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IMPROVING THE FEDERAL RESERVE SYSTEM: EXAMINING LEGISLATION TO REFORM THE FED AND OTHER ALTERNATIVES

HEARING

BEFORE THE

SUBCOMMITTEE ON
DOMESTIC MONETARY POLICY
AND TECHNOLOGY

OF THE

COMMITTEE ON FINANCIAL SERVICES
U.S. HOUSE OF REPRESENTATIVES

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IMPROVING THE FEDERAL RESERVE SYSTEM: EXAMINING LEGISLATION TO REFORM THE FED AND OTHER ALTERNATIVES

Tuesday, May 8, 2012

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON DOMESTIC MONETARY
POLICY AND TECHNOLOGY,
COMMITTEE ON FINANCIAL SERVICES,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:05 a.m., in room 2128, Rayburn House Office Building, Hon. Ron Paul [chairman of the subcommittee] presiding.

Members present: Representatives Paul, Luetkemeyer, Huizenga, Hayworth, Schweikert; Clay, Maloney, and Green.

Also present: Representatives Garrett and Ellison.

Chairman PAUL. This hearing will come to order.

Without objection, I ask unanimous consent that those nonsubcommittee members who are present be recognized if they wish to give opening statements or ask questions.

I now recognize myself for 5 minutes for an opening statement.

First, I want to thank our two colleagues for being here today, and they will be recognized shortly.

But as many Members know, the subject of the Federal Reserve (the Fed) and monetary policy is something I have been interested in for a long time, believing that it has a great deal of significance with regards to a healthy economy. Today, we will be discussing the various proposals to address the subject of some of the shortcomings of the monetary system.

I think what has happened here in these last 5 years is that it has been recognized by many that monetary policy and the Federal Reserve has a lot to do with the creation of some of our problems and their shortcomings when it comes to solving these problems. The Federal Reserve has been around for almost 100 years—100 years next year—and, of course, it has gone generally under the radar. Not too many people have talked precisely, because it was always said that it should not be interfered with by the Executive Branch or the Legislative Branch.

But lately, there has been more concern. With the help of Congressman Frank, we were able to get some transparency of the Fed, and he was obviously quite helpful in moving that along. From my viewpoint, we still have more to do on that, but it is very clear whether we decide exactly what constitutional money is and

how it comes about. I don't think many people reject the idea that the Congress does have responsibility of oversight and figuring out exactly how to handle that.

So with the crisis that came about in the last 5 years ago, I think an attitude changed dramatically. I think this is the reason that we had strong support in the last session for auditing the Fed and more information has come out because of the lawsuits.

But the way I see the monetary policy, and I think it is generally neglected, is most people realize how big the economy is and they know by supply and demand of all products and goods and services and labor—but, generally, they don't talk a whole lot about the other half of the equation, and that is the monetary issue. The monetary issues are one half of all the transactions. So to duck the issue and pretend it is not important, I think, has been a mistake.

I personally believe that over these many decades, the Federal Reserve has gotten a free pass because if we had good times, if they were able to stimulate the economy and have easy credit, and we had good times, they got the credit. Then if the predictable slumps would arrive and something had to be done, Congress would generally act and the Federal Reserve would act, and they would get the credit for getting us out of this slump.

But I think that has changed in the last 5 years because of the seriousness of the crisis, how global it is, and how—one of the consequences has been this excessive debt, and then the bailing out that occurred.

And so what the Congress did on the bailouts was significant but minor compared to how much the Federal Reserve was able to do. For this reason, so many people want to know a lot more about what is going on.

Not only do we want to know about policy—and a lot will be discussed today about the particular policies and how to guide that policy—but one thing we should not forget about is the nature of money. If we are trying to describe how we manage a monetary system, it seems to be most difficult, in my view—you have to be able to define money, and define the dollar, which has not been done for a long, long time. We use the Federal Reserve note as the unit of account, but there is no legal definition of a Federal Reserve note, and that is a pledge to pay something.

So a note being something precise, and then you have to have management and it doesn't work well, then we think, we just need more regulations and everything will work out smoothly. I have a lot of reservations about that because I think we have a lot of inflation, we have a lot of instability in prices. And even when the reports come out that the prices are rather stable, they seem to ignore the fact that the cost of living for many is going up significantly. The price of energy goes up, the price of medical care goes up, the price of education goes up.

So even when the CPI and the PPI might not be revealing what is happening, there still is a lot of destruction of the value of money. For this reason, now, we have been in a decade or so where the real wages have not been able to keep up, which really is the bottom line, I believe—the unemployment factor and keeping up with the cost of living and keeping up with real wages.

So I am very pleased to have the various Members here today, as well as the second panel of witnesses to discuss what I consider to be a very, very important issue.

Now, I would like to yield 5 minutes to Mr. Clay.

Mr. CLAY. Thank you, Chairman Paul, especially for holding this hearing on improving the Federal Reserve System and examining today six pieces of legislation to reform the Federal Reserve System. One piece to abolish the Federal Reserve, sponsored by our chairman, Mr. Paul, and another one, as sponsored by Mr. Kucinich, would make the Federal Reserve an arm of the Treasury.

The other bills would make various changes either to the mandate or to the Federal Open Market Committee's governance. As ranking member of this subcommittee, I want to focus on the Federal Reserve's dual mandate of maintaining stable prices and full employment for monetary policy.

The Full Employment and Balanced Growth Act of 1978, better known as the Humphrey-Hawkins Act, set four benchmarks for the economy: full employment; growth and production; price stability; and the balance of trade and budget.

To monitor progress towards these goals, the Full Employment and Balanced Growth Act of 1978 mandated that the Board of Governors of the Federal Reserve System present semiannual reports to Congress on the state of the U.S. economy and the Nation's financial welfare. The Humphrey-Hawkins Act charges the Federal Reserve with a dual mandate, both maintaining stable prices and full employment.

Currently, the unemployment rate is 8.1 percent. Since President Obama took office in January of 2009, the unemployment rate has gone from 7.8 percent around the Inauguration, to 10 percent as the impact of the financial crisis spread, to 8.1 percent today. I do believe that the U.S. economy is heading in the right direction. With the proper nudge, it could probably improve even more.

As of March, the consumer price index was 2.7 percent over the past year, a decline from February of this year of 2.9 percent. During the same period, the energy index had risen 4.6 percent, and the food index had increased 3.3 percent.

