	US4269271098	MAIN STREET TRUST INC USD 0.01
2619880	US42722X1063	MERCHANTS BANCSHARES INC USD 0.01
2544993	US42965Q1076	ANNAPOLIS NATIONAL BANCORP INC USD 0.01

sedol	prod_code	security
2428439	US4333231029	B W C FINANCIAL CORP USD NPV
2615048	US45814P1057	MIDSOUTH BANCORP USD 0.1
2896564	US4723751040	BCSB BANKCORP INC USD 0.01
2545015	US47559A1034	CAVALRY BANCORP INC USD NPV
6337876	KR7024100000	FIRST KEYSTONE FINANCIAL INC USD 0.01
B00H0M2	US48246S1015	NATIONAL MERCANTILE BANCORP USD NPV
6130064	INE614B01018	DEARBORN BANCORP INC USD NPV
4082480	AT0000624705	FIRST NATIONAL BANCSHARES INC USD 0.1
6364766	TH0016010R14	PEOPLES COMMUNITY BANCORP USD 0.01
6888794	TH0016010017	AMERICA NATIONAL BABCSHARES/DANVILLE VA USD 1
6494522	JP3248000006	HANMI FINANCIAL CORPORATION USD 0.001
6419365	KR7060000007	EXCHANGE NATIONAL BANCSHARES INC USD 1
6495042	KR7004940003	NATIOANL PENN BANCSHARES USD NPV
6501358	KR7025610007	NORTHEAST BANCORP USD 1
6361466	TH0150010R11	BERKSHIRE HILLS BANCORP INC USD 0.01
6492838	TH0150010Z11	SOUTHWEST COMMUNITY BANCORP USD NPV
6492827	TH0150010Z03	GRUPO FINANCIERO GALICIA S.A. ARS 1
2620042	US51504L1070	INTEGRA BANK CORPORATION USD 1
2620086	US5328791034	NBC CAPITAL CORP USD 1
2536871	US5021581088	BAR HARBOR BANKSHARES USD 2
2507190	US50215P1003	CITIZENS HOLDING COMPANY COM STK USD0.20
6311922	AU000000MPB4	MID PENN BANCORP INC USD 1
B054JQ5	US5545711096	WASHINGTON SAVINGS BANK FSB USD 1
2475156	US56062Y1029	ALLIANCE FINANCIAL CORP USD 1
2533883	US5616512092	BANC CORPORATION USD 0.001
6556938	MYL2488OO004	BRYN MAWR BANK CORP USD 1
2549147	US5768191067	CENTRAL BANCORP IN USD 1
2497558	US5783301022	CNB FINANCIAL CORP PA USD 1
6444066	TW0002886009	COLUMBIA BANCORP/OR USD NPV
2477947	US5982511066	FIRST COMMUNITY BANCORP USD NPV
6587615	JP3888000001	1ST INDEPENDENCE FINANCIAL GROUP INC USD 0.1
6407843	JP3905850008	HERITAGE FINANCIAL CORP USD NPV
4625959	GRS003013000	HOPFED BANCORP INC USD 0.01
2532556	US6348651091	L N B BANCORP INC USD 1
2591494	US6369122063	LAKELAND BANCORP INC USD NPV
2086655	US6409331070	LANDMARK BANCORP INC USD 0.01
2711656	US6494451031	LINCOLN BANCORP USD NPV
2640277	US6667621097	MERCANTILE BANK CORPORATION USD NPV
2654739	US6757461016	MERRILL MERCHANTS BANCSHARES USD 1
0614036	GB0006140361	MUTUALFIRST FINANCIAL INC USD 0.01
6685694	PHY7027H1583	PACIFIC MERCANTILE BANCORP USD NPV
2547969	US7440281019	PEOPLES BANCORP OF NC USD NPV
2706384	US7438591007	UNION COMMUNITY BANCORP USD NPV
B01R311	US7591EP1005	UNITED SECURITY BANCSHARES/THOMASVILLE USD 0.01
2670809	US75970E1073	WESTERN SIERRA BANCORP USD NPV
2277114	US7602812049	BANCORP RHODE ISLAND INC USD 0.01
2731933	US7602821032	NATIONAL CITY CORP USD 4
2421546	US7604161072	NBT BANCORP INC USD 0.01
2288257	US7952261094	APPALACHIAN BANCSHARES INC USD 0.01
4771799	DK0010017367	NASB FINANCIAL INC USD 0.15
6182043	CN0009282731	NEWMIL BANCORP INC USD 0.5

sedol	prod_code	security
2808053	US78486Q1013	NORTHRIM BANK USD 1
7207019	DK0010282359	NORTHERN STATES FINANCIAL CORPORATION USD 0.4
2905299	US8959251054	CITY BANK LYNNWOOD USD 1
6009454	MYL5185OO003	FIRST PLACE FINANCIAL CORPORATION USD 0.01
4604259	DK0010017797	FIRST CAPITAL INC USD 0.01
7454439	DK0010295922	AUBURN NATIONAL BANCORPORATION INC USD 0.01
2012070	US0321651020	LEESPORT FINANCIAL CORPORATION USD 5
4089953	IT0001000725	BANK OF MARIN USD NPV
4446398	IT0000074077	THE PEOPLES BANCTRUST COMPANY INC USD 0.1
4077323	PLBIG0000016	CKF BANCORP INC USD 0.01
2734921	US0637501034	PATHFINDER BANCORP USD 0.01
2619642	US1176651099	FAUQUIER BANKSHARES INC USD 3.13
2483353	US1649031069	PEOPLES FINANCIAL CORPORATION COM USD1
2205041	US1954933099	GREENE COUNTY BANCORP INC USD 0.1
2542072	US3140121050	ONEIDA FINANCIAL CORPORATION USD 0.01
2348429	US3163941053	OLD POINT FINANCIAL CORPORATION USD 5
2336747	US3167731005	MIDDLEBURG FINANCIAL CORPORATION USD 2.5
2344085	US3158311072	EAGLE BANCORP INC USD 0.01
2596949	US3175854047	FIRST COMMUNITY BANCSHARES USD 1
2351494	US3189101062	WELLS FARGO COMPANY USD 1.666
2619761	US31867T1034	CITIZENS FINANCIAL SERVICES INC USD 1
2296926	PR3186721027	MACATAWA BANK CORP USD NPV
2750080	US31868F1021	HOME FINANCIAL BANCORP USD NPV
2488477	US3193831050	CAPITAL BANK CORPORATION USD NPV
B0M02F6	US3193901002	OAK HILL FINANCIAL INC USD NPV
2647160	US31942S1042	OMEGA FINANCIAL CORP USD 5
2350178	US3194391054	OCWEN FINANCIAL CORP USD 0.01
2409519	US32020V1008	COMMERCEFIRST BANCORP COM USD0.01
2329264	US32020F1057	OPTIMUMBANK HOLDINGS INC USD 0.01
2330727	US32022D1081	OLD SECOND BANCORP INC USD 1
B09TNS6	US32020Y1047	OLD NATIONAL BANCORP USD NPV
2734910	US32021B1035	ORIENTAL FINANCIAL GROUP INC USD 1
2266026	US32020R1095	PAMRAPO BANCORP INC USD 0.01
2362515	US3202181000	PARKVALE FINANCIAL CORP USD 1
6580119	TW0002892007	RENASANT CORPORATION USD 5
2341376	US3202391062	PRINCETON NATIONAL BANCORP USD 5
2747811	US3194592024	PARK NATIONAL CORP USD NPV
2355582	US31946M1036	PINNACLE FINANCIAL PARTNERS INC USD 1
2619772	US31983B1017	CAROLINA BANK HOLDINGS INC USD 1
2648710	US31983A1034	AMERICAN RIVER HOLDINGS (CA) USD NPV
2863074	US3198351047	CRESCENT BANKING CO/GA USD 1
2351546	US3198291078	EAST PENN FINANCIAL CORPORATION USD 0.625
2590231	US3206551034	PEOPLES BANCSHARES INC USD NPV
2441373	US3207441052	PENNFED FINANCIAL SVCS INC USD 0.01
2137898	US3207951076	BANKNORTH GROUP INC COM USD0.01
2342410	US3208171096	ATLANTIC BANCGROUP INC COM USD0.01
2341439	US3208671046	PEOPLE'S BANK - BRIDGEPORT USD NPV
2355902	US32190E1029	CENTRAL VALLEY COMMUNITY BANCORP USD NPV
2761383	US32111B1044	ALBEMARLE FIRST BANK USD 4
2596325	US32110J1088	GLEN BURNIE BANCORP USD 1
2353047	US3357161062	UNIVEST CORPORATION OF PENNSYLVANIA USD 5

sedol	prod_code	security
2421171	US33582V1089	MBT FINANCIAL CORPORATION USD NPV
2341440	US3358472088	PNC FINANCIAL SERVICES GROUP USD 5
2355913	US3207341062	CENTERSTATE BANKS OF FLORIDA USD 0.01
2976778	US33589V1017	PREMIER FINANCIAL BANCORP USD NPV
2341484	US3205171057	SOMERSET HILLS BANCORP USD NPV
2355894	US32054R1086	PFF BANCORP INC USD 0.01
6123815	IL0005930388	PMI GROUP INC USD 0.01
2351870	US3374931000	COMMUNITY TRUST BANCORP INC USD 5
2828073	US33761G1040	NEW YORK COMMUNITY BANCORP INC USD 0.01
2282259	US33762X1063	JAMES MONROE BANCORP INC USD 1
2341161	US3379071091	QCR HOLDINGS INC USD 1
2339434	US3379151026	UNITED SECURITY BANCSHARES/FRESNO CA USD NPV
2645915	US33610T1097	NARA BANCORP INC USD 0.001
2383992	US33615C1018	YADKIN VALLEY BANK AND TRUST COMPANY USD 1
2341547	US3361581008	COMMONWEALTH BANKSHARE INC USD 2.5
B0GRCC0	US3363121035	STERLING BANK USD 2
2341848	US3369011032	REPUBLIC BANCORP INC/MI USD 5
2037909	US33646W1009	FIRST FEDERAL BANCSHARES/DE USD 0.01
2349400	US3364531059	BANK MUTUAL COPORATION USD 0.01
B03F0L2	US33708M2061	US BANCORP USD 0.01
2618229	US3835841095	CORUS BANKSHARES INC USD 0.05
4401687	DK0010015825	CITIZENS FIRST BANCORP INC USD 0.01
B01Z5Z3	US4236662056	UNITED BANCSHARES INC/OHIO USD 1
2619987	US4397341045	COMMUNITY CAPITAL BANCSHARES INC USD 1
6436892	MYL5819OO007	FIRST CITIZENS BANC CORPORATION USD NPV
6436450	MYL1082OO006	SHORE BANCSHARES INC USD 0.01
6889656	BMG4586T1036	FIRST BANCTRUST CORPORATION USD 0.005
4097279	GB0005405286	VILLAGE BANK AND TRUST FINANCIAL CORP USD 4
0540528	GB0005405286	ROYAL BANK OF CANADA NPV
6158163	GB0005405286	ROYAL BANK OF CANADA NPV
5510883	DE0008115106	NB & T FINANCIAL GROUP INC USD NPV
6171900	INE001A01028	FIDELITY BANKSHARES INC USD 0.1
6411877	TW0002880002	AMERICAN BANK INC USD 0.1
6683438	CN0001214203	BANK OF MCKENNEY COM USD0.001
2437952	US4436831071	MONROE BANCORP USD NPV
2445966	US4461501045	BRIDGE CAPITAL HOLDINGS USD NPV
6115696	TW0001236008	PREFERRED BANK LOS ANGELES USD NPV
4449610	DK0010016716	ENTERPRISE FINANCIAL SERVICE USD 0.01
4437176	CH0001341608	GATEWAY FINANCIAL HOLDINGS INC USD NPV
6659666	JP3793800008	CORPBANCA CLP NPV
6659707	JP3794200000	SECURITY NATL FINL CORP-CL A USD 2
2474926	US4505651061	PACIFIC CAPITAL BANCORP USD NPV
6556325	MYL1155OO000	S & T BANCORP INC USD 2.5
2568119	US5718341002	BEACH FIRST NATIONAL BANCSHARES INC USD 1
2817651	US55264U1088	SOUTHERN CONNECTICUT BANCORP INC COM USD0.01
5568086	NO0006001908	SAVANNAH BANCORP INC USD 1
2384672	US5883271067	SEACOAST BKG CORP FLA A USD 0.1
2580715	US5884481004	MERCANTILE BANCORP USD 1.25
2618348	US59540G1076	STATE BANCORP INC NY USD 5
6591014	JP3885780001	DEUTSCHE BANK AG EUR NPV
6986085	JP3932800000	SVB FINANCIAL GROUP USD 0.001

sedol	prod_code	security
6611440	JP3912800004	CHARTER FINANCIAL CORP/GA USD 0.01
6636692	JP3648300006	SIMMONS FIRST NATIONAL CORPORATION USD 0.01
6621524	JP3653400006	WESTFIELD FINANCIAL INC USD 0.01
6625281	BH0005508773	RURBAN FINANCIAL CORPORATION USD NPV
2077303	CA6330671034	MB FINANCIAL INC USD 0.01
2239686	CA6330671034	SM-CHILE SA CLP NPV
4242455	FR0000120685	GRUPO FINANCIERO INBURSA S.A. DE C.V. MXN 1.00023
2757274	US62874M1045	SOVEREIGN BANCORP USD NPV
2618014	US6287291057	MILLENIUM BANKSHARES CORPORATION USD 5
2626459	US6287781024	ALLIANCE BANKSHARES CORPORATION USD 4
2036315	US64352D1019	SOUTHFIRST BANCSHARE USD 0.01
2636555	US6516331096	HEARTLAND FINANCIAL USA INC USD 1
B0LD1K4	US65333R2004	SOUTHWEST BANCORP INC/OKLA USD 1
0145279	GB0001452795	BB&T CORP USD 5
2647762	US6824781024	COAST FINANCIAL HOLDINGS INC USD 5
6121507	INE141A01014	SAXON CAPITAL INC COM USD0.01
2662453	PR68618W1001	WGNB CORPORATION USD 1.25
4660767	DK0010017607	STERLING BANCSHARES INC USD 1
4678704	USX607461166	STERLING BANCORP USD 1
7320154	HU0000061726	STERLING FINANCIAL CORPORATION USD 1
2143787	US70336F1049	SUFFOLK BANCORP USD 2.5
2670274	US6977381028	SUSQUEHANNA BANCSHRAES INC USD 2
9751025	US6979382073	SUNTRUST BANKS INC USD 1
2673251	US7006581075	UNITED COMMUNITY BANKS INC/GA USD 1
2095145	US7008851062	FIRST COMMUNITY CORP USD 1
2620503	US7105771072	PARTNERS TRUST FINANCIAL GROUP USD 0.0001
2561419	US7097881038	WILLOW GROVE BANCORP INC USD 0.01
2679419	US7097891011	TEXAS REGIONAL BANCSHARES INC USD 1
2596671	US71086E1073	TECHE HOLDING CO USD 0.01
2647676	US71103B1026	TF FINANCIAL CORP USD 0.1
2437145	US7123081058	TOMPKINS TRUSTCO INC USD 0.1
2682406	US7101981022	JEFFERSON BANCSHARES, INC. USD 0.01
2675097	US72346Q1040	CENTRAL JERSEY BANCORP USD 0.01
2025056	US7292731020	TRICO BANCSHARES USD NPV
2692665	US6934751057	TRIAD GUARANTY INC USD 0.01
2763602	US7403671073	UNITED BANKSHARES INC USD 2.5
2547334	US7409211015	TRUSTCO BANK CORP NY USD 1
2701657	US74050M1053	AMERISERV FINANCIAL INC USD 2.5
2671073	US7422821063	UMB FINANCIAL CORP USD 1
2486578	US7429621037	SUN AMERICAN BANCORP USD 0.01
2136055	US7438681014	MONARCH BANK USD 5
2171603	US74386T1051	WAINWRIGHT BANK & TRUST COMPANY USD 1
4072328	IT0000064680	VALLEY NATIONAL BANCORP USD NPV
6795485	JP3424200008	AMERICAWEST BANCORPORATION USD NPV
6804143	JP3350000000	UNION BANKSHARES CORPORATION USD 2
5453289	US9001515074	WSFS FINANCIAL CORP USD 0.01
4232445	IT0000064854	WASHINGTON FEDERAL INC USD 1
4235422	IT0000064839	WASHINGTON MUTUAL INC USD NPV
5968006	LI0010737216	USB HOLDING COMPANY INC USD 0.01
4931593	DK0010019306	WEBSTER FINANCIAL CORP USD 0.01
B00HQS0	DK0010304500	HORIZON BANCORP INDIANA USD 0.2222

sedol	prod_code	security
2940375	US9293281021	VIRGINIA FINANCIAL GROUP INC USD 5
2966036	US00437P1075	WEST COAST BANCORP ORE USD NPV
6014469	BH0005508765	WESTAMERICA BANCORP USD NPV
7028599	GRS414013003	WESBANCO INC USD 2.0833
2619590	US05944B1035	WESTCORP USD 1
7340817	IT0003270102	TEMECULA VALLEY BANCORP INC USD NPV
7277528	IT0003211601	NEW ENGLAND BANCSHARES INC USD 0.01
7385487	IT0003308878	SNB BANCSHARES INC USD 0.01
6075745	MYL1023OO000	BANK OF NOVA SCOTIA CAD NPV
7154609	IT0003121495	TAYLOR CAPITAL GROUP, INC. USD 0.01
2175081	US14056D1054	SEVERN BANCORP INC USD 0.01
2407762	US14057C1062	WHITNEY HLDGS CORP USD NPV
4235950	FR0000064560	GREENE COUNTY BANCSHARES INC USD 2
2484110	US16517A1097	BNC BANCORP USD NPV
6518723	CN0005421275	ACCREDITED HOME LENDERS USD 0.001
2521640	US19046E1055	BROOKLINE BANCORP INC USD 0.01
2216225	US18712Q1031	OLD LINE BANCSHARES INC USD 0.01
2493192	US2004681068	TIERONE CORP USD 0.01
2192295	US2005191067	FIRST PACTRUST BANCORP INC USD 0.01
2335885	US21987A2096	TEXAS CAPITAL BANCSHARES INC USD 0.01
2773311	CLCORX290014	DACOTAH BANK INC USD NPV
2488057	US2237671043	MONARCH COMMUNITY BANCORP USD 0.01
2803025	DE0005140008	HARRINGTON WEST FINANCIAL GROUP USD 0.01
2452450	US4508281080	TOWER FINANCIAL CORPORATION USD NPV
2024848	US44923F1084	YARDVILLE NATIONAL BANCORP USD NPV
6100368	INE090A01013	ZIONS BANCORP USD NPV
6099552	INE008A01015	HBOS PLC GBP 0.25
2490911	US4932671088	BANK OF IRELAND EUR 0.64
2420316	US59100U1088	BARCLAYS PLC GBP 0.25
2625047	US6354051038	KOMERCNI BANKA AS GDR REP 0.333 ORD
4753935	CH0003977193	ALANDSBANKEN NPV
2421148	US6447221002	ALANDSBANKEN NPV
2956468	US6438632027	ALLIED IRISH BANKS LTD EUR NPV
B0VY4J7	US6438632027	AMAGERBANKEN A/S DKK 100
2263771	US6502031023	FIONIA BANK A/S DKK 100
6374970	MA0000011140	BANCO ESPIRITO SANTO SA EUR 5
5380031	SE0000427361	BANCA LOMBARDA E PIEMONTESE SPA EUR 1
5952496	SE0000427361	BANCA POPOLARE DI INTRA EUR 3
4310211	DK0010001288	BANCA POPOLARE DI MILANO EUR 3
9750781	US6587881045	RETI BANCARIE HOLDING EUR 3
2644837	US6594241050	CREDITO VALTELLINESE EUR 3
2549181	US66304M1053	BANCO DI SARDEGNA S.P.A EUR 3
2605373	US6639041002	BANCO ESPANOL DE CREDITO SA EUR 1.16
2561970	US6651121088	BANK LINTH CHF80(REGD)
2641184	US6657511035	BANCA INTESA SPA EUR 0.52
2549200	US6672701025	BANCA INTESA SPA EUR 0.52
2154347	US6673281084	BANK MILLENNIUM SA PLN 1
2549233	US6695491075	ROTHSCHILD S.A. CHF 500
2654513	US6713371036	OBERBANK AG EUR NPV
4112611	AT0000625132	BK TIROL & VORARLB EUR NPV
2546472	US6773991079	VORDINGBORG BANK A/S DKK 100