Both increases are smaller than last month. In contrast, the year change in the index for all items, less food and energy, which was 2.2 percent in February, edged up to 2.3 percent in March.

All of these factors play a very important role in getting America back to economic growth and prosperity, and I look forward to the witnesses' testimony.

Mr. Chairman, I yield back.

Chairman PAUL. I thank the gentleman.

Now, I yield 5 minutes to Dr. Hayworth.

Dr. HAYWORTH. Thank you, Mr. Chairman. It is with great pleasure that I anticipate the testimony from our distinguished colleagues, and we have a great challenge before us because obviously a central bank—our central bank, the Federal Reserve, has—we have cherished its independence in implementing monetary policy and yet at the same time, obviously the Congress has to establish monetary goals and hold the Federal Reserve responsible, and we have obviously, as a Congress, the express power to coin money and regulate the value thereof.

There is this dynamic tension, obviously, between the independence of the Fed and its accountability to us. So it is going to be very interesting to hear your proposals as to how we make that—reach that balance.

But in specific, with regard to the dual mandate, Chairman Bernanke has said many times that he does not perceive—in effect, he said he does not perceive an inherent conflict, if you will, in the dual mandate because, as I have understood him, serving the goal of price stability clearly works favorably toward having an economy that will work and that will enhance the employment prospects for all those who need work.

Yet we see that his warning, which he has expressed very diplomatically regarding our fiscal policy, having implications for monetary policy that it cannot overcome forever and ever by accommodation, we see that his warnings seem to be borne out in the fact that several years of accommodating monetary policy have not resulted in the kind of enhancement in our economic statistics that we would like to see.

So I look forward to your testimony and thank you for all the work that you have done on this very crucial topic. Thank you, Mr. Chairman. I yield back.

Chairman PAUL. I thank the gentlelady.

Mr. CLAY. Mr. Chairman, if I may, I would like to ask unanimous consent that the gentleman from Minnesota, Mr. Ellison, be allowed to sit in.

Chairman PAUL. We already asked for that unanimous consent, but without objection, it is so ordered.

Now, if the gentleman from Minnesota would like to make an opening statement, he can do that right now.

Mr. CLAY. Thank you.

Mr. ELLISON. Very briefly, Mr. Chairman, thank you for your chance to make an opening statement and to address this really important topic.

I really don't have so much of a statement as I have some questions that I would like to just put out on the table for discussion, and I hope we can resolve them during the course of our afternoon.

Is the dual mandate the problem? The fact is, to the degree that we have had challenges to monetary policy, has the dual mandate been responsible? If not, why the focus? I am curious, if anybody could point to an instance in the last 30, 40 years when the dual mandate required the Fed to downplay their preferred anti-inflation approach to concern about unemployment?

It seems to me that these are perfect. The dual mandate has been working. If it hasn't, I would be curious to know when it has let us down and when the dual mandate has been the cause of flawed monetary policy.

I am also curious to know, how have we have been doing with the dual mandate? Have we really been pursuing both, and to the degree that the statute would call for? Has unemployment gotten a short shrift?

I am concerned that we live in a time when we are getting used to an unemployment rate of about 8 percent, and that might be all we can ever aspire to get down to. I think this is a national disgrace and an outrage, and I think our country needs to do much

more to pursue both prongs of the dual mandate. I am concerned that unemployment has not been getting its full due.

So these are some questions that I have, some concerns that I would like to see addressed. And even though I am not on the subcommittee, I am grateful to be allowed to be on it today, and I hope that we can explore these important topics. Thank you, Mr. Chairman. I yield back.

Chairman PAUL. I thank the gentleman.

I now yield time to Mr. Schweikert from Arizona for an opening statement.

Mr. SCHWEIKERT. Thank you, Mr. Chairman, I will try to do this very quickly.

Since being placed on your subcommittee, this has actually become an area of great interest to me. One of the sides you are trying to get your head around—and as we walk through the pieces of legislation—is what the Fed does in regard to monetary policy. Has this, as part of unintended or intended consequences, allowed those of us here in Congress to engage in really bad fiscal policy? In many ways, is it an institution through its actions that allows us to get away with bad acts?

And secondly, even though this is one off, but in the discussions—the Fed is heading, their holdings are heading towards what, $2.9 trillion? What is the plan? At some point, when do they move back to normalization of their portfolio, and what are the potential cascade effects when moving back to a normalized portfolio?

With that, I yield back.

Thank you, Mr. Chairman.

Chairman PAUL. I thank the gentleman. Now, I want to move to our first panel. First, I want to introduce Representative Kevin Brady from Texas, an 8-term Republican Congressman representing the Eighth District. He is the sponsor of H.R. 4180, the Sound Dollar Act of 2012. He is also the vice chairman of the Joint Economic Committee.

Also with us today is the ranking member of the Financial Services Committee, Representative Barney Frank, a 16-term Democratic Congressman representing the Fourth District of Massachusetts. He is the sponsor of H.R. 3428.

I will now recognize Congressman Brady for his opening statement.

STATEMENT OF THE HONORABLE KEVIN BRADY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. BRADY. Thank you, Chairman Paul, Ranking Member Clay, and members of the subcommittee. Before discussing the Sound Dollar Act, I would like to acknowledge the work that Dr. Paul has done on this subcommittee. He is a long-time former member of the Joint Economic Committee who has worked to bring sound dollars to the forefront of the public debate.

Inflation has been called many things, a hidden tax, a government-sponsored reduction in workers' paychecks or, as Dr. Paul often says, theft, and more and more Americans understand the absurdity of a monetary policy that ultimately devalues our own currency.

We agree on three key points: preserving the value of the dollar is essential to economic growth and prosperity in America; the Federal Government must not be allowed to monetize its debt; and our financial system should serve the interests of all Americans, not just the interests of Washington and Wall Street.

Again, I would like to thank the chairman for your steadfast commitment to bringing those issues to the forefront of the public debate.

I am pleased to testify on behalf of the Sound Dollar Act. I want to thank the members of this subcommittee who have already cosponsored this important legislation: Mr. Jones; Mr. Lucas; Mr. Luetkemeyer; Mr. Huizenga; and Mr. Garrett.

The problem today is that according to some, the 1800s was the British century, the 1900s was the American century, and the 2000s, the 21st Century, may well be China's century. Well, not so fast. But, for America to continue its preeminence in the global economy, it is important that we get the role of the Federal Reserve right.