sedol	prod_code	security
2549136	US6777191064	BASELLANDSCHAFTLICHE KANTONALBANK CHF 100
2968173	US67984M1009	BANCA CR FIRENZE EUR 0.57
2658441	US6800331075	HSBC HOLDINGS PLC USD 0.5
2658429	US6802771005	BKS BANK AG PRF NPV
2657705	US68401P1066	BANCA POPOLARE DI SONDRIO SCRL EUR 3
2433972	US69412V1089	BANCO DESIO DELLA BRIANZ EUR 0.52
B019FY4	US6948641096	BANCA POP EMILIA ROMAGNA EUR 3
6410391	MYL4782OO008	BANIF SGPS SA EUR 5
9750713	US70213A1034	PIRAEUS BANK SA EUR 4.77
2872382	US70213F1021	BK TIROL & VORARLB PRF NPV
2552866	US7084301032	ING BANK SLASKI S.A. PLN 10
B01C1P6	ID1000098403	BQUE CANTONALE DE GENEVE CHF 100
6709099	ID1000096001	EMPORIKI BANK OF GREECE SA EUR 5.5
2041483	US7455481074	CREDITO BERGAMASCO EUR 3
6526759	INE160A01014	UNICREDITO ITALIANO SPA EUR 0.5
6075552	KR7005280003	UNICREDITO ITALIANO SPA EUR 0.5
2421405	US6936541050	ALPHA BANK A.E EUR 5
2737458	PR7491361072	CFCAL-BANQUE EUR15.25
2173911	US7502361014	NATEXIS BANQUE POPULAIRES EUR 16
4079998	CH0001347498	DNB NORBANK ASA NOK 10
2781109	US7838591011	DVB BANK AG EUR NPV
2838469	US80556P3029	EBH BANK A/S DKK 50
B02YLK6	US80556T1060	NORDJYSKE BANK A/S DKK 100
4781408	CH0001319265	BAYERISCHE HYPO-VEREINSBANK EUR NPV
2445353	US8140471066	COMMERZBANK AG EUR NPV
2775317	US8147853092	FORSTAEDERNES BANK A/S DKK 100
6804240	JP3347600003	GRAUBUNDER KANTONALBANK PTG CHF100
B01JHL5	US78425W1027	GRONLANDSBANKEN DKK 100
2586315	US82620P1021	HADSTEN BANK A/S DKK 100
6525875	TW0002890001	HYPOTHEKARBANK LENZBURG CHF500(REGD)
2957052	US78460M2098	BANCA INTERMOBILIARE SPA EUR 1
2888613	US8901101092	HVIDBJERG BANK A/S DKK 100
2862156	US90984P1057	LIECHTENSTEIN LANDESBANK CHF 50
5763267	US9098391025	KOMERCNI BANKA AS CZK 500
2413297	US9098391025	LAN & SPAR BANK DKK 100
5250769	NL0000301109	KREDYT BANK PBI PLN5
5250781	NL0000301109	DANSKE BANK A/S DKK 10
2647438	US12561J1043	MONS BANK A/S DKK 100
2729370	US2027361045	AKTIESELSKABET MORSO BANK DKK 100
2432485	US20342P1093	DIBA BANK A/S DKK 100
B034L61	US20343T1007	NATIONAL BANK OF GREECE EUR 4.8
2227476	US2035991056	BANK PEKAO SA GDR REP 1 ORD
2211037	US2036281028	NORRESUNDBY BANK A/S DKK 100
2536008	US20343F1003	OSTJYDSK BANK A/S DKK 100
2745075	US2036341004	OTP BANK RT GDR REP 2 ORD
2222545	US20363C1027	WEBAC-HOLDING EUR NPV
2552468	US20363J1079	NEUE AARGAUER BANK CHF 50
B0LFWR4	US2037192083	SBERBANK RUB 50
2183761	US2040461061	SALLING BANK A/S DKK 100
2706470	US2041491083	SCHWEIZ NATIONALBANK CHF 250
2488024	US2041571017	SKANDINAVISKA ENSKILDA SEK 10

sedol	prod_code	security
2419035	US2168441002	SPAREBANKEN MORE NOK100 GRUNNFONDSBEVIS
6227256	TW0002837002	SPAR NORD BANK A/S DKK 100
2229676	US2223721042	SPAREBANKEN MIDT-NORGE NOK 25
7135251	IT0003121677	FORENINGSSPARBANKEN AB SEK 20
2232986	BMG2519Y1084	DAB BANK AG EUR NPV
7110463	FR0000045528	TOTALBANKEN A/S DKK 100
7262610	FR0000045072	VESTFYNS BANK DKK 100
6166229	MA0000010381	VOSS VEKSEL -OG LANDMANDSBANK ASA NOK100
5487471	FR0005025004	WALLISER KANTONALBANK CHF 100
5725870	IT0001070769	ZUGER KANTONALBANK CHF 500
4228552	IT0000064359	RINGERLIKE SPREBANK NOK100(GRUNNFONDSBEVIS)
4072362	IT0000064516	BANCA POPOLARE SPOLETO EUR 2.58
2552479	US2257441012	STATE BANK OF INDIA GDR REP 2 ORD
2160645	US1266001056	BANK OCHRONY SRODOWISKA SA PLN10 (BR)
4870210	DE0005072300	IKB DEUTSCHE INDUSTRIEBANK AG EUR NPV
2979487	US2334221049	UNICREDITO ITALIANO SPA EUR 0.5
6249476	KR7005270004	BHW HOLDING AG EUR NPV
2593627	US24242R1086	ABN AMRO HOLDING EUR 0.56
4846523	SE0000242455	ABN AMRO HOLDING EUR 0.56
2219837	US3524511082	BANK HANDLOWY WARSZAWIE PLN4
2370585	US37637Q1058	YAPI VE KREDI BANKASI GDR REP 1000 ORD
2426228	US40424G1085	ERSTE BANK OEST SPARKASSEN ATS NPV
6471796	KR7006350003	BQE CANTONALE DU JURA CHF150(BR)
6474030	KR7007200009	NORDEA AB EUR 0.39632
6190648	JP3281600001	BANCO DE GALICIA EUR 0.3
7052275	CH0011693600	BANCO DE VASCONIA SA EUR 0.3
2575971	US55261R1086	BANCO DE ANDALUCIA EUR 0.75
6916703	IL0006954379	BANCO DE CASTILLA EUR 0.6
2654591	US6820921012	BANCO DE CREDITO BALEAR SA EUR0.75(REGD)
2307732	US7046991078	BANK PEKAO SA PLN 1
B00N3B0	US7260791063	KBC GROUPE EUR NPV
2265807	US7302341018	CREDIT INDUSTRIEL ET COMMERCIAL SA EUR 16
2077121	PR7331741061	VAN LANSCHOT EUROPEAN EQUITY FUND EUR NPV
2310257	US7436061052	BANCO BILBAO VIZCAYA ARG EUR 0.49
B034LD8	US7443191041	HSBC TRINKAUS & BURKHARDT KGAA EUR NPV
B00FGC8	US75087U1016	EUROHYPO AG EUR NPV
5060106	NO0006390400	BANCA NAZIONALE LAVORO EUR 0.72
7621415	DK0010300193	BANCA NAZIONALE LAVORO EUR 0.72
2446259	US7684751057	SAN PAOLO-IMI SPA EUR 2.8
2754383	CA7800871021	MELHUS SPAREBANK NOK 100
2756196	CA7800871021	WELLS FARGO COMPANY USD 1.666
0754783	GB0007547838	BANCA POP ETRURIA LAZIO EUR 3
2389439	US7850601045	BANCO DI DESIO E DELLA BRIANZA SPA DI RISP EUR0.52(NON CN
2312747	PR8028091034	BANCO GUIPUZCOANO EUR1(REGD)
5833621	PR8028091034	EFG EUROBANK EUR 3.3
4767981	RU0009029540	COMMERCIAL INTERNATIONAL BANK GDR REP 1 ORD
2793621	US8117073069	GONTARD & METALL BANK ORD NPV
B0188C0	US81756X1037	BANCO DE VALENCIA SA EUR 1
6804518	JP3358400004	BERNER KANTONALBANK CHF 35
6843663	JP3369100007	SVENSKA HANDELSBANKEN SEK 4.3
2748869	US8251071051	SVENSKA HANDELSBANKEN SEK 4.3

2977209	US88224Q1076	BANCO BPI S.A. EUR 1
2879758	US8826731064	BANCA PROFILO SPA EUR 0.52
2554260	US8828381058	CREDITO ARTIGIANO EUR1
6887809	JP3805100009	EGNATIA BANKSA EUR 1.17
6400626	JP3769000005	UNITED COMMUNITY FINANCIAL CORP USD NPV
6426042	JP3783800000	BANCO BILBAO VIZCAYA ARG EUR 0.49
6075723	JP3797000001	A/S JYSKE BANK DKK20
6468282	JP3149600003	BANCO COMERCIAL PORTUGAL NPV
6804165	JP3352000008	SANTANDER BANCORP USD 2.5
6196550	JP3103000000	BANCO POPULAR EUR0.5
B00JQM0	US88331E1047	ACORN ALTERNATIVE STRATGS AG
6620093	JP3648800005	BANK OF AMERICA CORPORATION USD 0.01
6886475	JP3486700002	MITTEL SPA EUR 1
6772853	JP3324000003	EQ OYJ EUR NPV
6805328	JP3351200005	NORDEA AB EUR 0.39632
2178734	US8378411057	SOCIETE GENERALE EUR 1.25
6148766	TH0597020005	VERWALTUNGS-UND-PRIVAT BANK VADUZ CHF 10
6892858	TH0597010014	COMDIRECT BANK AG EUR NPV
6894810	JP3624400002	ACRED MAD 100
2083968	US9132901029	AFFIN HOLDINGS BERHAD MYR 1
2904337	US9099191028	AKITA BANK NPV
6310930	JP3429200003	AHLI UNITED BANK BSC USD 0.25
2989828	US9897011071	MAGHREBAIL MAD 100
4990505	CH0001308904	AOMORI BANK NPV
2504492	US00809C1062	ACL BANK PUBLIC CO LTD THB 10
4012625	FI0009001127	AWA BANK LTD NPV
4019927	FI0009000103	BAHRAINI SAUDI BANK BHD 0.1
2586832	US0560421044	BAHRAIN ISLAMIC BANK BHD 0.1
6078625	MA0000010043	BANK OF BAHRAIN & KUWAIT BHD 0.1
6077343	MA0000010811	BANK OF THE PHILIPPINE ISLANDS PHP 10
7621363	AT0000995006	BANK OF JAPAN NPV
7288876	PLBPH0000019	CHEJU BANK LIMITED KRW 5000
B0DD1F7	CH0021273740	PUSAN BANK KRW 5000
6580034	ID1000094204	BANK OF EAST ASIA LTD HKD 2.5
5256068	PLBH00000012	BANK OF FUKUOKA LIMITED NPV
6075808	IL0006625771	THE HIROSHIMA BANK LTD
6076425	IL0006046119	BUMIPUTRA-COMMERCE HOLDINGS BERHAD MYR 1
4075048	CH0001307757	BANK OF KYOTO NPV
6651048	ID1000095003	BANK HAPOALIM LTD ILS 1
2282583	US2252331051	BANK OF AYUDHAY PUBLIC COMPANY LIMITED THB 10
2502612	US39115R1005	WESTPAC BANKING AUD NPV
2387002	US3909051076	BANK OF QUEENSLAND LTD AUD NPV
4383451	CH0001340204	BANK OF THE RYUKYUS LIMITED NPV
2373766	US38982K1079	BANK LEUMI LE-ISRAEL ILS1
6451271	IL0006912120	BANK OF SAGA LTD NPV
5169865	DE0008063306	HANA BANK KRW 5000
6575159	TW0002809001	BANGKOK BANK PLC THB 10
6431897	JP3892100003	BANGKOK BANK PLC THB 10
5946284	IT0001447348	BANQUE MAROCAINE POUR LE COM MAD 100

sedol	prod_code	security
2415174	US5954401080	BANQUE MAROCAINE DU COMMERCE EXTERIEUR MAD 100
2647836	US5960941020	UNITED OVERSEAS BANK THAI PCL THB 10
6397159	JP3923000008	UNITED OVERSEAS BANK (THAI) PCL THB 10
2920850	US60902N1028	ATTIJARIWAFA BANK MAD 100
2979539	US6090451096	BENDIGO BANK LTD AUD NPV
2762483	US6103131081	AL-RAJHI BANKING & INVESTMENT CORPORATION SAR 50
4601744	DK0010017870	TAIWAN BUSINESS BANK TWD 10
2620343	US62845B1044	IND DEV BANK OF INDIA INR 10
2723792	US63080P1057	BANK OF BARODA INR 10
2634612	US6289681099	BANK OF INDIA INR 10
2775793	US69404P1012	HDFC BANK LTD INR 10
2647472	US70320A1034	ICICI BANK LIMITED INR 10
2670724	US7014921008	INDUSIND BANK LIMITED INR10
2545242	US7404731033	STATE BANK OF INDIA INR 10
6724735	MYL1309OO003	CORPORATION BANK INR10
6244675	MYL1066OO009	LIC HOUSING FINANCE LIMITED INR10
7773491	DK0010303452	HUNYA FOODS CO TWD10
5556575	IT0001269361	BANK OF KAOHSIUNG TWD10
2148254	US8003631038	ORIENTAL BANK OF COMMERCE-NEW DEHLI BRANCH INR10
2784346	US8047481010	FIRST INTL BANK ISRAEL (1) ILS 0.01
2388737	US78401V1026	FIRST INTERNATIONAL BANK OF ISREAL LTD ILS 0.05
6793478	KR7016560005	SIAM CITY BANK PUBLIC CO THB 10
6397502	KR7055550008	SIAM CITY BANK PUBLIC CO THB 10
B00JQL9	US82669G1040	KARNATAKA BANK LTD INR10
9750866	US8270641066	UTI BANK LIMITED INR 10
2810133	US8287302009	BANK OF OVERSEAS CHINESE TWD10
2819431	CLP8716M1101	FEDERAL BANK LIMITED INR 10
2444770	US8308961064	TAIWAN DEVELOPMENT CORPORATION TWD 10
B0120Y8	US8324491021	JAMMU & KASHMIR BANK LTD INR 10
6263432	KR7007800006	SIAM COMMERCIAL BK 5.25% CNV PREF THB 26
2701873	US8347281078	SIAM COMMERCIAL BK 5.25% CNV PREF THB 26
2620707	US83607V1044	BANKTHAI PUBLIC CO LTD THB 10
2037910	US8404681020	HSBC HOLDINGS PLC USD 0.5
2161671	US84129R1005	CREDIT DU MAROC MAD 100
2570501	US8433801060	HOUSING DEVELOPMENT FINANCE CORP LTD INR 10
2264291	US8593171098	DBS GROUP HOLDINGS LTD SGD 1
2845674	US8593191054	CHINA UNITED TRUST & INVEST CORP TWD10
B05Q2D9	US87235A1016	SHANGHAI PUDONG DEVELOPMENT BANK CO LTD CNY 1
2954161	US87972L1044	CHANG HWA COMMERCIAL BANK TWD 10
2886093	US8723911074	CHIBA BANK LTD NPV
2147734	US8870981011	CHIBA KOGYO BANK LIMITED NPV
2647405	US7097961061	CHINESE BANK(THE) TWD10
2524382	US90262T3086	THE CHUGOKU BANK LIMITED NPV
6579634	INE692A01016	THE AICHI BANK LTD NPV
6923372	TW0002838000	CHUKYO BANK NPV
2939298	US9053991017	CHINA BILLS FINANCE CORP TWD10
2620796	US9060541011	ADELAIDE BANK LTD AUD NPV
2494203	US91307P1030	COSMOS BANK TAIWAN TWD10
6079275	TH0038010011	COMMERCIAL INTERNATIONAL BANK EGP10
6916781	SG1M31001969	RHB CAPITAL BERHAD MYR1
6079264	TH0038010003	DAEGU BANK KRW 5000

sedol	prod_code	security
2949327	US9278101012	DAH SING FINANCIAL HLDGS HKD 2
2488466	US94624Q1013	DAISHI BANK LTD NPV
2953782	US9508101014	DAISAN BANK LIMITED NPV
2555597	US9293581099	SOLOMON MUTUAL SAVINGS BANK KRW 5000
5786792	DK0010258482	DIAC SALAF MAD 100
7380062	DE0005408116	THANACHART BK PLC THB 10
2038849	US03076K1088	AFFIANCE GROUP LIMITED AUD NPV
2676948	US0293261055	EIGHTEENTH BANK LTD NPV
2052689	US0462651045	CHINA MINSHENG BANKING CORP CNY 1
4116765	PTBNF0AM0005	ZENSHIREN BANK PREF JPY NPV
2087777	VEV001671008	MACKAY PERMANENT BUILDING SOCIETY LTD NPV
6368360	TH0001010R16	ENTIE COMMERCIAL BANK TWD 10
6077008	TH0001010006	EQUITABLE PCI BANK PHP 10
6077019	TH0001010014	FAR EASTERN INTERNATIONAL BANK TWD10
7023011	DE0008022005	FARMERS BANK OF CHINA(THE) TWD10
B070FQ3	US0820731075	SAPPORO HOKUYO HLDGS NPV
6091280	AU000000BEN6	JEIL MUTUAL SAVINGS BANK KRW5000
5235528	DE0005223903	HOMELOANS LTD NPV
2190277	US1637311028	FUKUI BANK NPV
6527666	TW0002891009	BANK OF AYUDHAY PUBLIC COMPANY LIMITED RECEIPT REP 1 OF
6194383	TW0002831005	KRUNG THAI BANK PUBLIC CO LTD RECEIPT REP 1 ORD
2493073	US1920251048	SIAM COMMERCIAL BK RECEIPT REP 1 ORD
4588825	DK0010274414	SIAM CITY BANK PUBLIC CO RECEIPT REP 1 ORD
2343372	PR25811P1005	KASIKORNBANK PUBLIC COMPANY LIMITED RECEIPT REP 1 ORD
5759932	GRS009013004	TMB BANK PCL RECEIPT REP 1 ORD
6307028	JP3166400006	DBS BANK LIMITED PREF SGD 0.01
2798303	US2855625008	BANGKOK BANK PLC RECEIPT REP 1 ORD
4212823	GRS006013007	NEXANS MAROC MAD 100
2690153	US3774071019	SHINHAN FINANCIAL GROUP CO LTD KRW 5000
2949316	US4404071049	GUNMA BANK
2441157	US44041F1057	THE HACHIJUNI BANK LTD NPV
B04TFW9	US43709A1016	MINATO BANK LTD NPV
2434146	US4369261098	HANG SENG BANK LTD HKD 5
2654007	US43708T1016	PACIFICMAS BERHAD MYR1(POST REC)
6017082	MA0000011215	HUA NAN FINANCIAL TWD 10
2444725	US5916501068	KOOKMIN BANK KRW 5000
6514442	PHY6028G1361	RESONA HOLDINGS NPV
4813345	SE0000148884	THE HIGO BANK LTD NPV
4812740	SE0000120784	MIYAZAKI BANK LIMITED NPV
2040521	US83080P1030	HANMI CAPITAL CO LTD KRW5000
6819211	MA0000010522	CHINA DEVELOPMENT FINANCIAL HLDG CORP TWD 10
6828949	MYL1333OO003	MITSUI TRUST HOLDINGS INC NPV
9750888	US84263N1054	HOKKOKU BANK LTD NPV
2553030	US8426321019	BALIMA MAD 100
2784249	US84264A1025	HOKUETSU BANK NPV
4846114	NO0006390301	HONG LEONG CREDIT BERHAD MYR1
4831660	NO0006390004	HONG LEONG BANK BERHAD MYR 1
6768421	AU000000SGB0	MEGA FINANCIAL HOLDING COMPANY LIMITED TWD10
B030GJ7	ZAE000057378	ISRAEL DISCOUNT BANK ILS0.10 SER'A'
0840132	GB0008401324	TAISHIN FINANCIAL HOLDINGS CO TWD 10
0406284	GB0004082847	BANK OF IKEDA NPV

sedol	prod_code	security
6558484	GB0004082847	FUBON BANK (HONG KONG) LTD HKD 1
2802055	US8557161069	BANK OF IWATE LTD NPV
5131091	US8565522039	THE IYO BANK LTD NPV
6100799	INE062A01012	JEONBUK BANK KRW 5000
B0LN3M0	US8571241012	JINHEUNG MUTUAL SAVINGS BANK KRW 5000
2845276	US8591581074	JOYO BANK
2843720	US8589071088	JUROKU BANK NPV
6563024	JP3890350006	KAGOSHIMA BANK LTD NPV
2860990	US8679141031	KANTO TSUKUBA BANK NPV NPV
6873143	TW0002847001	KANSAI URBAN BANKING CORPORATION NPV
6451680	TW0002887007	CITIC INTERNATIONAL FINANCIAL HOLDINGS LIMITED HKD 1
2432526	US87815X1090	KRUNG THAI BANK PUBLIC CO LTD THB 5.15
6302238	TH0302010Y01	KRUNG THAI BANK PUBLIC CO LTD THB 5.15
6893806	JP3601000007	KITA-NIPPON BANK NPV
6895493	JP3587000005	KIYO BANK LTD NPV
2918510	US9027881088	KOREA DEVELOPMENT LEASING KRW5000
2484389	US9042141039	KOREA MUTUAL SAVINGS BANK KRW5000
2521059	US9066111082	HOME BUILDING SOCIETY LTD AUD NPV
2570534	US9099111091	KYUSHU-SHINWA HOLDINGS INC NPV
2744685	US9094581017	METROPOLITAN BANK & TRST PHP20
2714569	US9114601035	CHINA MERCHANTS BANK CO LTD CNY 1
2620815	US9114591053	BANCO DE ORO UNIVERSAL BANK PHP10
2950374	US9570901036	LIU CHONG HING BANK (TBD) HKD 0.5
2424028	US9571161069	SINOPAC HOLDINGS TWD 10
2815871	US96008D1019	PUNJAB NATIONAL BANK INR 10
2620826	US9595221030	CHINATRUST FINANCIAL HOLDING TWD 10
2963424	US9666121036	WOORI FINANCE HOLDINGS KRW 5000
2874270	US97111W1018	BOC HONG KONG HOLDINGS LTD HKD 5
2968537	US9718071023	BANK PAN INDONESIA TBK IDR 100
2537658	US97186T1088	MALAYAN BK BERHAD MYR 1
9750732	US9718672051	MALAYSIAN PLANTATIONS BERHAD MYR 1
6076447	JP3315200000	SUMITOMO MITSUI FINANCIAL GROUP INC NPV
6075541	KR7006220008	HSINCHU INTERNATIONAL BANK TWD 10
7147610	BE0003796134	MEDIUM BUSINESS BANK OF TAINAN TWD10
7147621	BE0003796134	THE MEDIUM BUSINESS BANK OF TAITUNG TWD10
6268880	MA0000010639	MIE BANK LIMITED NPV
2254162	US2610181057	LIPPO BANK LKD SHS (IDR5000 & IDR100)
4270489	DE0008045501	UNION BANK OF INDIA LIMITED INR 10
2648055	US2689481065	CANARA BANK INR 10
6433912	TW0002884004	BANK DANAMON INDONESIA IDR NPV
2678472	US2742871013	FIRST FINANCIAL HOLDING COMPANY TWD10
4296924	DK0060035327	ANDHRA BANK INR 10
2487407	US27579R1041	MICHINOKU BANK LTD NPV
2348388	US33832H1077	FIRSTRAND LIMITED ZAR 0.01
2327826	US3379301019	MUSASHINO BANK LTD NPV
2508030	US39607Y1001	THE BANK OF NAGOYA LTD
6656485	JP3176000002	NANTO BANK LTD NPV
2517274	US7058081032	NATIONAL AUSTRALIA BANK AUD NPV
2714257	US74727A1043	NATIONAL BANK OF BAHRAIN BHD 0.1
6730936	JP3729000004	NEDBANK GROUP LTD ZAR 1
7056262	CH0011484067	NAGANO BANK LTD NPV

sedol	prod_code	security
2550086	US7905951023	NISHI-NIPPON CITY BANK LIMITED NPV
6864329	JP3411000007	BANK MANDIRI PERSERO TBK PT IDR 500
2858876	US8690991018	OGAKI KYORITSU BANK LTD NPV
6674001	INE667A01018	BANK OF OKINAWA LIMITED NPV
2339025	US87162V1026	HYAKUGO BANK LTD/THE NPV
5703661	SE0000193120	HYAKUJUSHI BANK NPV
5703672	SE0000152084	BOWA COMMERCIAL BANK CO LTD TWD10
6871493	JP3441600008	SYNDICATE BANK INR 10
6869971	TW0002812005	HUA XIA BANK CNY 1
2958561	US8768511060	HOKUHOKU FINANCIAL GROUP INC NPV
2868455	US8722751026	PHILIPPENE NATIONAL BANK PHP 40
6893550	JP3627800000	INDIAN OVERSEAS BANK INR 10
2570051	US8724491035	VIJAYA BANK LTD INR10
6892977	JP3604200000	PT BANK RAKYAT INDONESIA 500
6777159	JP3630500001	RASHID HUSSAIN BERHAD MYR 1
4897060	DK0010120450	BANK NEGARA INDONESIA LKD SHS(IDR7500 & IDR375)
6897905	JP3622400004	SHINSEI BANK LTD NPV
2983853	US8917691011	WESTCOMB FINANCIAL GROUP LTD 0.02
6892171	JP3628600003	RMB HOLDINGS LIMITED ZAR 0.01
6898339	JP3632000000	ROCK BUILDING SOCIETY LTD NPV
2906429	US8983491056	ST. GEORGE BANK LTD AUD NPV
2340210	US8984021027	THE SAN-IN GODO BANK LTD NPV
2165145	US9089061009	TOMATO BANK LTD NPV
2690636	US9152711001	SENSHU BANK LTD NPV
B04H4K4	US91528W1018	SHENZHEN DEVELOPMENT BANK CO LTD CNY 1
6314631	TW0002849007	BIWAKO BANK NPV
3058750	GB0030587504	SHIKOKU BANK NPV
6100131	INE040A01018	THE 77 BANK
2828147	US42234Q1022	SHIGA BANK
6683591	JP3842400008	SHIMIZU BANK LTD NPV
6689953	INE565A01014	THE SHIZUOKA BK LTD
2227584	US4534141043	SOFAC CREDIT MAD 100
2492133	US4538381041	SOUTHERN BANK BERHAD MYR 1
2447821	US4538361084	SHOKUSAN BANK NPV
6100454	INE095A01012	SUMITOMO TRUST & BANKING COMPANY LIMITED NPV
2227250	US4566071001	TAICHUNG COMMERCIAL BANK TWD10
4132341	PLBSK0000017	TAIKO BANK NPV
2433927	US45820M1045	TA CHONG BANK LTD TWD10
2460196	US4584471092	THE DAITO BANK NPV
2243911	US4590441030	THE FUKUSHIMA BANK NPV
2136839	US4609271063	TMB BANK PCL THB 10
2473581	US4641191063	TMB BANK PCL THB 10
2943363	US9029101089	KASIKORNBANK PUBLIC COMPANY LIMITED THB 10
6136482	INE238A01026	HONGKONG CHINESE LIMITED HKD 1
2551915	US9187791093	SIAM COMMERCIAL BK THB 10
2935326	US9197941076	SIAM COMMERCIAL BK THB 10
5490703	NL0000292530	TOTTORI BANK NPV
5716302	NL0000302636	TISCO BANK PCL THB 10
2074412	VEV000031006	TOHOKU BANK LTD NPV
6701686	INE705A01016	TOCHIGI BANK LTD NPV
2751908	US92705T1016	TOHO BANK LTD NPV

sedol	prod_code	security
7327898	DK0010289875	HIGASHI-NIPPON BANK NPV
2554323	US9274261067	TOKUSHIMA BANK LTD NPV
2537692	US92778Q1094	TOKYO TOMIN BANK NPV
4083535	DK0010019652	TOWA BANK NPV
4935175	NO0003025009	TOYAMA BANK LTD NPV
2508762	US9297411061	UTAMA BANKING GROUP BERHAD MYR1
2341860	US9299031024	ABSA GROUP LIMITED ZAR2
2537993	US9373031056	INDUSTRIAL & COMMERICAL BANK OF CHINA (ASIA) HKD 2
2941981	US9388241096	MIZRAHI TEFAHOT BANK LTD ILS 0.1
2618456	US9396961008	UNION BANK OF TAIWAN TWD10
2942025	US9406101082	WESTPAC BANKING AUD NPV
2945143	US9478901096	WING LUNG BANK LTD HKD 5
4735267	DE0008103102	WING HANG BANK LTD HKD 1
5568989	US9497461015	WIDE BAY CAPRICORN BUILDING SOCIETY AUD NPV
2649100	US9497461015	YAMAGUCHI BANK NPV
2408840	US95123P1066	YAMAGATA BANK NPV
2950244	US9521451008	YAMANASHI CHUO BANK NPV
6732017	SG1P04916067	MIZUHO TRUST & BANKING CO LTD NPV
2953975	US9579071088	BANK OF YOKOHAMA LTD. NPV
B0CCGJ4	US9576381092	BAYERISCHE HYPO-VEREINSBANK EUR NPV
6076146	AU000000WBC1	AGRICULTURAL BANK OF GREECE EUR 1.91
2839729	US92923K1060	ST GALLER KANTONALBANK CHF 100
2379979	US9677971015	BANCO DE SABADELL SA EUR 0.5
6977120	AU000000WBB3	BASLER KANTONALBANK PTG CHF10
6972374	HK0302001547	CREDIT AGRICOLE D'ILE-DE FRANCE EUR 4
6972211	HK0096000564	GETIN SERVICE PROVIDER SA PLN 1
2425258	US97650W1080	BANCA MONTE DEI PASCHI DI SIENA SPA EUR 0.67
6534268	KR7053000006	CREDEM EUR 1
2728214	US9843081061	CAISSE REGIONALE DU CREDIT AGRICOLE MUTUEL D'AQUITAINE
6985242	JP3934800008	DEXIA BANQUE SA BEF NPV
6985219	JP3935200000	DEXIA BANQUE SA BEF NPV
6985361	JP3942000005	BANK ZACHODNI WBK SA PLN 10
2986294	US9850211049	BANCO PASTOR SA EUR 1
2554345	US31986N1028	SVENDBORG SPAREKASSE A/S DKK 100
2619868	US32053S1078	DEPFA BANK PLC ORD EUR3
2417437	US0033901010	CREDIT AGRICOLE SA EUR 3
B055ZK4	US00350R1068	FORTIS SA/NV EUR NPV
6056405	TH0040010Y07	BANCA CARIGE SPA EUR 1
B01Y8T5	US0043371014	BANK BPH SA PLN 5
6220675	AU000000ADB5	BNP PARIBAS SA EUR 2
B04TL76	US0310011004	OTP BANK RT HUF 100
2055718	US0454871056	BANCA ANTONVENETA SPA EUR 3
7520794	CH0015251710	BANK OF GREECE EUR 5.6
2074070	US0625401098	BCA POPOLARE DI VERONA EUR 3.6
6457268	JP3132400007	AAREAL BANK AG EUR NPV
6099789	INE084A01016	BANCA CARIGE SPA EUR 1
3060625	IE0030606259	ERSTE BANK OEST SPARKASSEN ATS NPV
3070732	IE0030606259	AKTIESELSKABET SKJERN BANK DKK 20
6357067	JP3803600000	VALIANT HOLDING CHF 5.8
4497749	BE0003565737	BANQUE CANTONALE VAUDOISE CHF 62.5
5476673	BE0005538096	BANK AUSTRIA CREDITANSTALT NPV (BR)

sedol	prod_code	security
2537528	US5116561003	BANCHE POPOLARI UNITE SCPA EUR 2.5
2691167	US5788771021	HYPO REAL ESTATE HOLDING AG EUR NPV
2605157	US6371381087	ROSKILDE BANK DKK 20
6624608	AU000000NAB4	FIRST TENNESSEE NATL CORP COM USD0.625
6639721	JP3658000009	HARRODSBURG FIRST FINL GROUP COM USD0.10
4644998	DK0010015072	PARTNERS TRUST FINANCIAL GROUP COM USD0.10
4645399	DK0010125251	WILSHIRE FINANCIAL SERVICES GROUP COM USD0.01
6657541	JP3175200009	WILSHIRE ST BANK-L.A. CALIF COM NPV
2125901	US6752341080	NORTH COUNTRY FINANCIAL CORP COM NPV
2620473	US6945521002	SILICON VALLEY BANCSHARES COM USD0.001
2680035	US7081671015	PROVIDENT BANK COM USD0.10
6421553	JP3500610005	AETHER SYSTEMS INC COM USD0.01
2501170	US77587P1030	PANAMERICAN BANCORP USD 0.01
6335472	JP3320950003	RAINIER PACIFIC FINANCIAL GROUP INC USD NPV
6802006	CN0005810378	K-FED BANCORP USD 0.01
2827467	US8442711060	VESTJYSK BANK A/S DKK 10
2485876	US84470P1093	SIGNATURE BANK USD 0.01
2829968	US8447671038	THE BANK HOLDINGS INC USD 0.01
2608509	US84479U1097	ENTERPRISE BANCORP INC USD 0.01
2447746	US84502A1043	AMES NATIONAL CORPORATION USD 2
2158974	US87161C1053	PLACER SIERRA BANCSHARES USD NPV
6098816	TW0002834009	BANK NIAGA TBK PT IDR 5000
6141088	TW0002841004	SMITHTOWN BANCORP INC COM USD1.25
2879855	US8783301091	BERKSHIRE BANCORP INC USD 0.1
6887876	TH0068010006	SERVICE BANCOPR INC USD 0.01
6887887	TH0068010014	PACIFIC STATE BANCORP USD NPV
7517893	CH0014786500	BAY VIEW CAPITAL CORP USD 0.01
B02T2K8	US91929R1077	PT BANK CENTRAL ASIA TBK IDR 125
2933870	US9307051089	SI FINANCIAL GROUP INC USD 0.01
2527110	PR9292511061	REGIONS FINANCIAL CORPORATION USD 0.01
4936888	CH0000288735	ACCESS NATIONAL CORP USD 1.67
6910794	ZAE000013389	HEMLOCK FEDERAL FINANCIAL CP USD 0.01
6011653	JP3107600003	VALLEY BANCORP COM USD0.73
2420662	US1729221069	SAXON CAPITAL INC REIT USD 0.01
2198583	US1744201096	STANDARD BANK GROUP LTD ZAR 0.1
4325538	DE0008032004	NEW CENTURY FINANCIAL CORP REIT USD 0.01
6100993	INE112A01015	ATLANTIC COAST FEDERAL CORPORATION USD 0.01
6606996	ZAE000066304	COMMUNITY BANCORP USD NPV
2231057	US3916481027	KEARNY FINANCIAL CORPORATION USD 0.1
2383828	US39167M1080	PRUDENTIAL BANCORP INC OF PENNSYLVANIA COM USD0.01
2378471	US3916881085	BANKFINANCIAL CORPORATION USD 0.01
6511852	AU000000HME5	FIRST STATE FINANCIAL CORPORATION USD 1
B034L83	US4871691048	UNIZAN FINANCIAL CORP USD 1
6484084	JP3227600008	HOME FEDERAL BANCORP INC USD 0.01
4519449	CZ0008019106	AMES NATIONAL CORPORATION USD 2
3315916	US5004594090	MACKINAC FINANCIAL CORP USD NPV
6335171	JP3902900004	ABINGTON COMMUNITY BANCORP USD 0.01
6628008	ZAE000004875	CAROLINA TRUST BANK USD NPV
2702865	US69331W1045	BANCORP INC USD 1
6756415	AU000000ROK7	BANK OF THE CAROLINAS (NC) USD 5
B081PW1	US7741861006	TD BANKNORTH INC USD 0.01

sedol	prod_code	security
2962443	US81811M1009	BENAJMIN FRANKLIN BANCORP INC. USD NPV
6363202	TH0119010R16	ROCKVILLE FINANCIAL INC USD NPV
6125844	TH0119010Z08	FIRST FEDERAL BANC OF THE SOUTHWEST INC USD 0.01
6125833	TH0119010Z16	WESTERN ALLIANCE BANCORP USD 0.0001
6153696	TH0015020009	BANK CA ST GALLEN CHF 100
6153726	TH0015020017	FPB BANCORP USD 0.01
6363172	TH0015010R16	FIRST SECURITY GROUP INC USD 0.01
6889924	TH0015010000	BANK OF WILMINGTON NPV
6889935	TH0015010018	NEXITY FINANCIAL CORPORATIOIN USD 0.01
5966516	FR0000130809	COMMUNITY INVESTORS BANCORP INC USD 0.01
6859002	JP3405000005	STATE NATIONAL BANCSHARES INC USD 1
2201867	US8660111092	CENTENNIAL BANK HOLDINGS INC USD 0.001
2485757	US8660131058	AMERICAN BANCORP OF NEW JERSEY INC USD 0.1
2424835	US86606G1013	FIRST BUSINESS FINANCIAL SERVICES INC USD 0.01
2919643	US86664A1034	NEW ENGLAND BANCSHARES INC USD 0.01
2679141	US01446U1034	ALLIANCE & LEICESTER GBP 0.5
2648088	US02520W1062	COMMERCIAL CAPITAL BANCORP USD 0.001
6070784	BH0004669287	NEW CENTURY FINANCIAL CORP COM USD0.01
7161461	ES0113770236	POPULAR INC USD 6
2074111	US0596921033	BOSTON PRIVATE FINANCIAL HOLDINGS INC USD 1
2647375	US0634311007	BFC FINANCIAL CORPORATION USD 0.01
2295677	US0605051046	OCEANFIRST FINANCIAL CORP USD 0.01
5474008	ES0113679338	CAMCO FINANCIAL CORP USD 1
4143053	PLBRE0000012	CASCADE BANCORP USD NPV
2519269	US3025191038	COLONIAL BANCGROUP INC USD 2.5
4071875	IT0000062197	COMMUNITY CAPITAL CORPORATION USD 1
2350781	US0641801024	NEWALLIANCE BANCSHARES INC USD 0.01
3134865	GB0031348658	CFS BANCORP INC USD 0.01
6804132	JP3800500005	FREDDIE MAC USD 0.21
2557924	US1170301063	FIRST OAK BROOK BANCSHARES INC USD 2
2053831	US1400711016	FIRST BANCORP NORTH CAROLINA USD NPV
2483591	US15641R1032	FIRST DEFIANCE FINANCIAL CORP USD 0.01
2009908	US1766821029	SCBT FINANCIAL CORPORATION USD 2.5
5668287	US2017122050	CANADIAN IMPERIAL BANK OF COMMERCE CAD NPV
6307169	JP3392200006	REPUBLIC FIRST BANCORP INC USD 0.01
2809982	US16122M1009	PACIFIC CONTINENTAL CORP USD NPV
2333889	US3135861090	RIVER VALLEY BANCORP USD NPV
2771304	US3681401093	ESB FINANCIAL CORP USD 0.01
2613310	ARP495251018	KEYCORP USD 1
6408374	HK0011000095	C & F FINANCIAL CORP USD 1
2736035	US9029733048	LSB CORPORATION USD 0.1
4534099	PLKRDTB00011	HIGH COUNTRY BANCORP INC USD 0.01
2143839	US56034R1023	HERITAGE OAKS BANCORP USD NPV
2282271	US6584181084	BRUNSWICK BANCORP USD NPV
2682224	US0482211051	MARSHALL & ILSLEY CORP USD 1
6893947	JP3783470002	SIERRA BANCORP USD NPV
6888783	TH0016010009	FINANCIAL INSTITUTIONS INC USD 0.01
2340168	US55261F1049	GOUVERNEUR BANCORP INC USD 0.01
2587233	US5980391057	FIRST BANCORP OF INDIANA INC USD 0.01
9750890	US74383A1097	SOUND FEDERAL BANCORP USD 0.01
6305583	AU000000AFS4	NORTH FORK BANKCORP INC USD 0.01