As we know, the Federal Reserve veered from the successful rules-based policies that brought the great moderation of the 1980s and the 1990s and instead, adopted an interventionist approach and helped to inflate the unsustainable housing bubble and led ultimately to a global economic crisis during the last decade. This interventionist approach, justified by the unemployment half of the dual mandate, continues today, and I believe it is a contributing factor to this anemic recovery.

The Federal Reserve's interventionist policies are felt by the single mom who goes to the grocery store and finds her paycheck doesn't go as far because inflation is robbing her of the value of the hard-earned dollar, and she also finds the same thing as she fills her gas tank.

These interventionist policies are also felt by the unemployed. The uncertainty generated by the Fed's unprecedented intervention is discouraging business investment in new buildings, equipment, and software, which drives job creation in America.

If you look at the fact of the numbers, government spending is where it was before the recession, and consumer spending is where it was before the recession, but business investment is not and the Fed has played a role in that.

For America to remain the world's leading economy in the 21st Century, Congress must give the Fed a single mandate for price stability, ensure that it is independent from political pressure, and hold it accountable for results.

Critics charge that focusing on a sound dollar implies the Fed will ignore the unemployment needs of America. They are wrong. America can only maximize our real output in employment with long-term price stability. Protecting the purchasing power of the dollar over time provides the strongest foundation for lasting economic growth and job creation.

Critics also react as if a single mandate is a shocking proposal, because we know the United States won World War II, enjoyed 3 decades of prosperity, and put a man on the moon without the dual mandate. It is not a fundamental part of our constitutional fabric.

It is a 1977 policy directive based on discredited Phillips curves and Congress can change it.

While it may be politically appealing, the current dual mandate asks the Fed to do something that it simply cannot do. Chairman Ben Bernanke has testified before JEC that in the long run, the only thing the Fed can control is inflation. In the long run, low inflation is the best thing we can do for growth. In a Federal Open Market Committee statement, he said basically the same thing, that the maximum level of employment is largely determined by nonmonetary factors. Further, using monetary policy as a short-term tool—the speed growth may actually harm the economy in the long term.

Let me skip to the end and make the point here that among other provisions in the Sound Dollar Act, we grant a permanent vote to all the regional Federal Reserve bank presidents. Because as important as important as New York and Washington are, there is much more to America's economy, and therefore, FMC should better reflect our geographic diversity.

We require the Fed for the first time to articulate this lender of last resort policy in order to reduce uncertainty and instance of moral hazard and speed the release of the transcripts from 5 years to 3 years to create more timely information and transparency, and we make sure the new Consumer Financial Protection Bureau is accountable to hardworking Americans by funding it the same way as other agencies do during Congress.

Mr. Chairman, I have included my full testimony for the record as well.

[The prepared statement of Representative Brady can be found on page 176 of the appendix.]

Chairman PAUL. I thank the gentleman.

Now, Mr. Frank is recognized.

STATEMENT OF THE HONORABLE BARNEY FRANK, RANKING MEMBER OF THE FINANCIAL SERVICES COMMITTEE, AND A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MASSACHUSETTS

Mr. FRANK. Thank you, Mr. Chairman. I appreciate your acknowledgment of the work we did together. It actually was work, as you know, that began with one of your Texas colleagues, Mr. Gonzalez, who works down with us who was a pioneer in forcing the Federal Reserve to be open. He made them release information that they claimed didn't exist. It was kind of a magical feat.

But one of the things that ought to be noted, in every instance, beginning with Mr. Gonzalez and maybe before I was here and the work we did, as the information flow has increased, it has been beneficial. There have been none of the negative effects on people they are worried about.

At the same time, it ought to be clear that the release of all this information has, I think, helped dispel the notion that there were nefarious things going on. We have gotten a lot of information out under the legislation we have. There will be no transactions the Federal Reserve engages in with private companies that won't, at some point, be made public. I think that has reflected well on what

they have done and again, suggestions that there was something untoward going on haven't been proven true.

I filed legislation to remove the regional presidents from the voting power that they have. It was pointed out to me that that would have a problem of diminishing geographic representation. So I submitted an amended version that would have appointees to the board wanted by the President, confirmed by the Senate from the various regions.

The problem you have now is this: The regional Federal bank presidents are picked by bankers. It is an extraordinary power that the FOMC has, and I think everyone agrees. And I cannot think of another element in American government where there is formal, binding, legal power given to the representatives of the industry that is in question.

I don't think the American people are unaware of the undemocratic nature of this, to have bankers pick the regional president, who, in turn, picks boards which are primarily from industry and with the financial industry dominate them. The statistics show that. To have them setting the policy seems to me to be greatly mistaken. So I think you can get to a presidential set of appointments without diminishing geographic diversity, and that is what we have done.

Beyond that, I do feel somewhat compelled to come to the defense of the Bush Administration. The single most important economic appointment made by President Bush was, of course, Chairman Bernanke.

Mr. Bernanke was his economic adviser, chairman, and then he became head of the Fed. And frankly, I think people have been unfairly critical of Mr. Bernanke. He obviously has been reappointed and reconfirmed by the Senate.

But once again, there have been predictions that haven't been borne out. The interventions by the Fed to deal with the problems that we had from the financial crisis have not led to inflation. Inflation is not at the point where it has become a serious problem for people.

The loans that they have made, the intervention they have made, have actually made money for the Federal Government; they have not added to the deficit. And as I said, the openness shows they haven't caused problems in terms of any kind of conflict of interest.

Now, we did make some changes in the legislation that was passed. We mandated much more openness. We repealed that part of the law which said the Fed could give money whenever it thought it was important to do so if they thought they might get paid back, and of course, the best example of that was AIG, a unilateral intervention by the Federal Reserve in 2008. We still are owed some money. We have replaced that with some other ways to go.

Finally, I think it would be a grave error to repeal the dual mandate. Yes, it is true that in the long run, monetary policy means what people have said. But as we know, the fact that something means something in the long run does not mean that is the only run, that there are not times in the shorter run and the intermediate run when a balance is necessary.

And I would say this: I can make a procedural point. I have a bill dealing with the presidents. I would be content to see that put aside because I think we have a central issue here in the bill that my colleague from Texas has put forward, and I will agree with him on one point, when he said that the dual mandate is not in the Constitution. I agree, even with the Federal Reserve.

We made up, in about 1912—it wasn't in the Constitution. In fact, Alexander Hamilton tried to put it in there, and got his brains beat out a couple of time.

But the question is this: There are very big differences, and to some extent, they are partisan. Partisan differences can be carried too far and they can become embittering, but they are also at the heart of democracy. It is entirely legitimate to have contending groups with different views, and there is clearly a major party difference in that those of us on the Democratic side think that unemployment is a very serious problem that deserves being addressed explicitly.

And so I would urge you, Mr. Chairman, let's take the bill of the gentleman from Texas. Let's put it out there, let's have a committee markup. Let's bring it out, and let's debate that one before the election. Let's have it be a stealth presence to the American people to take away the concern with employment after the election.

Chairman PAUL. I thank the gentleman.

I thank both Members for their opening statements.

I ask unanimous consent to include in the record written statements from the sponsors of the legislation being considered by the subcommittee today. Without objection, it is so ordered.

I will now yield myself 5 minutes for questions. The first question I have is for Congressman Brady, and I love the title of your bill, the Sound Dollar Act. That is something I think is so important, but it seems to get a sound dollar, we need to have something we can define. Do you have a definition in order to give us an idea what our goals are, divorced, maybe, from the policy? How do we define the unit of account, because it was precisely defined for a good many years.

As a matter of fact, up until 1971 in a relative way it always had a precise definition. So do you have, in your own mind, a definition for a sound dollar?

Mr. BRADY. I do, in my mind. We didn't include it in the legislation. Right now, the Fed has identified a 2 percent inflation, split inflation target, which seems reasonable over time. But the truth of the matter is we want a rules-based inflation targeting.

We want the Fed to stop, the go-stop policies, the interventionist policies and to focus on staying within the lines, both on inflation and deflation. Your point, that is the strongest foundation for economic growth.

Mr. Frank likes to point out this is an either/or. It is not. The Fed does not do and cannot do a good job at job creation, as the chairman and the members agree. But over time, in fact, preserving the purchasing power of the dollar does create the strongest economy for the United States, or at least the opportunity for it, the strongest job creation so, no, there is not an explicit target in the bill itself.

Chairman PAUL. So in a way, you defined the dollar by achieving a price level or price stability?

Mr. BRADY. We don't choose a strong dollar or a weak dollar, a sound one.

Chairman PAUL. Consider that there are many free market economists who don't concentrate on that. They, as a matter of fact, want a flexible pricing level, not a fixed pricing level.

For instance, how would this have been interpreted, or how would the monetary policy have been altered, say, in the 1920s because a lot of people say that there is no inflation because prices are relatively stable because productivity goes up. So if prices are relatively stable and due to productivity, but then there still are distortions in the stock market, say the stock market that, of course, led to the 1930s, can't you be deceived if you concentrate on prices rather than looking at the total picture of the amount of investment?

I know you did mention about not monetizing debt, so how would you adjust for the fact that the price level doesn't give you the information because even today, a lot of prices, in spite of the monetary inflation, some prices are going down like in electronics. At the same time, the cost of an education skyrockets. So how would you adjust for that?

Mr. BRADY. Thank you. One, I have, long ago, learned never to discuss Fed history with you, Dr. Paul, since you are as knowledgeable as anyone on the planet about it.

But looking a little closer in history the last 40 years, what we saw in the 1970s was a great lesson. We were told we couldn't have high unemployment and high inflation at the same time; it couldn't happen. As we know, not only did it happen, but the Fed's intervention go-stop, go-stop actually created a very volatile economy with very deep and frequent recessions.

When the Fed focused back on a single mandate of price stability in 1979, that changed. And for almost 20 years, we had not only strong economic growth, but we had very short, very shallow recessions. So we saw the benefits of that focus on price stability.

In the 2000s, we saw the Fed keep interest rates too low for too long. It helped to inflate a credit-fueled housing bubble and helped create a global financial crisis; and, to sort of wrap that up to your immediate question, within the Sound Dollar Act, not only do we focus on rules-based inflation targeting, but we require the Fed to monitor and report back on these potential asset bubbles, to monitor the price of gold, other commodities, equities, bonds, commercial real estate, agriculture, real estate industrial, real estate as well—and we don't force them to act on that because that circumstance will vary.

But we want to ensure to your point that not just the price index of the goods and services, but those potential asset bubbles would not only be monitored but reported to you and to me and to the public as well.

Chairman PAUL. I have a question for Mr. Frank, but I am out of time. I think there is going to be a second round, so hopefully I can get my question asked. I now yield to Mr. Clay.

Mr. CLAY. Thank you so much, Mr. Chairman.

Let me ask both witnesses, currently, the unemployment rate, according to the Labor Department, is 8.1 percent. What can the Federal Reserve and Congress do to put Americans back to work? Mr. Brady, do you have any thoughts or views on that?

Mr. BRADY. I do. One, I think the Fed is trying to do too much. They are trying to make up for, I think, some failed economic policies, in my view, from the White House. And I also believe they are sort of like the doctor who gives you a pill every 5 minutes and say how are you feeling? Take another one. How are you feeling? Take another one, as a result of actually creating uncertainty.

I believe the more the Fed does, the less responsibility Congress and the White House are taking for getting the right fiscal decisions, getting the right tax policy, to balance regulations, ensuring the right spending levels and entitlement reforms that actually create that uncertainty.

So I really believe as the Fed does more, Congress is doing less, and in the long term, that slows our recovery.

Mr. CLAY. Don't you think that Congress could be doing something now as far as passing a transportation bill, which would be a job starter?

Mr. BRADY. Mr. Chairman, Ranking Member Clay, I think it is important, especially long term to get our transportation policy right. I think that would be helpful. I also think taking off the table this discussion of higher taxes, just a tsunami of regulations hitting these businesses.

The President's health care plan, in my view, is right now a real deterrent to new job creation in America. So, yes, there are a lot of things Congress can do right. And there is a reason the Fed said in the end, we are not setting an employment target, because in the end we can't control employment.

Mr. CLAY. Mr. Frank, what do you think the Federal Reserve and Congress could do to put Americans—

Mr. FRANK. The Federal Reserve cannot do a great deal more. I think they have been very helpful, and the policy that I think Mr. Brady still would prohibit in the future, we would have been worse off if it hadn't have been for them.

I think the interventions the Fed has taken in two levels have been helpful to us, first of all in helping to provide the funding that has helped our economy. Secondly, and I think this is a real point of difference between the parties, I was surprised by it, I think the role of the Federal Government, is the Federal Reserve has been working with the European Central Bank, has been helpful in avoiding the kind of serious downturns in Europe which will have negative effects on us.