sedol	prod_code	security
2758233	US31604Q1076	AMERICAN COMMUNITY BANCSHARES INC USD 1
2352806	US3202091092	KNBT BANCORP INC USD 0.01
2356701	US32006W1062	ALERUS FINANCIAL USD 1
6123804	IL0005930123	PROVIDENT BANKSHARES CORPORATION USD 1
2360111	US3438731057	R & G FINANCIAL CORP USD 0.01
6575096	TW0002807005	FIRST NATIONAL BANCSHARES INC USD 0.01
7681248	DE0008027707	BOARDWALK BANK COM USD0.01
2620279	US59021H1032	ELECTRONIC CLEARING HOUSE INC USD 0.01
B032YT9	US6435EV1082	FIRSTBANK CORPORATION USD NPV
2421320	US7001641064	TCF FINANCIAL USD 0.01
2704032	US69344M1018	UNITED FINANCIAL CORPORATION USD NPV
5179712	IT0000064854	WASHINGTON TRUST BANCORP INC USD 0.0625
2212870	US2003401070	WILMINGTON TRUST CORP USD 1
2647289	US5244771060	BANK OF IRELAND EUR NPV
5888115	FI0009902530	BANCA POPOLARE ITALIANA EUR 3
4081294	AT0000625108	KARNTEN&STEIERM NPV
2647773	US6801941070	OBERBANK AG PRF NPV
2433938	US7086771091	BRE BANK SA PLN 4
2570471	US7800811058	DEUTSCHE HYPOTHEKENBANK AG ORD NPV
2905794	US9099071071	KBC GROEP NV EUR NPV
2222062	US2036071064	NORDFYNS BANK DKK 100
2183330	US20449H1095	SKANDINAVISKA ENSKILDA SEK 10
2676993	US2256461086	BANKGESELLSCHAFT BERLIN AG EUR NPV
6483638	JP3231000005	TURKIYE IS BANKASI AS GDR EACH REP 25'C'REGTRY 1
4122676	GRS014013007	BANKINTER SA EUR 1.5
2117920	US7693971001	BERLIN HANNOVER HYPBK AG EUR NPV
2569446	US82511E1091	BANCO SANTANDER CENTRAL HISPANO SA EUR 0.5
6195803	JP3521000004	NORDEA AB RECEIPT REP 1 ORD
9750901	US00808V1052	AUSTRALIA & NEW ZEALAND BANKING GROUP AUD NPV
4033626	DK0010169895	BANK OF AYUDHAY PUBLIC COMPANY LIMITED THB 10
2817468	US78176P1084	BANK OF AMERICA CORPORATION USD 0.01
2569468	US8335821091	TISCO BANK PCL 2.3% PREF THB 10
6575182	TW0002811007	KEIYO BANK LTD NPV
2031923	US9054001071	COMMONWEALTH BANK AUST AUD NPV
0006439	GB0000064393	EHIME BANK LTD NPV
4325419	DE0008022005	MITSUBISHI UFJ FINANCIAL GROUP NPV
2647632	US3120591082	MOMIJI HOLDINGS NPV
4834379	DK0010150366	E.SUN FINANCIAL HOLDINGS CO LTD TWD 10
2731126	US8589101026	KAGAWA BANK NPV
2904133	US8960951064	KOREA EXCHANGE BANK KRW 5000
9750738	US97200A1016	STANDARD CHARTERED PLC USD 0.5
2538963	US2771961016	MIZUHO FINANCIAL GROUP INC NPV
2265487	US8692451003	OITA BANK LTD NPV
2968935	US88650R1086	ALLAHABAD BANK LTD INR 10
2421568	US9089081064	SEOUL MUTUAL SAVINGS BANK KRW 5000
6912530	HK0349001625	SURUGA BANK NPV
6909888	MYL6831OO001	KASIKORNBANK PUBLIC COMPANY LIMITED THB 10
2942188	US9393221034	UNITED OVERSEAS BANK LIMITED SGD 1
6956527	AU000000WBC1	LUZERNER KANTONALBANK CHF 50
5270154	US9848482009	CAPITALIA SPA EUR 1
B00MZ00	US0310011004	VINDERUP BANK DKK 100

sedol	prod_code	security
2620031	US5116371007	RINGKJOBING BANK DKK 20
2421342	US69313P1012	SOUTHERN COMMUNITY BANK & TRUST COM USD0.01
6365145	TH0068010R15	CAPITAL CITY BANK GROUP INC COM USD0.01

SCHEDULE 2

The parties agree that the ticker symbols listed below comprise Annex A, Schedule 2 to the Amended and Restated Investment Management Agreement between Palomino Limited and Renaissance Technologies Corporation dated December 6, 2006.

sedol	prod_code	security
2077756	US06738E2046	Barclays Plc ADR Rep 4 Ord
2077767	US06738E2046	Barclays Plc ADR Rep 4 Ord
3134865	GB0031348658	Barclays Plc GBP 0.25
6507312	GB0031348658	Barclays Plc GBP 0.25
5273249	GB0031348658	Barclays PLC
	GB0031348658	Barclays PLC
B02S681	GB0031348658	Barclays PLC
3134865	GB0031348658	Barclays PLC
2193458	US06738E2046	Barclays PLC-Spons ADR

SCHEDULE 3

Pass-Through Entities

Ticker	Name	% Weight in the Index	Shares in the Index	Last Price	SECURITY TYP	SECURITY TYP2
AHGP UW Equity	Alliance Holdings GP LP	0.406	12	18.91	Ltd Part	Partnership Shares
ARLP UW Equity	Alliance Resource Partners LP	1.283	20.667	34.72	Ltd Part	Partnership Shares
APU UN Equity	Amerigas Partners LP	1.785	31.627	31.56	Ltd Part	Partnership Shares
APL UN Equity	Atlas Pipeline Partners LP	0.935	11.18	46.74	Ltd Part	Partnership Shares
BWP UN Equity	Boardwalk Pipeline Partners LP	0.779	14.7	29.65	Ltd Part	Partnership Shares
BPL UN Equity	Buckeye Partners LP	2.966	36.762	45.11	Ltd Part	Partnership Shares
CHC UN Equity	CharterMac			21.47	Ltd Part	Partnership Shares
CLMT UQ Equity	Calumet Specialty Products Partners LP	0.624	10.393	33.58	Ltd Part	Partnership Shares
XTEX UW Equity	Crosstex Energy LP	0.932	14.228	36.61	Ltd Part	Partnership Shares
DPM UN Equity	DCP Midstream Partners LP	0.509	8.82	32.25	Ltd Part	Partnership Shares
DMLP UQ Equity	Dorchester Minerals LP	1.055	24.58	24.01	Ltd Part	Partnership Shares
EEP UN Equity	Enbridge Energy Partners LP	4.339	48.94	49.57	Ltd Part	Partnership Shares
EEP US Equity	Enbridge Energy Partners LP	0.788	1	49.56	Ltd Part	Partnership Shares
ETE UN Equity	Energy Transfer Equity LP	1.07	20.895	28.63	Ltd Part	Partnership Shares
ETP UN Equity	Energy Transfer Partners LP	6.921	72.827	53.14	Ltd Part	Partnership Shares
EPE UN Equity	Enterprise GP Holdings LP	0.748	11.832	35.34	Ltd Part	Partnership Shares
EPD UN Equity	Enterprise Products Partners LP	13.992	278.129	28.13	Ltd Part	Partnership Shares
EPD US Equity	Enterprise Products Partners LP	0.447	1	28.1	Ltd Part	Partnership Shares
FGP UN Equity	Ferrellgas Partners-LP	1.525	36.898	23.11	Ltd Part	Partnership Shares
GEL UA Equity	Genesis Energy LP	0.431	12.51	19.25	Ltd Part	Partnership Shares
GEL US Equity	Genesis Energy LP	0.305	1	19.21	Ltd Part	Partnership Shares
GLP UN Equity	Global Partners LP	0.205	4.802	23.9	Ltd Part	Partnership Shares
HLND UW Equity	Hiland Partners LP	0.334	3.783	49.4	Ltd Part	Partnership Shares
HEP UN Equity	Holly Energy Partners LP	0.56	8.007	39.1	Ltd Part	Partnership Shares
NRGP UW Equity	Inergy Holdings LP	0.257	3.91	36.7	Ltd Part	Partnership Shares
NRGY UW Equity	Inergy LP	1.451	27.744	29.25	Ltd Part	Partnership Shares
KMP UN Equity	Kinder Morgan Energy Partners LP	12.088	144.667	46.72	Ltd Part	Partnership Shares
KMP US Equity	Kinder Morgan Energy Partners LP	0.743	1	46.73	Ltd Part	Partnership Shares
KSP UN Equity	K-Sea Transportation Partners LP	0.354	5.64	35.1	Ltd Part	Partnership Shares
MGG UN Equity	Magellan Midstream Holdings LP	0.861	21.998	21.88	Ltd Part	Partnership Shares
MMP UN Equity	Magellan Midstream Partners LP	4.446	65.033	38.23	Ltd Part	Partnership Shares

Ticker	Name	% Weight in the Index	Shares in the Index	Last Price	SECURITY TYP	SECURITY TYP2
MWE UA Equity	Markwest Energy Partners LP	1.293	13.161	54.94	Ltd Part	Partnership Shares
MMLP UW Equity	Martin Midstream Partners LP	0.42	7.812	30.06	Ltd Part	Partnership Shares
NRP UN Equity	Natural Resource Partners LP	1.042	11.151	52.24	Ltd Part	Partnership Shares
NSP UN Equity	Natural Resource Partners LP	0.284	3.087	51.5	Ltd Part	Partnership Shares
NRP US Equity	Natural Resource Partners LP	0.83	1	52.24	Ltd Part	Partnership Shares
OKS UN Equity	ONEOK Partners LP	4.899	44.979	60.9	Ltd Part	Partnership Shares
PPX UN Equity	Pacific Energy Partners LP	1.871	28.265	37.01	Ltd Part	Partnership Shares
PAA UN Equity	Plains All American Pipeline LP	4.834	55.85	48.4	Ltd Part	Partnership Shares
PAA US Equity	Plains All American Pipeline LP	0.77	1	48.44	Ltd Part	Partnership Shares
RGNC UQ Equity	Regency Energy Partners LP	0.876	19.146	25.59	Ltd Part	Partnership Shares
SGU UN Equity	Star Gas Partners LP	0.318	68.729	2.59	Ltd Part	Partnership Shares
TCLP UW Equity	TC Pipelines LP	0.87	15.083	32.25	Ltd Part	Partnership Shares
TGP UN Equity	Teekay LNG Partners LP	0.625	11.273	31	Ltd Part	Partnership Shares
TPP UN Equity	TEPPCO Partners LP	4.895	71.749	38.15	Ltd Part	Partnership Shares
TPP US Equity	TEPPCO Partners LP	0.607	1	38.22	Ltd Part	Partnership Shares
TLP UN Equity	Transmontaigne Partners LP	0.176	3.283	30	Ltd Part	Partnership Shares
USS UN Equity	US Shipping Partners LP	0.222	6.762	18.37	Ltd Part	Partnership Shares
VLI UN Equity	Valero LP	3.571	35.857	55.69	Ltd Part	Partnership Shares
WPZ UN Equity	Williams Partners LP	0.928	13.079	39.67	Ltd Part	Partnership Shares

ANNEX B

FEE SCHEDULE

CHI:1825573.3

Annex B. Effective December 8, 2006
Amended & Restated Investment Management Agreement
between Palomino Limited & Renaissance Technologies Corp.
Effective as of October 1, 2004
as amended and restated with effect on December 8, 2006

Country	Synthetic Only	Currency	Markets	Financing Short Rebate/ (Credit Interest)	Financing Long Charge/ (Debit Interest)	Financing "NET"	*Clearing Only Fees Per Name/Side/Day/ Per Broker/ 2 ways (buys & sells) *Waived for Barclays Executions	Execution Plus Clearing	Stamp Duty & Date	Stock Loan Index (GC)	Stock Loan** Charge - GC	Stock Loan** Charge - HTB	Stock Loan Misc	Receive Dividends Long	Pay Dividends Short
Barclays – USA		USD		FF open + 10 bps	FF open + 75 bps	Net	1.72 US	Free		S&P / NASD	41 bps	41 bps	N/A	100%	100%
Barclays – Australia		Australian Dollar	ASX	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	2 bps		All Ordinaries	150 bps	150 bps	35 bps for pre-borrow basket	85-100% based on franking	100%
Barclays – Austria		EURO	Vienna	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	60 USD	15 bps		Austrian Traded ATX	125 bps	150 bps		N/A	N/A
Barclays – Belgium		EURO	Euronext Brussels	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	1.75 bps		Belgium Stock Mkt Ret IDX	125 bps	150 bps	N/A	85%	100%
Barclays – Canada		Canadian Dollar	TSX	1W LIBOR - 15 bps	1w LIBOR + 60 bps	Net	6 USD	2.25 bps		S&P / TSX or via DTCC Settlement	100 bps / 50 bps for DTCC	150 bps / 50 bps for DTCC	300 bps for Trust Units	85%	85%
Barclays – Denmark		Danish Krone	OMX Copenhagen	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	15 USD	2 bps		Denmark Stk Mkt (Copenhagen)	125 bps	150 bps	N/A	85%	85%
Barclays – Finland		EURO	OMX Helsinki	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	15 USD	2 bps		HEX General Index	100 bps	125 bps	N/A	100%	100%
Barclays – France		EURO	Euronext Paris	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	1.5 bps		CAC 40	65 bps	125 bps	N/A	85%	85%
Barclays – Germany		EURO	XETRA	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	1.5 bps		DAX 30	65 bps	125 bps	N/A	85%	85%
Barclays – Hong Kong***		HK Dollar	SEHK	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	3bps	.1% rounded to the nearest dollar and payable by both buyer and seller	Hang Seng	200 bps	300 bps	N/A	100%	100%
Barclays – Ireland		EURO	N/A	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	80 USD	N/A		N/A	N/A	N/A	N/A	N/A	N/A
Barclays – Italy		EURO	MTA	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	.1 bp		Milan MIB30 Index	65 bps	125 bps	N/A	85% (87.5% for RISP)	85% (87.5% for RISP)
Barclays – Japan		Yen	TSE, Osaka, Jasdaq	1W LIBOR - 15 bps	1w LIBOR + 60 bps	Net	7 USD	.75 bps		TOPIX	110 bps	110 bps	N/A	93%	93%
Barclays – Netherlands		EURO	Euronext Amsterdam	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	1.5 bps		Amsterdam Exchanges Index	65 bps	125 bps	N/A	85%	85%
Barclays – New Zealand		New Zealand Dollar		1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	80 USD			NZSE Top 40 Index	200 bps	300 bps	N/A	N/A	N/A
Barclays – Norway		Norwegian Krone	Oslo	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	15 USD	2 bps		OSX Industrial Index	100 bps	125 bps	N/A	85%	85%
Barclays – Philippines	SO	Philippine Peso													
Barclays – Portugal		EURO	Euronext Lisbon	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	15 USD	1.75 bps		N/A	N/A	N/A	N/A	N/A	N/A
Barclays – Singapore		Singapore Dollar	SGX	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	20 USD	3.5 bps	Clearing Fee .05% (Max 100 USD/200 SGD); SGX access fee was .0075%	N/A	N/A	N/A	N/A	N/A	N/A
Barclays – South Africa		South African Rand	J'burg	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	15 USD	10 bps	25 bps on purchases	N/A	N/A	N/A	N/A	N/A	N/A
Barclays – South Korea	SO		KRX			Net	N/A	6 bps	levy as .3% (sales only)	N/A	N/A	N/A	N/A		
Barclays – Spain		EURO	Madrid	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	2 bps		IBEX 35 Index	65 bps	125 bps	35 bps for pre-borrow basket	85%	85%
Barclays – Sweden		Swedish Krona	OMX Stockholm	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	10 USD	2 bps		OMX (Stockholm) Index	65 bps	125 bps	N/A	85%	85%
Barclays – Switzerland - SWX		Swiss Franc	SWX	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	15 USD	2 bps		Swiss Market Index	65 bps	125 bps	N/A	85%	100%
Barclays – Switzerland - Virt-x (Note: 1.15bps until 12/31/06)		Swiss Franc	Virt-x	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	15 USD	1.5 bps		Swiss Market Index	65 bps	125 bps	N/A	85%	100%
Barclays – Thailand	SO	Thai Baht		SC COF - 100 bps	SC COF + 60 bps	Net									
Barclays – Taiwan	SO	Synthetic Only	TSEC			Net		6 bps	Sales tax .3% (sales only)	N/A	N/A	N/A	N/A	N/A	
Barclays – UK		Sterling	SETS	1W LIBOR - 25 bps	1w LIBOR + 60 bps	Net	N/A	2.10 GBP per fill + $20,000/ month****		FTSE 100, 250 Index	40 bps	60 bps	N/A	100% of net	100% of net

**The loan fee shall apply only for days when a short position is outstanding, except Australia and Spain.
***Hong Kong: The 3bps execution fee incudes a) Transfer Levy .005% b) Trading Fee .005% c) CCAS Clearing Fee .02% (HKD 100).
****The $20,000 monthly fee covers trading for Palomino Limited and St.Veran Equities Ltd.

To: Mark Silber[silber@rentec.com]
From: Thomas Kerns
Sent: Wed 5/21/2008 12:09:31 PM
Importance: **Normal**
Subject: Legal Entity Org Chart Powerpoint
organization.ppt

Mark

see attached. To run this file; open it using powerpoint, click on "Slide Show" and then "View Show". You can click on entity names to bring you to the relative slides about those entities. THIS IS A PROTOTYPE and may have bugs. The goal is to have this on the web with proper technology supporting it. Tiffany has some questions she needs to run by Carla, but for your purposes I think this is fine.

Let me know if you have any questions.

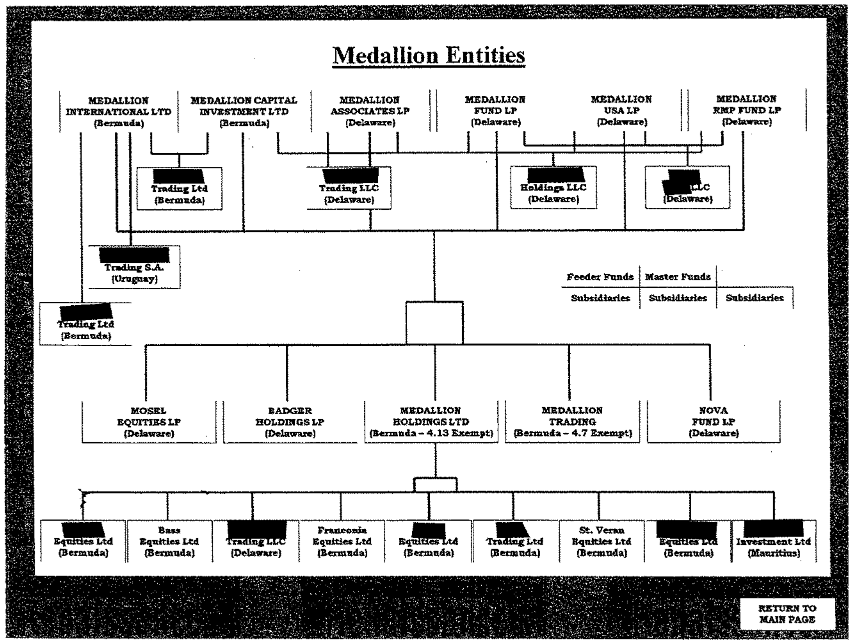
Regarding the questions labeled Page 20: The $26M contribution came from 3 partners: S.Robert Foundation ($1M), Sea Change ($15M) and Lemma Foundation ($10). The $76M redemption was actually the Performance Fee paid to RTLLC.

The explanation of the Option premium is as follows:
Premium is comprised of two components; the "Fixed" premium and the "Amortizable" premium. The fixed premium represents collateral required by the counterparty and the amortizable premium is the portion of the premium that will decay over the life of the option. Premium decay can be calculated a number of different ways, however the straight line amortization method has not been sighted by BDO as not being in compliance with GAAP.

TK

Renaissance Technologies LLC

MEDALLION ENTITIES	RIEF ENTITIES	RIFF ENTITIES	GLOBAL ENTITIES	MERITAGE ENTITIES	RELATED ENTITIES



[redacted] = Redacted by the Permanent Subcommittee on Investigations

Medallion Feeders

MEDALLION INTERNATIONAL LTD (Bermuda)	MEDALLION CAPITAL INVESTMENT LTD (Bermuda)	MEDALLION ASSOCIATES LP (Delaware)	MEDALLION FUND LP (Delaware)	MEDALLION USA LP (Delaware)	MEDALLION RMP FUND LP (Delaware)

The 6 Medallion Feeders are structured to meet a variety of legal and tax requirements
***Please click on the buttons above to get more information*:**

<u>Medallion International Ltd</u> is the feeder fund for *non-U.S.* investors.

<u>Medallion Capital Investment Ltd</u> is the feeder fund for *U.S. Tax Exempt* investors who are considered Qualified Purchasers.

<u>Medallion Associates LP</u> is the feeder fund for *Non-U.S.* investors who required flow-through (or non-PFIC) investments.

<u>Medallion Fund LP</u> is the feeder fund for *U.S. Taxable* investors who are considered Qualified Purchasers

<u>Medallion USA LP</u> is the feeder fund for *U.S. Taxable* investors who are considered Accredited Investors (not Qualified Purchasers). This fund is used for Accredited Investors who are <u>not</u> Renaissance employees.

<u>Medallion RMP Fund LP</u> is the feeder fund for *U.S. Taxable* investors who are considered Accredited Investors (not Qualified Purchasers). This fund is used for Accredited Investors who are Renaissance employees.

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Medallion Feeders

MEDALLION INTERNATIONAL LTD (Bermuda)	MEDALLION CAPITAL INVESTMENT LTD (Bermuda)	MEDALLION ASSOCIATES LP (Delaware)	MEDALLION FUND LP (Delaware)	MEDALLION USA LP (Delaware)	MEDALLION RMP FUND LP (Delaware)

Medallion International Ltd is the feeder fund for *non-U.S.* investors.

In addition to its investment in the Medallion master funds, Medallion International Ltd has small investments in [redacted] S.A. and [redacted] Trading Ltd. *(Please click on the following buttons to get more information on these 2 entities.)*

[redacted] S.A. | [redacted] Trading Ltd.

Along with Medallion Capital Investment Ltd (another Medallion Feeder), Medallion International Ltd has an investment in [redacted]rading Ltd. *(Please Click on the following button to get more information about [redacted] Trading Ltd.)*

[redacted] Trading Ltd

Medallion International Ltd operates under the 4.7 exemption of the CFTC Rules.

CFTC Rules Exemptions

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[redacted] = Redacted by the Permanent Subcommittee on Investigations

Medallion Feeders

MEDALLION INTERNATIONAL LTD (Bermuda)	MEDALLION CAPITAL INVESTMENT LTD (Bermuda)	MEDALLION ASSOCIATES LP (Delaware)	MEDALLION FUND LP (Delaware)	MEDALLION USA LP (Delaware)	MEDALLION RMP FUND LP (Delaware)

Medallion Capital Investment Ltd is the feeder fund for *U.S. Tax Exempt* investors who are considered Qualified Purchasers (a.k.a.; a 3(c)7 Fund).

In addition to its investment in the Medallion master funds, Medallion Capital Investment Ltd, along with Medallion Associates LP (another Medallion Feeder), has an investment in [redacted] Trading Ltd. ***Please Click on the following button to get more information about Cachaca Trading Ltd.*** [redacted] Trading Ltd

Also, along with Medallion Associates LP, Medallion Fund LP, Medallion USA LP and Medallion RMP Fund LP, Medallion Capital Investment Ltd is an investor in [redacted] Holdings LLC. ***Please Click on the following button to get more information about [redacted] Holdings.***
[redacted] Holdings LLC

Medallion Capital Investment Ltd operates under the 4.7 exemption of the CFTC Rules.
CFTC Rules Exemptions

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Medallion Feeders

MEDALLION INTERNATIONAL LTD (Bermuda)	MEDALLION CAPITAL INVESTMENT LTD (Bermuda)	MEDALLION ASSOCIATES LP (Delaware)	MEDALLION FUND LP (Delaware)	MEDALLION USA LP (Delaware)	MEDALLION RMP FUND LP (Delaware)

Medallion Associates LP is the feeder fund for *Non-U.S.* investors who required flow-through (or non-PFIC) investments. An example of an investor in this fund would be a foreign trust with U.S. beneficiaries.

In addition to its investment in the Medallion master funds, Medallion Associates LP has an investment in [redacted] Trading Ltd. ***Please Click on the following button to get more information about [redacted] Trading Ltd.***

[redacted] Trading Ltd

Also, along with Medallion Capital Investment Ltd, Medallion Fund LP, Medallion USA LP and Medallion RMP Fund LP, Medallion Associates LP is an investor in [redacted] Holdings LLC. ***Please Click on the following button to get more information about [redacted] Holdings.***

[redacted] Holdings LLC

Medallion Associates LP operates under the 4.7 exemption of the CFTC Rules.

CFTC Rules Exemptions

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Medallion Feeders

MEDALLION INTERNATIONAL LTD (Bermuda)	MEDALLION CAPITAL INVESTMENT LTD (Bermuda)	MEDALLION ASSOCIATES LP (Delaware)	MEDALLION FUND LP (Delaware)	MEDALLION USA LP (Delaware)	MEDALLION RMP FUND LP (Delaware)

Medallion Fund LP is the feeder fund for *U.S. Taxable* investors who are considered Qualified Purchasers (a.k.a.; a 3(c)7 Fund).

In addition to its investment in the Medallion master funds, Medallion Fund LP, along Medallion USA LP and Medallion RMP Fund LP (other Medallion Feeders), has an investment in [redacted] LLC. *Please Click on the following button to get more information about [redacted] LLC.*

[redacted] LLC

Also, along with Medallion Capital Investment Ltd, Medallion Associates LP, Medallion USA LP and Medallion RMP Fund LP, Medallion Fund LP is an investor in [redacted] Holdings LLC. *Please Click on the following button to get more information about [redacted] Holdings.*

[redacted] Holdings LLC

Medallion Fund LP operates under the 4.7 exemption of the CFTC Rules.

CFTC Rules Exemptions

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Medallion Feeders

MEDALLION INTERNATIONAL LTD (Bermuda)	MEDALLION CAPITAL INVESTMENT LTD (Bermuda)	MEDALLION ASSOCIATES LP (Delaware)	MEDALLION FUND LP (Delaware)	MEDALLION USA LP (Delaware)	MEDALLION RMP FUND LP (Delaware)

Medallion USA LP is the feeder fund for *U.S. Taxable* investors who are considered Accredited Investors (not Qualified Purchasers) (a.k.a.; a 3(c)1 Fund). This fund Is used for accredited Investors who are not Renaissance employees.

In addition to its investment in the Medallion master funds, Medallion USA LP, along Medallion Fund LP and Medallion RMP Fund LP (other Medallion Feeders), has an investment in [redacted] LLC. *Please Click on the following button to get more information about* [redacted] *LLC.* [redacted] LLC

Also, along with Medallion Capital Investment Ltd, Medallion Fund LP, Medallion Associates LP and Medallion RMP Fund LP, Medallion USA LP is an investor in [redacted] Holdings LLC. *Please Click on the following button to get more information about* [redacted] *Holdings.* [redacted] Holdings LLC

Medallion USA LP is *not* exempt from the disclosure and registration provisions of the Commodity Futures Trading Commission Rules.

CFTC Rules Exemptions

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Medallion Feeders

MEDALLION INTERNATIONAL LTD (Bermuda)	MEDALLION CAPITAL INVESTMENT LTD (Bermuda)	MEDALLION ASSOCIATES LP (Delaware)	MEDALLION FUND LP (Delaware)	MEDALLION USA LP (Delaware)	MEDALLION RMP FUND LP (Delaware)

Medallion RMP Fund LP is the feeder fund for *U.S. Taxable* investors who are considered Accredited Investors (not Qualified Purchasers) (a.k.a.; a 3(c)1 Fund). This fund is used for accredited Investors who are Renaissance employees.

In addition to its investment in the Medallion master funds, Medallion RMP Fund LP, along Medallion Fund LP and Medallion USA LP (other Medallion Feeders), has an investment in [redacted] LLC. *Please Click on the following button to get more information about [redacted] LLC.* [redacted] LLC

Also, along with Medallion Capital Investment Ltd, Medallion Fund LP, Medallion Associates LP and Medallion USA LP, Medallion RMP Fund LP is an investor in [redacted] Holdings LLC. *Please Click on the following button to get more information about [redacted] Holdings.*

[redacted] Holdings LLC

Medallion USA LP is *not* exempt from the disclosure and registration provisions of the Commodity Futures Trading Commission Rules.

CFTC Rules Exemptions

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CFTC Rules Exemptions

Section 4.7 of Commodity Future Trading Commission Rules provides for certain exemptions from certain requirements with respect to commodity pool operators making offerings to qualified eligible persons or commodity trading advisors with respect to advising qualified eligible persons. Under Section 4.7, the pool operator is exempted from certain disclosure compliance requirements. Specifically, Section 4.21 with respect to required delivery of a pool disclosure document, Section 4.24 with respect to the contents of the disclosure document in general, Section 4.25 with respect to requirements relating to the disclosure of past performance and Section 4.26 with regard to use amendment and filing of a disclosure document. The Section 4.7 exemption is not an exemption from registration as a commodity pool operator or commodity trading advisor.

Section 4.13 provides for exemption from registration as a commodity pool operator. Before its amendment in August of 2003, a person was not required to register as a commodity pool operator if the person did not receive any compensation or payment directly or indirectly; operated only one commodity pool at a time; was not otherwise required to register with the commission; and either the person or other person involved with the pools does any advertising in connection with the pool or to the total gross capital contributions for participation units in all pools that are operated, or intends to operate, do not in the aggregate exceed $200,000 and none of the pools operated have more than 15 participants. This is referred to as the "small pool exemption." In August 2003 CFTC Rule 4.13 was amended, increasing the total gross capital contributions for the small pool exemption from $200,000 to $400,000 and broadened the class of persons that need not be counted towards the exemptions limited on investors per pool.

Rule 4.13(a)(4) exempts a person from registration as a CPO if interests in the pool for which it seeks to claim relief (1) are exempt from registration under the Securities Act and (2) are offered and sold without marketing in the United States. In addition, the CPO must reasonably believe that (a) natural person participants in such pool are "qualified eligible persons" which are either (i) "qualified purchasers" for purposes of the 1940 Act; (ii) "knowledgeable employees" for purposes of the 1940 Act; or (iii) Non-United States persons (as defined in Rule 4.7); and (b) non-natural person participants in such pool are "qualified eligible persons" or "accredited investors."

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Investment Company Act of 1940 - Exemptions

Hedge funds are not required to register as an investment company with the SEC in reliance upon an exemption pursuant to either Section 3(c)(1) or Section 3(c)(7) of the Investment Company Act of 1940.

Section 3(c)(1) of the Act, in part, provides an exemption from the Act's registration requirement for an investment company whose securities are owned by not more than 100 beneficial owners who are considered "Accredited Investors" as defined in the act.

Section 3(c)(7) of the Act, in part, exempts investment companies from the Act's registration requirement without limitation as to the number of its beneficial owners as long as the securities are owned exclusively by "Qualified Purchasers" as defined in the Act. A hedge fund with 500 or more Qualified Purchasers, however, is required to register its securities with the SEC.

An "accredited investor" is deemed to include, A natural person with an individual net worth, or joint net worth with his or her spouse, at the time of purchase in excess of $1,000,000; A natural person with an individual income in excess of $200,000, or in excess of $300,000 with his or her spouse, in each of the two most recent years and who has a reasonable expectation of an income in excess of $200,000 individually, or in excess of $300,000 with his or her spouse, in the current year; and other types of investors with higher thresholds.

The Act defines the term "qualified purchaser" to include, any natural person who owns at least $5 million in investments; and Any other person (e.g., an institutional investor) that owns and invests on a discretionary basis at least $25 million in investments.

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Subsidiaries of Medallion Feeders

[redacted] Trading Ltd (Bermuda)	[redacted] Trading S.A. (Uruguay)	[redacted] Holdings LLC (Delaware)	[redacted] Trading Ltd (Bermuda)	[redacted]LC (Delaware)	[redacted] LLC (Delaware)

The 6 Medallion Feeder Subsidiaries are structured to gain access to certain markets
***Please click on the buttons above to get more information*:**

[redacted] Trading Ltd is structured to allow trading in Non-U.S. markets (primarily Index Futures and Currencies in Korea and Switzerland).

[redacted] Trading S.A. is structured to allow access to futures markets in Brazil.

[redacted] Holdings LLC has entered into swaps with Deutsche Bank and Calyon.

[redacted] Trading Ltd, [redacted] Trading LLC and [redacted] LLC were formed to gain access to the Tokyo Commodities Exchange

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Subsidiaries of Medallion Feeders

[redacted] Trading Ltd (Bermuda)	[redacted] Trading S.A. (Uruguay)	Ho[redacted] LLC (Delaware)	[redacted] Trading Ltd (Bermuda)	Trading [redacted]C (Delaware)	[redacted] LLC (Delaware)

[redacted] Trading Ltd is structured to allow trading in Non-U.S. markets (primarily Index Futures and Currencies in Korea and Switzerland). Medallion International Ltd has a very small ownership percentage. This entity is majority owned by three counterparties; Deutsche Bank AG, Chesham – a DB affiliate and Calyon.

[redacted] Trading S.A. is structured to allow access to futures markets in Brazil. Medallion International Ltd has a very small ownership percentage. This entity is majority owned by three counterparties; Deutsche Bank AG, Chesham – a DB affiliate and Calyon.

[redacted] Holdings LLC is owned by 5 of the 6 Medallion Feeders (exception is Medallion International Ltd). [redacted] has entered into swaps with Deutsche Bank and Calyon, the underlying security of which is DB and Calyon's investment in [redacted] and [redacted] (see above)

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[redacted] = Redacted by the Permanent Subcommittee on Investigations

Subsidiaries of Medallion Feeders

[redacted] Trading Ltd (Bermuda)	[redacted] Trading S.A. (Uruguay)	[redacted] Holdings LLC (Delaware)	[redacted] Trading Ltd (Bermuda)	[redacted] Trading LLC (Delaware)	[redacted] LLC (Delaware)

[redacted] Trading Ltd, [redacted] Trading LLC and [redacted] LLC were formed to gain access to the Tokyo Commodities Exchange.

Due to contract limitations imposed by the Tokyo Commodities Exchange on any single legal entity, three separate legal entities were formed with different beneficial owners to increase access to this market.

- [redacted] Trading Ltd is owned by Medallion International Ltd and Medallion Capital Investment Ltd.
- [redacted] Trading LLC is owned by Medallion Associates LP
- [redacted] LLC is owned by Medallion Fund LP, Medallion USA LP and Medallion RMP Fund LP

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Medallion Master Funds

MOSEL EQUITIES LP (Delaware)	BADGER HOLDINGS LP (Delaware)	MEDALLION HOLDINGS LTD (Bermuda-4.13 EXEMPT)	MEDALLION TRADING (Bermuda – 4.7 EXEMPT)	NOVA FUND LP (Delaware)

The 5 Medallion Master Funds are owned jointly by the 6 Medallion Feeders and are structured to meet a variety of legal and tax Requirements. *Please click on the buttons above to get more information*:

Mosel Equities LP purchases barrier options offered by Deutsche Bank

Badger Holdings LP purchases barrier options offered by Barclays Bank

Medallion Holdings Ltd is the holding company for a variety of trading entities

Medallion Trading trades Futures, Foreign Exchange, Fixed Income Securities and Options not otherwise traded in other Renaissance related entities

Nova Fund LP is a Broker/Dealer in a Joint Back Office arrangement with Bear Stearns.

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Medallion Master Funds

MOSEL EQUITIES LP (Delaware)	BADGER HOLDINGS LP (Delaware)	MEDALLION HOLDINGS LTD (Bermuda-4.13 EXEMPT)	MEDALLION TRADING (Bermuda – 4.7 EXEMPT)	NOVA FUND LP (Delaware)

Mosel Equities LP was formed as U.S. pass through entity (Limited Partnership). Mosel invests in global equities through the use of financial derivatives. The primary derivative product is a Barrier Option offered by Deutsche Bank, AG. Mosel is replacing Franconia Equities Ltd (subsidiary of Medallion Holdings Ltd) as the counterparty to the Deutsche Bank barrier options.

Badger Holdings LP was formed as U.S. pass through entity (Limited Partnership). Badger invests in global equities through the use of financial derivatives. The primary derivative product is a Barrier Option offered by Barclays Bank PLC.

Medallion Trading trades Futures, Foreign Exchange, Fixed Income and Listed Options that are not otherwise traded in other entities.

Medallion Trading operates under the 4.7 exemption of the CFTC Rules. CFTC Rules Exemptions

Nova Fund LP is a U.S. broker/dealer and trades U.S. equity securities and listed options under a Joint Back Office arrangement with Bear Stearns.

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Medallion Master Funds

MOSEL EQUITIES LP (Delaware)	BADGER HOLDINGS LP (Delaware)	MEDALLION HOLDINGS LTD (Bermuda-4.13 EXEMPT)	MEDALLION TRADING (Bermuda – 4.7 EXEMPT)	NOVA FUND LP (Delaware)

Medallion Holdings Ltd is the holding (parent) company for the following trading subsidiaries:

Baden Equities Ltd (Bermuda)	Bass Equities Ltd (Bermuda)	[redacted] Trading LLC (Delaware)	Franconia Equities Ltd (Bermuda)	
[redacted] Equities Ltd (Bermuda)	[redacted] Trading Ltd (Bermuda)	St. Veran Equities Ltd (Bermuda)	[redacted] Equities Ltd (Bermuda)	[redacted] Investment Ltd (Mauritius)

Medallion Holdings Ltd operates under the 4.13 exemption of the CFTC Rules.

CFTC Rules Exemptions

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Subsidiaries of Medallion Holdings Ltd

Baden Equities Ltd (Bermuda)	Bass Equities Ltd (Bermuda)	[redacted] Trading LLC (Delaware)	Franconia Equities Ltd (Bermuda)	[redacted] Equities Ltd (Bermuda)	[redacted] Trading Ltd (Bermuda)	St. Veran Equities Ltd (Bermuda)	[redacted] Equities Ltd (Bermuda)	[redacted] Investment Ltd (Mauritius)

The Medallion Holdings Ltd subsidiaries were formed to trade in various markets around the world. ***Please click on the dark green buttons for more information on the active Entities.***

The following entities are no longer active:

Bass Equities Ltd
[redacted] Trading Ltd
[redacted] Equities Ltd

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Subsidiaries of Medallion Holdings Ltd

Baden Equities Ltd (Bermuda)	Bass Equities Ltd (Bermuda)	[redacted] Trading LLC (Delaware)	Franconia Equities Ltd (Bermuda)	[redacted] Equities Ltd (Bermuda)	[redacted] Trading Ltd (Bermuda)	St. Veran Equities Ltd (Bermuda)	[redacted] Equities Ltd (Bermuda)	[redacted] Investment Ltd (Mauritius)

Baden Equities Ltd trades UK equities with Deutsche Bank, AG not otherwise Traded in other entities or structures.

[redacted] Trading LLC trades Brazilian Interest Rate Futures.