I think the Federal Reserve—

Chairman PAUL. Check your microphone.

Mr. FRANK. Thank you, Mr. Chairman. With the European Central Bank, have been very helpful and to have prevented the Federal Reserve from that kind of cooperation, increasing the chances of trouble in Europe would have been, I think, a very grave error.

Secondly, as far as Congress is concerned, we have the major activity. We should be following a two-step procedure, long-term deficit reduction with some shorter-term stimulus. The fact is that the employment rate is higher than it would have been if we had not

forced, by a variety of fiscal policies, State and local governments to fire 600,000-plus teachers and firefighters and public works employees and police officers.

I think that has been a very, very grave error. They have been hurt because many of them are financed primarily by property taxes. Property values went down. I think forcing those reductions by inappropriate Federal policy is a great mistake. Yes, it is important for us to reduce a deficit long term.

Unlike many of my Republican colleagues who think the President wants to get out of Afghanistan too quickly, I think he wants to stay there too long. I think there is a great deal of room for reduction in the military budget.

I think that we should be—and we will be fighting about this in the budget. Do we cut the military or restrain the military or do we cut our Medicare and Medicaid? So I would be for a short-term increase in spending and stimulus at the Federal level here, including primarily to the States. You give money to the States, and they are going to hire some people who, in turn, will be spending money.

As for taxes, I heard the argument that higher taxes were going to kill the economy in 1993 when I voted for the tax proposal put forward by President Clinton. And in the years afterward, we had a very good economy. I don't have to claim that the higher taxes, and marginal rate increase, a fairly small amount, caused that good economy, but it clearly didn't interfere with it.

I think if you talk about people who are making more than a million dollars a year, that for every thousand dollars they make over that, tax them $56, it is inconceivable to me, and I think it has been proven by economic history, that it has no negative effect and it allows us to do a long-term deficit reduction with some short-term help for the economy.

Mr. CLAY. Thank you so much.

Chairman PAUL. I yield 5 minutes to Mr. Schweikert from Arizona.

Mr. SCHWEIKERT. Mr. Chairman, would you like me to yield you a couple of minutes to finish your previous question?

Chairman PAUL. Pardon me?

Mr. SCHWEIKERT. Would you like me to yield you a couple of minutes to finish where you are at?

Chairman PAUL. Oh, thank you, yes, absolutely, thank you very much.

Mr. BRADY. Mr. Chairman, I would rather be grilled by Mr. Schweikert than yourself, if that is okay.

Chairman PAUL. No, I saved this one for the ranking member.

Mr. BRADY. Okay, go ahead.

Chairman PAUL. The big argument is, dual mandate or one mandate. I am pretty much of a skeptic on what we get from the Fed, and I think they generally can find an excuse to do whatever they want to do, so I know that is an important argument, and it is going to go on for a while. But I am not hopeful that, in itself, will solve the problem, because I think they are rather independent in what they do.

And I want to ask—I asked you a question, Mr. Frank, about the appointees, whether they are approved by the Senate or not, because a lot of people that I talked to are very interested in this sub-

ject. They are very concerned about the fact that this isn't a government operation. This is a private operation and they don't like the private.

Now, do you think you fully answer that, or do you partially answer the questions by saying people have to be approved by the Senate? Does this become less private and less sinister? Or how would you, frankly—

Mr. FRANK. Actually, I wouldn't say that, sir. I wouldn't say "sinister." I don't think the people on the Federal Reserve regional boards who are predominantly from the financial industry in terms of influence, when they pick a president, who in turn picks the new people, it is not sinister. They are people of good will, but it has an obvious bias.

Yes, I diminish the sector, which is the private sector, by not having a vote.

There is another thing we can do, Mr. Chairman. You were absent—understandably, you had a couple of other things on your mind when we voted here during the reconciliation markup on whether or not to subject the Federal Reserve to the appropriations process, not monetary policy.

But there was a proposal, as you know, to subject the Consumer Financial Protection Bureau to the appropriations process. It would seem to be another step that could be taken. I am not for it myself, but for those who are worried, I would think consistency would say, why not subject the Federal Reserve, including the regional entities to the appropriations process?

So I think that if you said that—now, there is an alternative in terms of the regional presidents, which would have them Senate-confirmed, I think that might be worse. So, yes, I think I partially—I diminish the private sector element. I think except for people who are concerned about it more than me, would subject them to appropriations.

Chairman PAUL. I am sorry, I don't want to use all of Congressman Schweikert's time. I yield back my time to David.

Mr. FRANK. You aren't going to comment on the appropriations process, Mr. Chairman?

Chairman PAUL. Tomorrow.

Mr. SCHWEIKERT. He is just sorry he wasn't here. Thank you, Mr. Chairman.

One of the things I have been trying to get my head around is with the dual mandate, and this is for both of our honored Members here, does it ultimately, do you think, because—okay, here we are chasing inflation, here we are chasing unemployment, but through the back door, does that also allow us, as Members of Congress, often to avoid tough decisions, whether they be on, particularly on fiscal policy?

Mr. FRANK. I don't see how it does. First of all, I reject the notion that we, as elected officials, should be blaming the Fed, oh, it is the Fed's fault. No, it is our fault if we don't step up.

To be honest, I don't think, in fairness to us, that we are avoiding those. The problem is we have very different views about how to do it. That is democracy. Some people want to raise taxes on the wealthy and restrain the military and make some domestic restraints. Others want to do other things. I literally don't know any-

body who doesn't have views on this. But, no, I don't see the fact that there is a responsibility somewhere else in any way allows us to avoid anything. Our responsibility is the same.

Mr. SCHWEIKERT. Ranking Member Frank, thank you. I did say one truism and that is ultimately, it is our responsibility.

Mr. FRANK. Yes.

Mr. SCHWEIKERT. And in my, what, 16 months here, I find policywise, we do lots of trying to push it off to regulators and others. You do the work and that way we have sort of this plausible deniability.

Mr. FRANK. But let me just say, I think that is especially the case with regard to military activity. In my 32 years here, when I have seen, I said, get involved in military activity without congressional authorization, it has been not been so much executive overreach as congressional ducking.

Mr. SCHWEIKERT. Okay. I am going actually agree with you on that one.

Mr. BRADY. The answer is yes, absolutely. As the Fed tries to do more, Congress, frankly, is using that and the White House as an excuse not to take the key steps necessary to create the business climate for recovery.