Franconia Equities Ltd is the predecessor to Mosel Equities LP and invests in global equities through the use of financial derivatives. The primary derivative product is a Barrier Option offered by Deutsche Bank, AG.

[redacted] Equities Ltd trades Korean equities through CSFB.

St Veran Equities Ltd trades European equities at Barclays Capital not otherwise Traded in other entities or structures.

[redacted] Investment Ltd was formed to trade in India and is waiting for approval by the Securities and Exchange Board of India (SEBI) to trade as a Foreign Institutional Investor (FII).

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RT-PSI-00363699 - 711

Renaissance Related Entities

RENAISSANCE TECHNOLOGIES LLC
(Delaware)
SEC REGISTERED

Renaissance Technologies LLC ("RTCLLC") is a Registered Investment Advisor as defined by the Investment Advisors Act of 1940.

RTCLLC is the "investment advisor" for the following entities:
Medallion International Ltd Medallion Capital Investment Ltd [redacted] Trading Ltd [redacted] Trading S.A. [redacted] Trading Ltd [redacted] Trading LLC [redacted] Holdings LLC [redacted] LLC Medallion Holdings Ltd Medallion Trading Baden Equities Ltd Bass Equities Ltd [redacted] Trading LLC Franconia Equities Ltd [redacted] Equities Ltd [redacted] Trading Ltd St. Veran Equities Ltd. [redacted] Equities Ltd [redacted] Investment Ltd Renaissance Institutional Equities Fund SICAV PLC Renaissance Institutional Futures Fund SICAV PLC

RTCLLC is the "Managing General Partner" of the following entities:
Medallion Associates LP Medallion Fund LP Medallion USA LP Medallion RMP Fund LP Mosel Equities LP Badger Holdings LP Nova Fund LP Renaissance Institutional Equities Fund International LP Renaissance Institutional Futures Fund International LP

RTCLLC is the "Administrative General Partner" of the following entities:
Meritage Group LP Meritage International LP

RTCLLC is the "Managing Member" of the following entities:
Renaissance Institutional Equities Fund LLC RIEF RMP LLC RIEF Trading LLC Renaissance Kaleidoscope Fund LLC Renaissance Institutional Futures Fund LLC RIFF RMP LLC RIFF Trading LLC

RTCLLC is the "Sole Member" of the following entities:
Renaissance Institutional Management LLC TCA Futures LLC Futures Tech LLC

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on Investigations

Delaware

The First State

PAGE 1

I, HARRIET SMITH WINDSOR, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF LIMITED PARTNERSHIP OF "BADGER HOLDINGS L.P.", FILED IN THIS OFFICE ON THE SIXTH DAY OF AUGUST, A.D. 2004, AT 12:13 O'CLOCK P.M.

Harriet Smith Windsor

Harriet Smith Windsor, Secretary of State

3839312 8100

040577257

AUTHENTICATION: 3282411

DATE: 08-09-04

CERTIFICATE OF LIMITED PARTNERSHIP

OF

BADGER HOLDINGS L.P.

The undersigned, desiring to form a limited partnership under the laws of the State of Delaware, does hereby certify as follows:

(1) The name of the limited partnership is Badger Holdings L.P. (the "Partnership").

(2) The registered office of the Partnership in the State of Delaware is located at 1209 Orange Street in the City of Wilmington, County of New Castle. The name of the registered agent of the Partnership at such address is The Corporation Trust Company.

(3) Renaissance Technologies Corp. is the sole general partner (the "General Partner") of the Partnership. The business address of the General Partner is 800 Third Avenue, New York, New York 10022.

IN WITNESS WHEREOF, the undersigned has executed this Certificate on the 5th day of August, 2004.

RENAISSANCE TECHNOLOGIES CORP.

By: /s/ Mark Silber
Name: Mark Silber
Title: Vice President

State of Delaware
Secretary of State
Division of Corporations
Delivered 12:31 PM 08/06/2004
FILED 12:13 PM 08/06/2004
SRV 040577257 - 3839312 FILE

FORM NO. 6

Registration No. 32502

BERMUDA

CERTIFICATE OF INCORPORATION

I hereby in accordance with the provisions of section 14 of ***the Companies Act 1981*** issue this Certificate of Incorporation and do certify that on the **13th** day of **August, 2002**

BASS EQUITIES LTD.

was registered by me in the Register maintained by me under the provisions of the said section and that the status of the said company is that of an **exempted** company.

Given under my hand and the Seal of the REGISTRAR OF COMPANIES this **14th**, day of **August, 2002**.

Acting Registrar of Companies

U.S. Department of Justice

United States Attorney
Southern District of New York

The Silvio J. Mollo Building
One Saint Andrew's Plaza
New York, New York 10007

December 21, 2010

Mark F. Pomerantz, Esq.
Paul, Weiss, Rifkind, Wharton & Garrison LLP
1285 Avenue of the Americas
New York, N.Y. 10019

Re: Deutsche Bank AG – Non-Prosecution Agreement

Dear Mr. Pomerantz:

On the understandings specified below, the Office of the United States Attorney for the Southern District of New York (the "Office"), and with respect to tax offenses, the Tax Division, Department of Justice ("DOJ Tax"),[1] will not criminally prosecute Deutsche Bank AG ("Deutsche Bank")[2] for any crimes related to its participation in a conspiracy in violation of 18 U.S.C. § 371 to (a) defraud the United States and its agency, the Internal Revenue Service (hereinafter "IRS"); (b) commit tax evasion in violation of 26 U.S.C. § 7201; and (c) make and subscribe false and fraudulent tax returns, and aid and assist in the preparation and filing of said tax returns in violation of 26 U.S.C. § 7206, to the extent Deutsche Bank has disclosed such participation to this Office as of the date of this Agreement. Specifically, during the period between approximately 1996 and 2002, through the conduct of certain Deutsche Bank employees, Deutsche Bank participated in and implemented fraudulent tax shelters. In doing so and through other actions, Deutsche Bank assisted high net worth United States citizens, who, through 2005, reported approximately $29.3 billion in bogus tax benefits on their tax returns, mainly losses, resulting in the evasion of approximately $5.9 billion in U.S. individual income taxes on capital gains and ordinary income. The tax shelters that Deutsche Bank participated in and implemented include, among others: Foreign Leveraged Investment Program ("FLIP"), Offshore Portfolio Investment Strategy ("OPIS"), Bond Linked Issue Premium Structure ("BLIPS"), Custom Adjustable Rate

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1 The protection against prosecution with respect to tax offenses set forth herein has been approved by DOJ Tax.

2 Deutsche Bank AG refers to Deutsche Bank AG, Taunus Corporation, and their respective subsidiaries, affiliates, and related entities.

Debt Structure ("CARDS"), Currency Options Bring Reward Alternatives ("COBRA"), Currency Option Investment Strategy ("COINS"), Family Office Customized Partnerships ("FOCUS"), FX Digital Options, FX Digital Swaps, Treasury Shorts, Hedge Option Monetization of Economic Remainder ("HOMER"), Margate, Market Linked Deposits ("MLD"), Personal Investment Corporation ("PICO"), Partnership Option Portfolio Securities ("POPS"), Partnership Option Portfolio Securities Lite ("POPS LITE"), Presidio Bond, and Presidio FX. Deutsche Bank participated in approximately 1,300 deals involving over 2,100 customers, and implemented over 2,300 financial transactions related to these shelters. This conduct is described more fully in the Statement of Facts, which is attached hereto as Exhibit A, and incorporated by reference herein. Deutsche Bank accepts and acknowledges as true the facts set forth in the Statement of Facts. This Agreement is entered into by Deutsche Bank pursuant to authority conveyed by decision of the Management Board of Deutsche Bank.

This Agreement does not provide any protection against prosecution for any crimes except as related to the tax shelters set forth above.

Unless stated otherwise in this Agreement, Deutsche Bank's obligations under this Agreement will continue until the later of (1) a period of two years from the date of the signing of this Agreement, or (2) the expiration of the tenure of the Independent Expert, as that term is defined herein.

Continuing Obligation to Cooperate

It is understood that Deutsche Bank (a) shall truthfully and completely disclose all information with respect to the activities of itself and its officers, agents, and employees concerning all matters about which this Office inquires of it, which information can be used for any purpose; (b) shall cooperate fully with this Office, the civil and criminal branches of the IRS, the civil branch of DOJ Tax, and any other law enforcement agency designated by this Office; (c) shall attend all meetings at which this Office requests its presence and use its best efforts to secure the attendance and truthful statements or testimony of any past or current officers, agents, or employees at any meeting or interview or before the grand jury or at trial or at any other court proceeding; (d) shall provide to this Office upon request, any document, record, or other tangible evidence relating to matters about which this Office or any designated law enforcement agency inquires of it; (e) shall assemble, organize, and provide in a responsive and prompt fashion, and upon request, expedited fashion, all documents, records, information and other evidence in Deutsche Bank's possession custody and control as may be requested by the Office, the IRS, or DOJ Tax; (f) shall volunteer and provide to the Office any information and documents that come to Deutsche Bank's attention that may be relevant to the Office's investigations and proceedings; (g) shall bring to this Office's attention all criminal conduct by or criminal investigations of Deutsche Bank or its senior managerial employees, and, with respect to conduct or investigations concerning products or transactions that may run afoul of U.S. federal income tax laws, rules, and regulations, all Deutsche Bank employees, that comes to the attention of Deutsche Bank's

Management Board or senior management; (h) shall bring to the Office's attention any administrative or regulatory proceeding or civil action or investigation by any governmental authority that alleges fraud by Deutsche Bank; and (i) shall commit no crimes whatsoever. Moreover, any assistance Deutsche Bank may provide to federal criminal investigators in connection with this Agreement shall be pursuant to the specific instructions and control of this Office and designated investigators. Deutsche Bank's obligations under this paragraph will continue until the later of (1) a period of two years from the date of the signing of this Agreement, or (2) the date upon which all prosecutions and appeals arising out of, or relating in any way to, the conduct described in the Statement of Facts are finally concluded, or (3) the date when all IRS and DOJ Tax civil proceedings and appeals relating to the tax shelter activity described in this Agreement are finally concluded.

Payments and Forfeiture Obligations

It is understood that Deutsche Bank agrees to pay to the United States a sum of money in United States currency equal to $553,633,153. This payment is attributable to the following: (1) in lieu of a fine, payment in the amount of the fees Deutsche Bank earned from its participation in the tax shelter activity described in this Agreement; (2) in lieu of restitution, payment in the amount of taxes and interest the IRS was unable to collect from taxpayers because of the expiration of the civil statute of limitations on collection, and for suspended interest the IRS was unable to collect from taxpayers; and (3) the penalty Deutsche Bank has agreed to pay pursuant to the Closing Agreement referenced below to settle the IRS's promoter penalty examination. Deutsche Bank agrees to forfeit to the United States all of these funds pursuant to 18 U.S.C. Section 981(a)(1)(c), less the promoter penalty, which will be paid directly to the IRS in accordance with the terms of the Closing Agreement. Deutsche Bank must transfer the funds to be forfeited to the United States within thirty days of executing this Agreement. Such payment shall be made by wire transfer to the Department of Treasury. Deutsche Bank agrees to execute all documentation necessary to effectuate the forfeiture of the property. Deutsche Bank further agrees that it will not file a claim with the court or otherwise contest this civil forfeiture action and will not assist a third party in asserting any claim. It is further understood that Deutsche Bank will not file or assist anyone in filing a petition for remission or mitigation with the Department of Justice or Treasury concerning this property.

It is further understood that Deutsche Bank will not take any deductions on its tax returns, or seek any other tax related benefit, for any of the financial payments it makes pursuant to this Agreement.

Obligations Not to Violate the Law and Consequences for Violating the Law or Breaching the Agreement

It is understood that, should Deutsche Bank commit any crimes subsequent to the date of the signing of this Agreement, or should the Government determine that it has knowingly given false, incomplete, or misleading testimony or information, or should it otherwise violate any provision of this Agreement, Deutsche Bank shall thereafter be subject to prosecution for any federal criminal violation of which this Office has knowledge, including perjury and obstruction of justice. Any such prosecution that is not time-barred by the applicable statute of limitations on the date of the signing of this Agreement may be commenced against Deutsche Bank, notwithstanding the expiration of the statute of limitations between the signing of this Agreement and the commencement of such prosecution. It is the intent of this Agreement to waive all defenses based on the statute of limitations with respect to any prosecution that is not time-barred on the date that this Agreement is signed. By this Agreement, Deutsche Bank expressly intends to and hereby does waive its rights in the foregoing respects, including any right to make a claim premised on the statute of limitations, as well as any constitutional, statutory, or other claim concerning pre-indictment delay. Such waivers are knowing, voluntary, and in express reliance on the advice of Deutsche Bank's counsel.

It is understood that if the Office, in its sole discretion, has determined that Deutsche Bank has committed any crime after signing this Agreement or has given false, incomplete, or misleading testimony or information, or has otherwise violated any provision of this Agreement: (a) all statements made by Deutsche Bank to this Office or other designated law enforcement agents, including Exhibit A, the Statement of Facts, and any testimony given by Deutsche Bank before a grand jury or other tribunal, whether prior to or subsequent to the signing of this Agreement, and any leads from such statements or testimony shall be admissible in evidence in any criminal proceeding brought against Deutsche Bank; and (b) Deutsche Bank shall assert no claim under the United States Constitution, any statute, Rule 410 of the Federal Rules of Evidence, or any other federal rule that such statements or any leads therefrom should be suppressed. It is the intent of this Agreement to waive all rights in the foregoing respects.

It is understood that Deutsche Bank has entered into a Closing Agreement with the IRS in connection with IRS's civil promoter penalty examination of Deutsche Bank and has agreed to pay the IRS a civil penalty in the amount of $149,839,000, which is included in the $553,633,153 referenced on page three of this Agreement. It is further understood that the resolution reached in the Closing Agreement is a condition precedent to this Agreement and that Deutsche Bank's violation of any terms and provisions of the Closing Agreement shall constitute a violation of this Agreement.

Compliance Measures

It is understood that Deutsche Bank shall maintain throughout its U.S. operations and with respect to any Deutsche Bank operations affecting U.S. income taxes, an effective compliance and ethics program that fully comports with the criteria set forth in Section 8B2.1 of the 2009 edition of the United States Sentencing Guidelines Manual. Deutsche Bank represents that it has implemented certain procedures (the "Compliance Measures") that enable it to identify products and transactions that may run afoul of U.S. federal income tax laws, rules, and regulations and that the Compliance Measures enable it to avoid the execution of such transactions by or with the assistance of Deutsche Bank. Deutsche Bank further represents that the Compliance Measures are effective within the meaning of Section 8B2.1 of the 2009 edition of the United States Sentencing Guidelines Manual.[3]

Because the Government has not conducted an independent examination into whether the Compliance Measures have been implemented or whether they are effective in achieving compliance with U.S. federal income tax laws, rules and regulations, in lieu of such independent examination, Deutsche Bank has voluntarily agreed to retain an independent expert (the "Independent Expert"), for selection by the Office and approval by the Office of the Deputy Attorney General, whose jurisdiction will be to evaluate the implementation and effectiveness of the Compliance Measures. The Independent Expert's responsibilities will include evaluating the Compliance Measures and determining whether they are adequate to achieve compliance with U.S. federal income tax laws and to prevent and detect misconduct relating to products and transactions susceptible to abuse on behalf of high net worth individuals. The Independent Expert will review and monitor Deutsche Bank's maintenance and execution of the Compliance Measures and, as required, any other relevant Deutsche Bank compliance program, and recommend such changes as are necessary to ensure that Deutsche Bank is implementing and maintaining an effective Compliance & Ethics Program as defined in Section 8B2.1 of the 2009 edition of the United States Sentencing Guidelines Manual. The terms of the Independent Expert's retention, including, without limitation, the Independent Expert's jurisdiction, powers, and duties (the "Verification Procedures"), are set forth in Section II of the document entitled "Compliance Measures and Verification Procedures" and all of the terms and provisions of Section II A. are incorporated by reference herein. Deutsche Bank agrees to adopt all recommendations submitted by the Independent Expert unless Deutsche Bank objects to any recommendation and the Office agrees that adoption of such recommendation should not be required. It is understood that Deutsche Bank's failure to adopt such recommendations, unless the Office agrees that adoption of such recommendations is not required, shall constitute a violation of this Agreement. Deutsche Bank further agrees that the "Tax Specific Policies" set forth in Section I A. 2. of the Compliance Measures, incorporated by reference herein, must be implemented and maintained for the Compliance Measures to be effective and that any failure to implement or maintain the "Tax Specific Policies" shall constitute a violation of this Agreement.

It is further understood that this Agreement does not bind any federal, state or local prosecuting authority other than this Office and, to the extent set forth

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[3] The Compliance Measures are set forth in Section I of the document entitled "Compliance Measures and Verification Procedures," attached hereto as Exhibit B.

above, DOJ Tax. This Office will, however, bring the cooperation of Deutsche Bank to the attention of other prosecuting offices, if requested by Deutsche Bank.

It is further understood that Deutsche Bank and/or this Office may disclose this Agreement and Exhibits A-B attached hereto to the public.

Mark Pomerantz, Esq.
December 21, 2010

With respect to this matter, this Agreement supersedes all prior, if any, understandings, promises and/or conditions between this Office, DOJ Tax, and Deutsche Bank. No additional promises, agreements, and conditions have been entered into other than those set forth in this letter and none will be entered into unless in writing and signed by all parties.

Very truly yours,

PREET BHARARA
United States Attorney

By: Bonnie Jonas
Bonnie B. Jonas/Christopher L. Garcia
Assistant United States Attorneys
(212) 637-2472/1022

APPROVED:

Boyd M. Johnson III
Deputy United States Attorney

AGREED AND CONSENTED TO:

By: ______________________ Date: December 21, 2010
Richard H. Walker, Managing Director and General Counsel, Deutsche Bank AG

By: ______________________ Date: December 21, 2010
Joseph Polizzotto, Americas General Counsel, Deutsche Bank AG

By: ______________________ Date: December 21, 2010
Joseph Polizzotto, Managing Director, Taunus Corporation

By: ______________________ Date: December 21, 2010
Stuart Clarke, Managing Director, Taunus Corporation

APPROVED:
By: Mark F. Pomerantz Date: December 21, 2010
Mark F. Pomerantz
Attorney for Deutsche Bank, AG

Exhibit A

Statement of Facts

1. Deutsche Bank AG is a Germany-based financial institution that operates in the United States through its New York branch at 60 Wall Street, New York, New York. It is and was the ultimate parent of or successor to various related entities, including Deutsche Bank Trust Company Americas, Deutsche Bank Securities, Inc. and Alex. Brown. Collectively, all of the foregoing entities are referred to herein as "DB."[1]

2. As set forth in more detail below, between approximately 1996 and 2002, DB unlawfully, willfully and knowingly participated in financial transactions executed in connection with a number of tax shelter transactions primarily devised by others by, among other things, assisting tax shelter promoters to structure financial transactions that would be used to generate substantial tax benefits (generally losses), by preparing financial transaction documents that would be used by others to mislead the IRS regarding the true nature of the transactions, and by executing the transactions for the taxpayer clients of the promoters. DB acknowledges that it was wrong and unlawful to have engaged in these transactions and it regrets having done so.

3. At the time that DB participated in the shelters, it knew or should have known that:

(a) DB's participation in executing the financial transactions was intended to create the appearance of investment activity, but taxpayers were entering into these transactions for the primary purpose of avoiding taxes, as opposed to making profits on the transactions;

(b) in order to obtain tax benefits, the taxpayers and the tax shelter promoters would use documents that falsely described the purpose and intent of the transactions; and

(c) the tax shelters, and the financial transactions DB facilitated in connection with the shelters, would be used by taxpayers and others to generate purported tax losses that would be used to evade the payment of several billion dollars in federal income taxes that in fact were due and owing.

4. DB's supervisory and internal controls with respect to these transactions were inadequate. Specifically, for example, DB did not have adequate policies and procedures for analyzing client tax-motivated transactions in which DB participated as a counterparty, nor for involving its internal control functions in an appropriate analysis and approval process for such transactions.

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[1] During the relevant time period, DB employed approximately 92,000 people, including approximately 14,000 in the United States.

The Tax Shelters

5. DB participated in approximately 15 different tax shelters, engaging in at least 1,300 deals involving over 2,100 customers, and implementing over 2,300 financial transactions. These tax shelter transactions included (among others): 56 BLIPS transactions; 62 FLIP/OPIS transactions; 16 COBRA transactions; 63 COINS transactions; 474 FX Digital Options transactions; 54 FX Digital Swaps transactions; 36 HOMER transactions; 100 PICO transactions; and 114 POPS transactions. Customers used the transactions to claim approximately 29.3 billion dollars in bogus tax benefits, mainly losses.

<u>BLIPS</u>

6. DB executed approximately 56 BLIPS transactions between September and December 1999. Prior to executing the transactions, DB employees took steps to have the BLIPS series of transactions approved within DB. In that connection, certain internal documents falsely identified the transaction as an investment strategy. DB's BLIPS credit reports, for example, falsely identified the primary purpose of BLIPS as providing the investor with an opportunity to make profits based on the potential depreciation of emerging markets currencies. Those internal credit reports did not recite that the BLIPS transactions were designed to enable BLIPS investors to claim a purported tax benefit, although the BLIPS transactions were tax-motivated and, in practical terms, involved no credit or investment risk to DB and virtually no overall profit potential to the customers.

7. Before participating in the transactions, DB obtained a copy of a draft KPMG opinion letter on the underlying tax merits of the BLIPS transaction. DB was aware that Law Firm No. 1 also had been retained to provide a separate opinion to the customers. The KPMG and Law Firm No. 1 opinions each represented that the customers' tax position would "more likely than not" withstand IRS challenge. DB also obtained its own opinion from another major New York law firm with regard to whether it had any tax shelter registration and list maintenance obligations for its participation in BLIPS. DB did not seek or obtain an independent written opinion regarding the merits of the tax arguments that it understood would be advanced by taxpayers. While DB was advised by the major New York law firm that the taxpayer argument would not be frivolous if properly presented to the IRS, that advice was based on certain representations about the taxpayers' intent that DB knew or should have known were incomplete, false, and misleading.

8. For example, the BLIPS transactions were structured as 7-year loans. DB knew that the purpose of this structure was to reduce the taxes of BLIPS customers. DB prepared and executed loan documents that customers could use to support their position vis-a-vis the IRS that the transactions were part of a highly-leveraged investment program. However, the plan as understood by DB employees was not a highly leveraged investment program. These DB transactional documents

could be used by the customer to falsely argue that loan funds were borrowed to provide leverage for forward contracts that involved shorting foreign currencies pegged to the U.S. dollar ("the forward contracts"), which were foreign currency investments of the customers in the BLIPS transactions. However, separate cash funds provided by the customers as part of the "all-in" cost for participating in BLIPS were the only funds used to fund the forward contracts. Although the loan documents purported to permit the customer to make foreign currency investments with the loan proceeds, the loan proceeds and the customers' cash contribution served to collateralize the loans and DB knew that the loan proceeds would not be used in any way to fund or leverage the forward contracts.

9. The BLIPS loans also were documented as seven-year loans with options to unwind early. DB knew that this documentation was necessary in order to generate the tax benefits sought by the customers. While each customer had the contractual right to keep the loan outstanding for seven years, DB understood that all the borrowers would unwind their transactions in 60-90 days, and that the customers did not expect to maintain the loans for longer periods, and DB acted in accordance with this understanding. In order to achieve the desired tax benefit, all of the 1999 BLIPS transactions executed by DB in fact were unwound by customers at around the 60-day mark, before the end of 1999, so that customers could claim purported tax losses in that year. In order to complete the transactions in this time frame, DB processed many of the BLIPS transactions in October 1999.

10. The BLIPS transactions were designed by KPMG and Presidio to create the impression that the loans had an unusual premium structure at an interest rate well above prevailing market rates. DB knew that the premium structure was necessary for the loans to generate the tax benefits sought by the customers. As part of the overall structure, the customer and DB entered into a series of interest rate swaps with a retroactive effective date to the date of the initial loan book entries. The net effect of the swaps was that the clients paid only a market rate of interest on the full amount of the loaned funds (principal and premium). In other words, although the loans were described in the transactional documents as above-market, fixed-rate loans with an unamortized premium, the interest rate swaps effectively converted the loans to variable-rate loans, at market rates, with no premium. This swap was part of the original agreement between DB and Presidio, agreed to before the first BLIPS transaction began.

11. The forward contracts, which DB conducted on behalf of the BLIPS customers, were executed in the aggregate at the direction of Presidio and then allocated among the individual customers' BLIPS transactions. DB did not subject the individual customers to scrutiny as to their creditworthiness before entering into the non-recourse loans; the entities to which the loans were made had no significant assets and the loan proceeds were pledged as collateral for the loans themselves.

12. The BLIPS tax opinion letters drafted by KPMG represented that DB, the Presidio entities, and the customer all acted at arm's length with respect to the BLIPS transaction, and that there was no legally binding arrangement to

conduct the transaction in the way described in the opinion letters. In fact, while there was no written or formal agreement requiring each party to complete the transaction in the way described in the opinion letters, it was understood by all parties that the various steps in the BLIPS transaction were orchestrated in advance, and that each transaction would be executed in accordance with the description in the opinion letters, as in fact took place.

13. DB's fees for the BLIPS transactions were calculated as a percentage of the loss the customer was attempting to generate, typically 1.25 percent of the targeted loss.

FLIP/OPIS

14. During 1997 through 1999, DB participated in another tax-motivated transaction devised by KPMG known as FLIP/OPIS. As part of the FLIP/OPIS structure, DB agreed to lend money to a Cayman single-purpose entity to purchase DB stock. DB knew that FLIP/OPIS customers were not borrowing the loan proceeds to increase their ability to profit from the appreciation in value of DB stock, but rather to avoid paying United States taxes.

15. Prior to executing the FLIPS/OPIS transactions, DB received draft FLIP/OPIS tax opinions prepared by KPMG and Law Firm No. 1. The KPMG and Law Firm No. 1 opinion letters represented that DB agreed to extend a loan to the Cayman single purpose entity to purchase DB stock. DB did lend money to the Cayman entity that was used to purchase DB stock. The structure of the transactions ensured that DB was not exposed to any lending or credit risk as a practical matter; the loan agreement provided that the stock that was purchased with the loan proceeds would serve as collateral for the loan. When large purchase orders were placed on behalf of the customers on the Frankfurt Exchange, DB traders would simultaneously place a nearly offsetting similarly large sale order on its own behalf. Moreover, the stock was fully hedged against depreciation by equity derivatives issued by DB. Specifically, DB and the Cayman entity entered into put and call agreements, by which DB purchased back from the Cayman entity in approximately seven weeks the same DB stock that the Cayman entity had purchased with the loan proceeds. Any remaining potential risk to DB was fully collateralized with cash provided by the customer, who was a partner in the Cayman entity.

16. The KPMG and Law Firm No. 1 tax opinion letters further represented that the taxpayers entered into the FLIP/OPIS transaction in an effort to profit from the appreciation of DB stock. Given the structure and the short duration of the transactions, there was virtually no chance that the customer would profit significantly from an increase in the price of DB stock.

17. The FLIP/OPIS tax opinions represented that DB, the Cayman entity, and the customer all acted at arm's length in negotiating the terms of the transaction, and that there was no legally binding or written arrangement to conduct the loan, purchase, and re-sale of securities in any particular manner. While there

was no written or formal agreement requiring each party to complete the transaction in the way described in the opinions, it was understood by all parties that the FLIP/OPIS transaction steps were orchestrated in advance, and that each transaction would be executed in accordance with the description in the tax opinion letters, as in fact took place. Moreover, DB knew that the Cayman entity was controlled by Presidio and was not an "independent" or "arm's length" negotiator with respect to the customer.

Short Option Strategies ("SOS")

18. DB participated in a series of transactions referred to herein as "SOS" (for "Short Option Strategies") with promoters Jenkens & Gilchrist ("J&G"), KPMG, Ernst & Young ("E&Y") and others. The SOS transactions included FX Digital Options, FX Digital Swaps, COBRA, HOMER, and COINS.

19. The SOS transactions were designed to generate a substantial ordinary or capital loss through the creation of an artificially high basis in an interest in a partnership or other entity through a series of purchases and sales of off-setting options on foreign currency. DB understood that the SOS transactions were designed solely to achieve tax benefits for customers. DB personnel created the individual paired options structures for specific use in the tax shelter transactions. Given the fees charged by the other promoters, there was no reasonable opportunity for the clients to make an overall profit. Specifically, certain DB employees understood that:

(a) FX Digital Options and COBRA transactions were designed to generate tax losses based on long and short option positions; the transactions involved offsetting and paired options that netted out to a relatively small long option position;

(b) FX Digital Swaps transactions were designed to generate a tax loss based on a pair of offsetting contingent swap payments; the contingent swap payments netted out to a relatively small contingent payment;

(c) HOMER transactions were designed to generate a tax loss based on two pairs of barrier options that netted out to place at risk a relatively small amount of the overall premium for the four options, while DB also provided the taxpayers with a loan for the purchase of the HOMER options, with the understanding that the loan posed no risk to the bank but was being employed by the taxpayers to achieve the creation of the tax loss; and

(d) COINS transactions were designed to generate a tax loss based on long and short foreign currency barrier options; the offsetting paired options netted out to a relatively small long option position.

20. J&G and other promoters of the SOS transactions issued tax opinions to customers participating in them. While customers received opinions from tax advisors that the transaction was more likely than not to withstand a challenge by

the IRS, DB did not, as an institution, seek to obtain copies of the tax opinions. Certain DB employees received the J&G opinion letters because those employees executed their own SOS transactions in connection with their personal tax obligations. The J&G opinion letters falsely represented that certain steps of the short option transactions were executed for substantial non-tax business reasons (such as a transfer of the options from the partnership to a corporation), whereas in fact they were carried out solely to achieve the desired tax result. Also, while the J&G opinion letters stated that there was no obligation on the part of any party to complete any particular step of the FX Digital Options or COBRA transactions, there was an understanding that each party to the transaction – including DB – would carry out its role in effectuating each of the steps in order to produce the tax loss.

21. Customers had to pay substantial fees to the promoters of the SOS transactions, like J&G. Those fees dwarfed the potential investment return in virtually all of the FX Digital Options transactions executed by DB. Indeed, in most of the FX Digital Options transactions, the best that the customer could hope to achieve was a doubling of his or her money, and there was only approximately a one-in-three chance of doing so. Certain DB employees knew that the fees charged by J&G alone often were greater than the doubled return, and therefore there was virtually no chance for a customer to make a profit from the overall transaction.

22. While the customers were not contractually prohibited from separating the options, DB would not have permitted the long and short legs of any pair of offsetting digital options or swaps to be segregated into separate component options without requiring the taxpayer to pay the full premium for the long leg and to satisfy substantial credit requirements in the event that the short leg terminated in DB's favor. The taxpayers usually executed their transactions through LLCs that had few assets other than those associated with the tax transactions. The LLCs did not have the resources to pay the full premiums for the long transaction legs or to satisfy the substantial credit requirements that would have been required to transfer the short legs separate from the long legs.

23. The long and short legs of any given pair were priced as if they were one unified transaction. In pricing the options transactions, DB understood that the starting point was the amount of tax loss desired by the customer. For example, in the FX Digital Options transactions, the stated price or premium for the long option was equal to the tax loss desired by the taxpayer. DB's fee for the options was generally 1% of the premium for the long option, or in other words, 1% of the customer's desired tax loss. In reverse engineering the options to fit the parameters required for the tax loss, DB calculated premiums for both the long leg of the transaction being purchased by the taxpayer and the short leg of the transaction being purchased by DB that were, in many cases, significantly above the theoretical Black-Scholes value of the options being purchased and that provided a 1% net premium for DB.

24. The FX Digital Options and COBRA transactions were structured with a supposed "lottery payout" potential – that is, many customers were

told that there was a chance, albeit an extremely remote one, that the options could result in a very large profit if on the measurement day the underlying currency valuations happened to hit within what was typically a two "pip" difference between the strike price for the long digital option and the short digital option. In such event, the customer would be paid on one option but would not have to pay on the offsetting option leg. Virtually all of the DB FX Digital Options and COBRA transactions had a 2-pip spread, and the area within the spread was referred to at times as the "sweet spot." As DB knew, there was virtually no chance that the sweet spot would be hit, and in fact it was not hit in any of the transactions that DB executed. In fact, DB did not hedge for that possibility and ultimately recorded the options spreads in its internal risk management system as having a zero pips spread.

25. On more than one occasion, J&G personnel instructed DB to sell the wrong percentage of foreign currency from a customer's DB account. These incorrect instructions, which affected the amount of ordinary loss that could be claimed by the customer, were not discovered until after the close of the tax year in which the options transactions were executed. To correct these errors, J&G requested that DB employees execute new transactions in the correct amounts in the following tax year: DB did so. While the new transactions were reflected on the customers' account statements as settling at or around the time they were actually executed, the account statements indicated that the transactions were executed "as of" dates in the previous tax year. DB knew that J&G and the customers would rely on the "as of" entries in the account statements to prepare tax returns that reported the transactions not when they actually occurred, but when the customer intended the transaction to have occurred but for the incorrect instructions that had been provided to DB.

26. Various DB Alex. Brown brokers and others, including personnel in New York, executed their own FX Digital Option and FX Digital Swaps transactions in order to evade their own personal income taxes. The DB employees who entered into these personal transactions knew that the transactions were not entered into, and the various steps of the transactions were not carried out for, substantial non-tax business reasons, as was represented in the opinion letters that these employees received in connection with their transactions. Rather, the transactions were entered into to avoid their own tax obligations. Those obligations arose, in substantial part, from the salaries and commissions the DB employees made as a result of assisting the J&G lawyers and others in implementing the SOS transactions for others.

27. J&G provided its opinion letter free of charge or at a discounted rate to certain of the DB employees that executed their own transactions. This effectively granted to these employees a gratuity for which other taxpayers paid tens if not hundreds of thousands of dollars or more depending on the size of the transaction. The DB employees accepted these gratuities from J&G in implementing J&G option and other transactions.

28. In August 2000, the IRS issued Notice 2000-44 in which the IRS announced that losses resulting from options transactions substantially similar to

those that DB was executing did not represent bona fide losses reflecting actual economic consequences and were not allowable as deductions for federal income tax purposes. The Notice also warned that the IRS might impose penalties on the various participants in the transactions. Despite DB's awareness of the issuance of this Notice, DB continued to engage in the transactions.

The PICO and POPS Tax Shelter Activities

29. From 1999 through 2001, DB participated in approximately 100 PICO transactions and approximately 114 POPS transactions. The PICO and POPS transactions were marketed to customers by various accounting firms and other entities as a means to avoid the payment of income tax. Law Firm No. 2 wrote most of the opinions for the PICO and POPS transactions, and other law firms also wrote opinion letters. DB understood that the customers' primary motivation for entering into the transactions was tax avoidance, and that each transaction involved a pre-conceived series of steps designed to generate a targeted tax benefit for the client.

30. During early 2000, while PICO was being developed, DB reviewed a draft legal opinion prepared by Law Firm No. 2. This opinion purported to provide PICO clients with support for the legitimacy of the transaction, and protection against IRS penalties, by concluding that PICO would, more likely than not, survive IRS attack. The law firm's opinion began by falsely characterizing the PICO client's S Corporation as "a type of new asset management and estate planning vehicle." The draft opinion made no mention of the primary purpose for the formation of the S Corporation – to achieve substantial tax benefits for the client – but instead falsely described the entity as having been formed "to create a special purpose investment management company to capitalize on [Promoter X's] expertise in the foreign exchange markets and general investment management services." The law firm's draft opinion also falsely represented that PICO was designed to facilitate potentially substantial estate tax savings and protection of family assets.

31. Law Firm No. 2's draft PICO opinion contained a set of factual representations, purportedly made by the entity, upon which the opinion was specifically premised. Among those representations was the following statement: "The principal purpose of each Combined Transaction [referring to the straddles] is not the avoidance of federal income taxes." This particular representation was false. The execution of each step in the PICO transactions – including the purported "investment" in straddles – was primarily motivated by tax consequences rather than profit. For instance, the straddles had to be terminated at a specific time in order for each client to obtain the tax benefits PICO was designed to generate. Further, the purpose of setting up the S Corporation with both the client and the Promoter X principal as initial shareholders was to enable the splitting of gains and losses to achieve tax consequences. Although the law firm's draft PICO opinion stated that the Promoter X principal would become an initial shareholder in the corporation "in order to demonstrate the potential return available through [Promoter X's] foreign currency trading activity, and to share the risks of that activity," DB knew that this and other representations in the opinion were not true.

32. The POPS transactions employed a multi-tiered partnership structure and, like PICO, utilized straddles to generate non-economic losses that were used by customers to offset income. During early 2000, while POPS was being developed, DB received and reviewed draft POPS legal opinions from Law Firm No. 2 and other law firms. These opinions purported to provide support for the legitimacy of the transaction, and protect against IRS penalties, by concluding that POPS more likely than not would survive IRS scrutiny. These opinions were based on false and misleading misrepresentations, namely that the transactions were designed to achieve investment objectives when in reality they were motivated solely by the desire to avoid tax obligations.

33. DB also received and reviewed a "Technical Memorandum" prepared by Accounting Firm No. 1, which marketed POPS to its clients. Accounting Firm No. 1's "Technical Memorandum," drafted in March 2000, began by describing POPS as a "Private Hedge Fund" and "a proprietary investment program for high net worth investors . . . designed to enable investors to diversify a portion of their portfolio into 'alternative investments' to which most high net worth investors have limited access." The Technical Memorandum made no reference to tax benefits as a reason for the clients to enter into the POPS transaction, though this was understood to be the clients' dominant purpose.

34. Law Firm No. 2's and Law Firm No. 1's draft POPS opinions, which were provided to DB, similarly focused on purported non-tax business reasons for various steps in the transaction. Like Law Firm No. 2's draft PICO opinion, the Law Firm No. 2 POPS draft discussed the deductibility of straddle losses, and the "primary motive" test that would apply. It also was specifically premised on a factual representation that "[t]he principal purpose of the Combined Transactions is not the avoidance of federal income taxes." Elsewhere, the Law Firm No. 2 draft sought to distinguish the facts in POPS from those in another case by stating, "[T]hese transactions are clearly not being promoted as a method of achieving favorable treatment under the tax laws." The Law Firm No. 1 draft opinion contained many of the same false and misleading statements contained within the Law Firm No. 2 and Accounting Firm No. 1 documents, describing POPS, for example, as a "proprietary investment program for high net worth investors . . . designed to enable [them] to diversify a portion of their investment into 'alternative investments[.]"

35. DB understood that the POPS transaction was primarily tax-motivated. In May 2001, in a communication to a DB Alex. Brown broker, a former DB employee who handled sales on DB's Foreign Exchange desk commented that the IRS was "getting more and more concerned with economic substance as the POPS trade basically has none."

DB's Enhanced Policies And Procedures and Pledge of Continued Cooperation

36. DB acknowledges that its internal control systems at the time of the tax shelter transactions discussed above were inadequate to prevent employees

from executing inappropriate or unlawful transactions. In recognition of this fact, DB has implemented over the course of several years, and commits to maintain on an ongoing basis, enhanced policies and procedures to ensure that it complies with the tax laws and does not participate in transactions that may be used to defraud the United States. Among other things, DB established:

(a) a Prohibited Tax-Oriented Transactions Policy, pursuant to which DB will not engage in transactions in which the underlying strategy has been identified by the IRS as a reportable tax avoidance transaction (or a substantially similar transaction), including listed transactions;

(b) a Tax Opinion Policy, pursuant to which any business unit engaging in a structured transaction in which Deutsche Bank is a participant, other than solely as an advisor, must obtain a "should" level opinion from outside counsel as to the tax consequences to Deutsche Bank of its participation. If outside counsel does not believe a "should" level of confidence is warranted, the transaction cannot proceed;

(c) a Global Reputational Risk Management Program, which requires all DB business and control units at all levels to own and evaluate reputational risk, including scrutinizing transactions to determine whether they are designed primarily to be tax-advantaged, have no valid business purpose, or lack economic substance; and

(d) a New Product Approval ("NPA") Policy, which mandates that all proposed new transactions go through the NPA process. An NPA approval is required before groups such as Treasury, Credit, or Business Area Controlling can fund, extend credit for, or allocate profits from any transaction.