If, in fact, the dual mandate is the right answer, and the Fed is in charge of the economy, it is certainly not doing a good job—the weakest recovery since the Great Depression, lowest number of workers in the workforce, we, despite the stimulus, the bailouts, auto bailout, housing bailout, stimulus to Cash for Clunkers, there are actually fewer Americans working today than when President Obama took office. At the end of the day, it is our responsibility.

Mr. SCHWEIKERT. Mr. Chairman, thank you for yielding back to me.

Chairman PAUL. I thank the gentleman.

I now yield 5 minutes to Congresswoman Maloney from New York.

Mrs. MALONEY. Thank you very much, and thank you for calling this hearing.

I would like to ask Mr. Brady to respond to a statement from Alan Blinder and Mark Zandi. In their paper of 2010, they argued that the Federal Reserve's actions in the area of monetary policy during the economic crisis were more powerful and effective than anything that Congress did fiscally through the stimulus, and I would argue that the Fed's pursuit of the dual mandate contributed to avoiding an all-out economic collapse and helped fuel our economy.

So I would specifically like to ask my colleague, can you cite any example of how the dual mandate in any way hindered the recovery? Most economists believe that it was helpful in the recovery.

Mr. BRADY. I think that there are a couple of key issues here. One, the Fed's actions in the mid-2000s, keeping interest rates too low for too long helped bring about the crisis in which they later intervened.

Secondly, I do think—

Mrs. MALONEY. But that happened during Chairman Greenspan's days.

Mr. BRADY. We are talking the Fed as it is today and its actions over the last 4 decades, truly.

Secondly, I think the Fed—

Mrs. MALONEY. But we are discussing it, just because I want to make sure you are answering the question. On this point, if I could make it clear, what we are looking at now is the recovery, the actions that took place by Chairman Bernanke and others in response, and you were saying the interest rates were too low. Would keeping interest rates high to avoid inflation have been a sensible policy during the crisis when we were looking for recovery in 2008 and 2009?

That is the time that we are looking at, how the dual mandate responded to the economic crisis, and I would argue that it was helpful.

But my question specifically—

Mr. BRADY. I actually wanted to give you a "yes" answer to your question.

Mrs. MALONEY. Oh, really.

Mr. BRADY. During the financial crisis, I think the Fed frankly helped fuel it. Some of the actions they took during the financial crisis truly did calm those waters, but stop there and look at the economic recovery since. In my view, you were pursuing the dual mandate, in some ways for the first time, identifying it as a way to not only intervene, for example, in the housing market and then continuing to intervene as well rather than allowing exiting of that market, continuing to allocate credit around the United States, creating this uncertainty on what will the Fed do next has actually, in my view, hindered the recovery.

So if you look at three points: Did they help fuel the financial crisis? Yes. Were they helpful during it? Yes. Is the recovery on in truth? No.

In my view, we are not at the job levels we should be, in part, because it is Congress' role to set the fiscal policy to create the business climate so recovery can occur.

Mrs. MALONEY. If the Fed had been constrained because they did not have the dual mandate in moderating inflation only, and would the recovery be what we are experiencing now, they were able to keep the—if all they had to do was look at inflation, they would have been raising interest rates.

They lowered them in 2008 and 2009, which was very important because they had the dual mandate. And if they were constrained and moderating only inflation, if that was the only thing they could have looked at, then they wouldn't have been lowering the rates. Having the dual mandate, most economists are arguing, gave them the flexibility to react quickly to the marketplace.

I would also like to hear from the ranking member, Mr. Frank.

Mr. BRADY. At some point, I would like to respond to that, because I think I can shed a little light on it.

Mr. FRANK. First, I want to talk about the comment about the Fed's role in inflating things during the Greenspan years. I agree, but not by keeping interest rates in general down, but by explicitly refusing to follow the mandate this Congress gave the Federal Reserve in 1994 in the Home Ownership and Equity Protection Act.

And in subsequent efforts, many of us did believe that loans were being made imprudently to people who couldn't pay them back.

There were two ways to deal with that. One was, some argued, to deflate the economy as a whole. I think that would have been a mistake. There was an option. It was to use the authority the Fed was given to ban imprudent loans to people who couldn't afford them, and Mr. Greenspan flatly refused to do that, and lately acknowledged that was an error in front of Mr. Waxman's committee. And then in that period, in 2004 and 2005, some of us on this committee—myself, Mr. Watt, and Mr. Miller—tried to re-legislate that.

So, yes, I do think that there was a problem from the Fed, but it wasn't for not causing a deflation in the economy or less economic activity in general. It was refusing to use a specific tool they were given to stop the bad loans from being made.

Mrs. MALONEY. My time has expired. Thank you.

Chairman PAUL. I thank the gentlewoman.

I now recognize Mr. Luetkemeyer from Missouri for his 5 minutes.

Mr. LUETKEMEYER. Thank you, Mr. Chairman.

Congressman Brady, thank you for your efforts on this Sound Dollar Act. I really like some of the things that you have in there.

I am just kind of curious, do you believe that we need the Federal Reserve as a lender of last resort? Do we need a lender like that, some entity that can be the entity that puts the finger in the dike when something starts to happen?

Mr. BRADY. The answer is yes, and your question, in some regards, addresses Mrs. Maloney's question, which is under a single mandate, focused on the purchase power of the dollar, could the Fed intervene in times of emergency? The answer is absolutely yes. They would still be the lender of last resort, still provide liquidity to those banks that just have a liquidity problem but are solvent. And, of course, they have the ability to increase or decrease the interest rates to tighten or loosen the money supply.

So they would still be under a single mandate, and have the ability to intervene in very unusual and exigent situations. What they would not be allowed to do is to continue to intervene far beyond that financial crisis which, again, is contributing to the uncertainty today.

Mr. LUETKEMEYER. It would seem that, looking at the last 20, 30 years, their ability to impact our economy is greatly exaggerated on both ends. It would seem to me that they can nibble around the edges on these things, but if they actually had the ability to control unemployment, we wouldn't have the situation we have today.

If they control inflation, I don't think that we would have had some of those situations we have had over the last several years. As long as we have an economy that is rolling along very stable, it seemed like they can tweak it around the edges, but it doesn't appear they can do much more than that. So I really liked your approach here.

One of the questions that I had with regards to title 4 of your bill, with regard to exchange rate responsibility, can you explain just a little bit about that section and why you put it in here and what you want to try to accomplish with that?