37. DB has also pledged, and will continue, to cooperate with the Office's investigation relating to the tax shelter activities of itself and others.

Exhibit B

Compliance Measures and Verification Procedures

Deutsche Bank AG and its affiliates (collectively, "DB") are committed to compliance with: (1) all applicable laws, rules and regulations that govern DB's activities; (2) DB's internal policies and procedures; and (3) the highest standards of ethical conduct. DB's commitment to these standards is reflected in a comprehensive framework of policies and procedures, business supervisory requirements, oversight by control groups, such as the Legal, Compliance and Group Audit Departments, and various corporate governance committees. DB has set forth below a description of key general and tax-specific policies and procedures, as well as corporate governance committees (collectively, the "Compliance Measures"), that are designed to ensure, among other things, that DB's employees are aware of and comply with the applicable laws, rules and regulations, and high standards of ethical conduct.

I. Compliance Measures

A. Policies and Procedures

1. General Policies and Procedures

(a) *Americas Code of Professional Conduct*: All DB Americas employees must certify on an annual basis that they have read and understood the Americas Code of Professional Conduct (the "Code"), which requires managers and employees at all levels to be aware of and comply with applicable laws, rules, regulations and DB policies. Employees have an obligation to comply with the Code, and failure to do so can result in disciplinary action, including termination. The Code provides, among other things:

- Any suspected violation of applicable laws, rules, regulations or DB policies must be reported to the employee's Department Head. If, however, it is not practical for an employee to report the matter to his or her Department Head, or if the employee does report the matter and it is not addressed, the employee should report the matter, as appropriate, to the relevant Compliance Officer or the Legal Department.

- Employees may also report issues anonymously by calling the DB Americas Employee Hotline.

- To encourage reporting of any perceived violation of laws, rules, regulations or DB policies, the Code prohibits retaliation against any employee who makes a good faith report, even if an investigation determines there has been no violation.

- All employees are required to cooperate fully with any investigation relating to allegations of misconduct, legal or regulatory violations, or violations of the Code, including investigations by third parties such as governmental and quasi-governmental regulators and prosecutors.

(b) *Reputational Risk Management Program Policy*: This Policy, effective June 15, 2005, requires that all business and control units own and evaluate reputational risk, including any threat that a transaction or business practice will negatively impact the public's trust in DB. When evaluating reputational risk with respect to tax-related issues, the business and control groups are expressly required to consider questions such as:

- Could the transaction be viewed as having no valid business purpose or economic substance?

- Was the transaction designed primarily to achieve a financial reporting or tax effect?

- Does the transaction have an impact on the relationship between DB entities and fiscal (tax) authorities?

Reputational risk issues may be addressed by senior management and senior control group members, including, ultimately, the Regional Governance Board ("RGB"), whose members include the Regional Chief Executive Officer and Regional Chief Operating Officer ("COO"), and the Heads of the Finance, Market Risk Management, Compliance, Legal and Credit Risk Management Departments. The RGB does not include a representative of any business unit. The RGB has formally delegated consideration of reputational risk issues to the Americas Reputational Risk Committee ("ARRC"), a permanent sub-committee of the RGB that is responsible for reviewing, resolving and reporting on all reputational risk issues brought forward for its consideration. The members of the ARRC are the Regional General Counsel, the Regional COO and the Regional Head of Compliance. Issues remaining unresolved by the ARRC and RGB are escalated to a global Group Reputational Risk Committee ("GRRC"), which consists of the Chief Credit Officer, the Global Head of Operational Risk Management, the Global General Counsel, the Global Head of Compliance and the Global Head of Corporate & Investment Bank Controlling.

(c) *New Product Approval ("NPA") Policy*: All new products must go through an NPA process to ensure that reputational, legal, regulatory and tax risks are evaluated by relevant control groups. For this purpose, "new product" is defined broadly to include all new business initiatives, products, markets, trading locations and services, and includes any changes to the risk profile of an existing business or product. The NPA process applies to all businesses and subsidiaries. The decision as to whether an NPA is required is initially with the sponsoring business. To ensure that NPAs are requested as required, the position of NPA Gatekeeper has been created in each business and support group. NPA Gatekeepers are usually part of the risk management or COO structure of the Businesses/Control & Support Units and are responsible for implementing and overseeing the execution of the NPA process within their area of responsibility (Business Division and Corporate Control & Support Function). The NPA Gatekeeper function is usually executed either by the business group COO or by the Divisional Operational Risk Officer. Additionally, any control or support group may independently call for the submission of an NPA.

The Global NPA Policy requires the Operational Risk Management Committee to perform initial oversight of the NPA process, including review of NPA risk profiles and potential breaches of policy. This Committee escalates any unresolved disputes to the NPA Office within Group Operational Risk Management. The NPA Office performs further risk oversight on all NPAs and acts as the point of escalation for NPA issues or breaches to the Chief Risk Officer of the Legal Risk and Capital Executive Committee, which is ultimately responsible for managing risk and determining NPAs.

NPAs within the Americas Region must also comply with the following additional requirements. The Americas NPA Policy is administered by the Americas Legal Entity Committee ("LEC") and its regional subcommittees. Issues not resolved by the regional sub-committees or the full LEC are escalated to the RGB for resolution, and then, if necessary, to the GRRC. Any NPA in the Americas must be approved by senior representatives of the Legal, Treasury, Tax and regulatory control groups, independent of the business that sponsors the proposal.

All NPAs must be documented in the Global New Product Approval Database in order to ensure that a complete population of such approvals is available for management, control groups, regulators and auditors.

(d) *Prohibited Activities - Global Markets US*: The Prohibited Activities Policy, effective November 1, 1996, forbids employees from engaging in a practice or conduct that is manipulative, illegal, anti-competitive, unethical, or contrary to industry standards or applicable regulations.

2. Tax-Specific Policies

(a) *Potential Tax-Avoidance Transaction Policy*: This Policy, effective March 8, 2001 and subsequently updated and revised, most recently as of July 2, 2009, requires DB to comply with the broad reporting requirements of the U.S. federal and state tax laws for "potential tax avoidance transactions." This Policy recognizes that those requirements are broad enough to apply not only to obvious tax-avoidance transactions, but also to certain "plain vanilla" products, trades, structures or other transactions that may provide tax benefits. This Policy requires, among other things, that DB disclose its role as a participant in or Material Advisor with respect to any "Reportable Transaction," as defined by Treasury Regulations, including: (a) Listed Transactions; (b) Confidential Transactions; (c) Contractual Protection Transactions; (d) Loss Transactions; and (e) Transactions of Interest that the Internal Revenue Service ("IRS") has publicly identified.

(b) *Prohibited Tax-Oriented Transactions Policy*: This Policy, which is a part of the broader tax-avoidance transaction policy, prohibits DB from engaging in Listed Transactions, Confidential Transactions or Contractual Protection Transactions, as defined in the Treasury Regulations, as either a participant or a Material Advisor. In addition, the Policy provides that Transactions of Interest may be engaged in only in consultation with Group Tax. This Policy also requires any DB employee who becomes aware that a prohibited transaction has taken place to notify Group Tax immediately.

(c) *Tax Opinion Policy on Structured Transactions*: This Policy, effective January 31, 2005, requires that any business unit engaging in a structured transaction in which DB is a participant, other than solely as an advisor, must obtain a "should" level opinion from outside counsel as to the tax consequences to DB of its participation. Before the transaction may close, the opinion must be vetted and approved in writing by Group Tax. Moreover, each business unit must contact Group Tax regarding a structured transaction no later than when discussions with a client or counterparty are scheduled to begin. In its sole discretion, Group Tax may choose separate counsel to advise on the tax treatment of the proposed transaction. If counsel does not believe a "should" level of confidence is warranted, the transaction cannot proceed.

B. Corporate Governance Committees

1. *Americas Regional Governance Board*: The Americas RGB provides high-level supervision of internal controls, reputational risk, regulatory issues, and business ethics and practices. The RGB is the ultimate point of escalation for resolution of disputes or review of significant issues within the region, and it has the authority to escalate unresolved issues to the responsible Group Executive Committee member. The Chair of the RGB is the CEO of the Americas Region, and its members include the Regional COO and the Heads of Finance, Market Risk Management, Compliance, Legal and Credit Risk Management Departments.

2. *Americas Reputational Risk Committee*: The ARRC is a permanent sub-committee of the RGB and is responsible for reviewing, assessing and opining on all reputational risk issues brought before it by businesses or Control & Support functions. The ARRC is required to report all of its actions within the region through the Reputational Risk Network for further aggregation and reporting to the Risk Executive Committee and the GRRC. The Chair of the ARRC is the Regional General Counsel, and its members include the Regional COO and the Regional Head of Compliance.

3. *Americas Region Legal Entity Committee*: In order to ensure compliance with U.S. regulatory requirements, any new legal entity or subsidiary must be reviewed and approved by the LEC and/or a relevant subcommittee. The LEC is responsible for

oversight and risk management relating to new legal entities created within DB's business areas. LEC proposals are voted on at a committee meeting, and individual members have the right to have their opposing views reflected in the record. If the committee as a whole cannot agree on a decision, the LEC will escalate the issue to the Americas RGB.

4. *NPA Review Committee*: The NPA Review Committee is a subcommittee of the LEC and exercises initial oversight of all NPAs. Upon submission of any NPA, the NPA Review Committee will make an initial determination as to whether an NPA is high risk or low risk. NPAs identified as high risk by regional LECs are escalated to the full LEC for review. Lower risk NPAs are reviewed by the regional subcommittee, with monthly reporting to the full LEC of all actions taken. The Committee performs oversight and monitoring of the completeness and timeliness of the NPA review process.

5. *Group Reputational Risk Committee*: The GRRC is responsible for the approval of the regional escalation structures to assess reputational risk issues. It also reviews and makes determinations on all reputational risk issues. The GRRC is an official subcommittee of both the Risk Executive Committee and the Group Compliance Committee, and is co-chaired by the chairmen of these Committees. Standing members of the GRRC are the Chief Credit Officer, the Global Head of Operational Risk Management, the Global General Counsel, the Global Head of Compliance and the Global Head of Corporate & Investment Bank Controlling.

6. *Operational Management Risk Committee*: The Operational Risk Management Committee ("ORMC") is responsible for reviewing the NPA risk profile of new products, reviewing any breaches of NPA policy, approving group NPAs, and ensuring that the NPA process is functioning effectively.

C. Training Program

Comprehensive Training Plan and Needs Analysis: DB has a comprehensive training program for its employees, including mandatory training on certain applicable laws, rules, regulations and guidelines. Compliance and ethics are a substantial part of this program. DB does a comprehensive review of this program on an annual basis, focusing particularly on the compliance component, to identify any new areas where training is needed. DB has procedures in place to ensure that all

DB employees attend mandatory trainings, including a system to advise management when an employee fails to attend mandatory training.

II. Verification Procedures

A. Initial Verification by Independent Expert

1. Scope of Independent Expert's Jurisdiction and Authority and Access to Information

To demonstrate that the Compliance Measures have been implemented and are effective in achieving compliance with U.S. federal income tax laws, rules and regulations, and that they constitute an effective Compliance & Ethics Program as defined in Section 8B2.1 of the 2009 edition of the United States Sentencing Guidelines Manual, DB has agreed voluntarily to retain an independent expert (the "Independent Expert") appointed by the United States Attorney's Office for the Southern District of New York ("the Office"). The Independent Expert's jurisdiction will be to evaluate the Compliance Measures set forth above in Section I and to determine whether they are adequate to achieve compliance with U.S. federal income tax laws and to prevent and detect misconduct relating to products and transactions susceptible to abuse on behalf of high net worth individuals. The Independent Expert will review and monitor DB's maintenance and execution of the Compliance Measures and, as required, any other relevant DB compliance program, and recommend such changes as are necessary to ensure that DB is implementing and maintaining an effective Compliance & Ethics Program as defined in Section 8B2.1 of the 2009 edition of the United States Sentencing Guidelines Manual. The Compliance Measures must include provisions for appropriate disciplinary measures in the event criminal conduct is detected and should ensure that employees and agents of DB may report or seek guidance regarding potential or actual criminal conduct without fear of retaliation.

The Independent Expert will have the authority to take such reasonable steps that are, in the Independent Expert's view, necessary to be fully informed about the existence and effectiveness of the Compliance Measures ("his/her jurisdiction"). To that end, the Independent Expert will have, subject to attorney-client privilege: (i) access to, and the right to make copies of, any and all books, records, accounts, correspondence, files, and any and all other documents or electronic records, including e-mails, of DB and its agents and employees, within or relating to his/her jurisdiction; and (ii) the right to interview any employee, agent, or consultant of DB and to participate in any meeting concerning any matter within or relating to his/her jurisdiction. The Independent Expert will take appropriate steps to maintain the confidentiality of any non-public information entrusted to him/her and shall share such information only with the Office.

Consistent with the description of the policies and procedures set forth in Section I.A.1.(a) above, DB and all of its employees, agents, and consultants shall have an affirmative duty to cooperate with and assist the Independent Expert in the execution of his/her duties and shall inform the Independent Expert of any information that may relate to the Independent Expert's duties or lead to information that relates to his/her duties. In addition, DB officials, compliance officers, and employees are required to notify the Independent Expert, upon discovery, of any violations or potential violations of law relating to the Independent Expert's jurisdiction.

DB will maintain a hotline to facilitate communication anonymously or otherwise with the Independent Expert.[1] Within 10 days of the commencement of the Independent Expert's duties, DB shall advise each of its U.S.-based agents and employees, and any DB employee participating in transactions involving US income tax laws, rules, and regulations, in writing or electronically of the appointment of the Independent Expert, the Independent Expert's powers and duties as set forth herein, the telephone number established for contacting the Independent Expert, and email and mail addresses designated by the Independent Expert. Such notice shall inform employees that they may communicate with the Independent Expert anonymously or otherwise, and that no agent, consultant, or employee of DB shall be penalized in any way for providing information to the Independent Expert.

2. Term of Independent Expert's Authority

The Independent Expert's authority set forth herein shall extend for a period of at least one year from the Independent Expert's entry on duty. If upon the year anniversary of his or her entry on duty the Independent Expert certifies that the Compliance Measures have been implemented and are effective and, in the view of the Office, DB has not violated any provision of the Non-Prosecution Agreement with Deutsche Bank AG dated December 21, 2010 (the "Non-Prosecution Agreement"), the Independent Expert's authority will be terminated. If the Independent Expert cannot so certify, or in the event that the Office determines that DB has violated any provision of the Non-Prosecution Agreement, a one-year extension of the Independent Expert's authority may be imposed in the sole discretion of the Office.

The Office shall have the power to impose additional one-year extensions of the Independent Expert's authority until at the end of any one-year period the Independent Expert is able to certify that the Compliance Measures have been implemented and are effective and the Office has concluded that there have been no violations of the Non-Prosecution Agreement during that one-year period. DB agrees that the Compliance Measures as approved by the Independent Expert will survive the termination of the Independent Expert's authority.

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[1] DB already has in existence a DB Americas Employee Hotline, referenced in Section I.A.1.(c) above, that may provide an effective vehicle for anonymous communication with the Independent Expert. If the Independent Expert concludes that the DB Americas Employee Hotline is not an effective vehicle for anonymous communications with the Independent Expert, DB agrees that it will establish an independent, toll-free answering service for such purpose and will advise each of its agents and employees in writing of the toll-free number and its purpose.

3. Selection of the Independent Expert and Terms of Independent Expert's Retention

The Office will consult with DB using its best efforts to select and appoint a mutually acceptable Independent Expert (and any replacement Independent Experts, if required) as promptly as possible. In the event that the Office is unable to select an Independent Expert acceptable to DB, the Office shall have the sole right to select an Independent Expert (and any replacement Independent Experts, if required).

The Independent Expert will have the authority to employ legal counsel, consultants, investigators, experts, and any other personnel necessary to assist in the proper discharge of the Independent Expert's duties. The compensation and expenses of the Independent Expert, and of the persons hired under his/her authority, shall be paid by DB. The Independent Expert, and any persons hired by the Independent Expert, shall be compensated in accordance with their respective typical hourly rates. DB will pay bills for compensation and expenses promptly. Any issues as to the reasonableness of the Independent Expert's activities or expenses may be brought to the attention of the Office for discussion.

DB will provide an appropriate indemnification agreement to the Independent Expert with respect to any claims arising out of the performance of the Independent Expert's duties.

The Independent Expert is not, and shall not be treated for any purpose, as an officer, employee, agent, or affiliate of DB. DB agrees that it will not employ or be affiliated with the Independent Expert for a period of not less than one year from the date that the Independent Expert's authority is terminated.

4. Reports and Recommendations by the Independent Expert

The Independent Expert may report to the Office whenever the Independent Expert deems fit but, in any event, shall file a written report not less often than every four months regarding: the Independent Expert's activities; the nature, extent and adequacy of the Compliance Measures in achieving compliance with U.S. federal income tax laws and the U.S. Sentencing Guidelines; and any changes to the Compliance Measures that are necessary to make them effective. The Independent Expert may defer the filing of a written report if he or she deems appropriate, but shall file a report if requested to do so by the Office. Such periodic written reports are to be provided to DB and the Office. The Office may, in its sole discretion, provide all or part of any such periodic written report, or other information provided to the Office by the Independent Expert, to the IRS or any other agency the Office deems appropriate.

DB agrees to adopt all recommendations submitted by the Independent Expert unless DB objects to any recommendation and the Office agrees that adoption of such recommendation should not be required.

Should the Independent Expert, in the course of his or her work, determine that it appears that DB has violated any law, has violated any provision of the Non-Prosecution Agreement, or has engaged in any conduct that could warrant the modification of his/her jurisdiction, the Independent Expert shall promptly notify the Office.

B. Subsequent Verification by DB

DB recognizes that it must institute and maintain an audit procedure to self monitor the continuing implementation and effectiveness of its compliance program, and make changes to it as required. In addition, however, in order to ensure that the Compliance Measures continue to operate as intended following the Independent Expert's tenure, DB will implement the additional procedures set forth below within 6 months of the end of the Independent Expert's tenure, and maintain these additional procedures on an annual basis for a minimum of two years.[2]

1. A senior representative of the Americas Group Audit Department (the "Group Audit Representative") will confirm through a certification process that the Compliance Measures are in effect and operating as required in the Americas. As part of this process, the Group Audit Representative:

    - Will request that a representative of senior management in the Americas Global Markets and Private Wealth Management businesses certify to the Group Audit Representative that they are aware of DB's above-referenced policies with respect to tax-oriented transactions and that they are not aware of any violation of those policies.

    - Will request that a senior representative of Group Tax certify that the above-referenced policies with respect to tax-oriented transactions are in effect in the Americas, and that he or she is not aware of any violation of those policies.

    - Will, if necessary, require sub-certifications from the Chairperson of each corporate governance committee listed above, or the Chairperson's designee, that such committee is operating as required, *i.e.*, meeting in accordance with internal policies, ensuring that

2 DB will enter into a closing agreement with the IRS providing for enhanced oversight and regulatory compliance with respect to reportable transactions, registration and list maintenance.

appropriate matters are escalated, and acting on all matters that are brought to such committee's attention.

- Will supervise the preparation of a report, summarizing the certification process.

2. Additionally, DB will obtain annual certifications from all appropriate U.S.-based Directors and Managing Directors in the Global Markets and Private Wealth Management business units, and all appropriate U.S.-based Directors and Managing Directors in Group Tax, stating that they have read and understand DB's policies with respect to tax-oriented transactions, that they have complied with and will comply with these policies, and that they have not participated in and are not aware of any DB participation in transactions that are prohibited by the policies. DB shall maintain these certifications for a period of three years, and they shall be available for inspection upon request by the Office.