Mr. BRADY. Is this dealing with the special drawing rights ending that that slush fund?

Mr. LUETKEMEYER. Yes, the exchange rate policy, bringing in the exchange, to exchange stabilization fund.

Mr. BRADY. We have, unfortunately, over time created, in effect, a slush fund within the Federal Reserve, both from historical—about $100 billion in there, half of that about from historical dollars here and the other half, more recent. And unfortunately, Mr. Luetkemeyer, what has happened is that both Republican and Democrat Administrations related to the Fed have used that, in effect, to circumvent the power of Congress.

The Clinton Administration used those dollars to provide a bailout to Mexico after Congress rejected it. The current Fed uses the guaranteed money market funds. Those may have been the appropriate efforts, but those decisions should have been made by Congress, not by the Federal Reserve.

So under this bill, we end that as a slush fund. We apply the $50 billion to reduce the deficit and we, in effect, return the Fed to what the Fed should do and retain for Congress, our constitutional role, to act in those matters of emergency.

Mr. LUETKEMEYER. So what you are trying to do is rein them in and go back to establish principles or mission of what they originally should have been and get it more in line with what most people think the Fed's mission should be?

Mr. BRADY. Yes, sir.

Mr. LUETKEMEYER. Thank you. Congressman Frank, just quickly with regard to the bill that you have, why do you believe that it is important to have—I am kind of curious, all of the Fed members, the appointees versus the Fed regional president is going to replace those with appointees. Why do you think that is important?

Mr. FRANK. First, let me just say one thing in response to your previous question, the biggest power the Federal Reserve had to intervene freely with Section 13.3 of the Federal Reserve Act, which actually came from the early 1930s under the Hoover Administration, and we repealed that in the financial reform bill. So they can no longer do what they did with AIG on an entity-by-entity basis.

Secondly, the chairman asked me did I think it should be less privatized? Yes. I understand the importance of geographical representation. I think we should have people who live in the regions be the appointees, but I can't think of a comparable case of formal governmental power, the right to set interest rates, and the impact they can have on regulation where the entity primarily concerned picks its own people.

Mr. LUETKEMEYER. Yes, but you are assuming from your comment there that this is a government entity when it really is a quasi-government—

Mr. FRANK. Oh, I think it should be a government entity.

Mr. LUETKEMEYER. —and has a lot of private implications from its independence. Don't you think it should be more independent in its structure as well?

Mr. FRANK. Independence, independence from the—I think you get independence with 7-year terms and 14-year terms, but I don't think that the financial industry, which really dominates the selection of the regional presidents, should be independent from the

whole society in setting the policy which governs it. And, no, I think when you talk about setting interest rates, that is a governmental function, yes.

And I didn't say, by the way, that they don't exist to the extent that they have some local economic functions; they would still be there. I specifically say they shouldn't be voting to set interest rates to the Federal Open Market Committee, and I would be very surprised if someone thought that was not a governmental function.

Mr. LUETKEMEYER. I see my time is up. Thank you, Mr. Chairman.

Chairman PAUL. Thank you. I now recognize Mr. Ellison from Minnesota for his 5 minutes.

Mr. ELLISON. Thank you, Mr. Chairman.

Congressman Frank, could you describe—and you already have alluded to it a little bit—but could you elaborate further on what benefit you see from ensuring greater representation of people of diverse experience on the Federal Reserve's Open Market Committee?

Mr. FRANK. I have a fundamental belief in the electorate ultimately making the decisions, and it is very anomalous. There is nothing comparable.

As a matter of fact, today, with there being some vacancies on the Board of Governors, half the votes, I think, on the Open Market Committee are cast by people, and we did a check of who are the members of the boards? It is a kind of a closed system.

The board members are selected to—with a great input from the presidents—they, in turn, pick the regional presidents, and it is private sector governance of an important part of what we do. And, again, I am not talking about what they do in their regions and their economic activity.

The bill says they should not vote on monetary policy, and I just don't understand what the rationale is for letting private sector people with the financial industry generally, not in every case, being the predominant influence, pick the people who come to Washington and vote on one of the most important governmental policies. That has been the whole premise of much of what we have been talking about.

Mr. ELLISON. Congressman Frank?

Mr. FRANK. Yes.

Mr. ELLISON. I have some information on the board, by profession.

Mr. FRANK. The regional boards?

Mr. ELLISON. Yes. One person from labor. You have four academics, you have 41 people from banks, and 47 people from other for-profit corporations.

Mr. FRANK. I think that is just a mistake, and it is not that bankers are bad people or others. It is that we generally don't say it is kind of a corporatism. It is kind of let the profession govern itself, and I think that is a mistake when you have a large number from the financial industry, and they tend to be very influential in all of this. There ought to be a broader representation.

Again, in voting on monetary policy, not what is done in terms of regional economic activity. These people come to Washington.

Now I understand people want some geographic diversity. We should do that, but it is very surprising to me, we don't do that for any other Federal agency.

We don't say that the people in the energy industry, or we don't say that votes on labor policy are set by boards where unions are the predominant influence. The President appoints people to the NLRB. A Republican President will appoint people differently than a Democratic President, but they are Presidential appointees subject to Senate confirmation.

And I have picked—half the notes on the NLRB don't come from groups that are dominated by labor unions. That is the analog to the FOMC votes from the presidents.

Mr. ELLISON. Mr. Frank, I have a little time left.

On this issue of more diversity on the board, you just talked about professional diversity, but also, it seems like there has been some lack of ethnic and racial diversity too.

Do you think that including more voices from consumers who are from urban areas, rural areas, people who have dealt with hard-hit neighbors, neighborhoods with foreclosure, do you think some, these kinds of experiences are—

Mr. FRANK. I think that would be good on the boards. But even with that, even if I picked the boards personally, I wouldn't want them voting on Federal Government policy. I do not think that private citizens should pick other private citizens with no intervention from any electoral process. There is no appointment by someone who was elected. There is no confirmation by the Senate. It is really, as I said, anomalous for people who believe in democratic self-governance. And, yes, I would like to have more—better representation on these local boards, but even with that, I would not want them—and by the way, they tend to be sort of self-selected. I wouldn't want them, again, voting to set important national policy. Everybody acknowledges the monetary policy is very important. Some people think it has been too loose. I don't understand the justification for that.

I would say, and I would say again to the chairman, I know he wasn't here when we were voting on it, but you also have this situation about whether or not they should be subject to appropriation.

I think if you had all Presidential appointees and Senate confirmation, that would be okay. But I think others might say, well, gee, shouldn't they be subjected to the appropriations process? But in any case, as I said, I cannot think of a comparable situation where the people in the industry most affected by public policy get to pick a significant number of the formal official policymakers with no intervention by anybody who is elected to anything.

Mr. ELLISON. I yield back

Chairman PAUL. Thank you.

I now recognize the gentleman from New Jersey, Mr. Garrett.

Mr. GARRETT. Thank you, and I will just run down a series of questions. Start at the very beginning.

Mr. Brady, the question I'm not sure I heard the answer to, in my mind, your definition under the bill—I am the cosponsor—of a sound dollar, is that just the language of saying that if we hit our 2 percent inflationary, as opposed to anything else?

Mr. BRADY. It doesn't set an explicit target of 2 percent. It does not.

Mr. GARRETT. Is that something that should be looked at and clarified in the bill before it goes forward?

Mr. BRADY. I am very open to that. I would like to see Congress set that type of target in a rules-based system.

Mr. GARRETT. Does the ranking member have a comment on that point by any chance?

Mr. FRANK. No. You mean to define what is the sound—I don't know how—I would be concerned about how you would do that statutorily. We are in a world where the dollar has several roles. It has a domestic role and an international role. The international role of the dollar is very significant, especially since we are confronting competitors in the world, the People's Republic of China primarily, who use the currency.

Mr. GARRETT. For other purposes.

Mr. FRANK. And I would not want to disable ourselves from dealing with that aspect.

Mr. GARRETT. So that goes to the next question, I guess, for both of you. If you did pass legislation similar to this, how do we know whether they are meeting the standard if we don't set a standard?

And then, secondly, is there a consequence of not meeting the standard we haven't set?

Mr. FRANK. That is a very good question and proves why we shouldn't pass the bill.

Mr. GARRETT. Now, the rest of the story.

Mr. BRADY. Yes, for the rest of the story. I think setting a clear mandate, whether we set the explicit target or not and it is certainly open to that and then holding them accountable to that, I think, is key.

And, Mr. Garrett, one point I would like to make, that going forward, and I think it is a terrible mistake to require all of the Federal Reserve Bank presidents to be appointed and confirmed by the Senate. One, it will further politicize the Federal Reserve Board, including leading to vacancies as we have today, and it will concentrate more power on Wall Street and Washington.

I think it will be less independent as a Fed, because as you know, the regional bank presidents have an independent staff so they can actually not rely just on the chairman's staff, but on their own to assess economic policy.

And then, as you know, finally, the Board of Governors actually approves these regional reserve bank presidents. So we already have accountability within the system.

Mr. GARRETT. I guess I could sit here and wonder, maybe as the chairman does, what our role is under either one of your scenarios. You are saying the reason you don't have that appointment—under the ranking member's position, it would go through Presidential appointment. I can see some benefit to that. But then I can also see we in Congress if that is all up in the Senate as far as monetary policy, we are sort of left out, except to hear the chairman occasionally come and testify and say, this is what they are doing and we have no standing—

Mr. FRANK. I understand that, but I assume that is what you wanted when you voted not to subject them to the appropriations process—may I respond?

Mr. GARRETT. Reclaiming my time. On that, I just wanted to delve into a little bit more than what we just did in the few minutes that we had there.

Mr. FRANK. I did offer an amendment—which I wasn't for because I wasn't concerned, but you voted against subjecting it to the appropriations process that would seemingly to have dealt with the issue you just raised—

Mr. GARRETT. I am open to the idea.

Mr. FRANK. Open to the idea in the sense that the roof is off. I mean, open to the idea, I think there is going to be very much openness for a very long time.

Mr. GARRETT. We are just trying to do things a little bit differently from the last session where we moved hundreds of pages at a time of a piece of legislation—

Mr. FRANK. I move, Mr. Chairman—

Mr. GARRETT. Reclaiming my time, Ranking Member Frank, you did raise one other question that I thought the chairman would raise in here. You said with regard to the process, and that is the constitutionality of it. And you had made, I think, a good point saying that it would make it perhaps more constitutional if we had the Presidential appointment here that it becomes not in the private sector but more public sector. But it raises the fundamental question that I thought the chairman would raise, which is where is the constitutionality for either one of the proposals that are before here?

Mr. FRANK. First, Mr. Garrett, the suggestion that we rushed things through 2 years ago, I think we had dozens of roll calls, a lot of meetings. I gather you have some concerns about your own vote. But I don't think you should ever be concerned about the process.

Mr. GARRETT. I was never concerned about my own vote, but rather I was concerned about legislation being dropped in at 3 a.m. in a conference committee that we obviously did not have any hearings on. That is not the debate we are having here—

Mr. FRANK. I understand you don't want to talk about your vote against subjecting it to appropriations. Let me say this to the constitutionality—

Mr. GARRETT. I only want to discuss what we are supposed to be discussing here and not the way that things were held in the past. That is part of the reason why we are here today.

Mr. FRANK. I will answer your question. The constitutionality of my provision is what it says in the Constitution, that important government officers should be appointed by the President, subject to confirmation by the Senate. And I think that voting on monetary policy is indisputably an important public policy and ought to be executed by public officers in the constitutional manner.

Mr. GARRETT. Mr. Brady, for the last word, do you care to chime in?

Mr. BRADY. Congress holds the constitutional responsibility for monetary policy. We have, through history, contracted that out to the Federal Reserve Bank with a clear mandate, now, lately, a

more muddled mandate. And to make the point, first, I don't think we want to envision a day where 535 Members of Congress are setting monetary policy in America. Second, America is really an outlier here. Of the 47 central banks and monetary authorities around the world, only two give equal weight to unemployment, only two have, in effect, a muddled mandate. The others have set price stability as either the primary or the hierarchically the single mandate for their central authority.

Mr. FRANK. Mr. Chairman, may I have one sentence?

I thought my Republican colleagues were in favor of American exceptionalism.

Mr. BRADY. And I wish we would have dealt with that on Fannie Mae and Freddie Mac years ago. And I do thank Chairman Garrett for his efforts to actually solve the problem—

Mr. FRANK. Would the gentleman yield?

Mr. BRADY. To this crisis—

Mr. FRANK. If the gentleman would yield—

Mr. BRADY. —in history—

Mr. FRANK. The Republicans have been in power since January 2011 and have done zero on Fannie and Freddie. What is holding you back?

Chairman PAUL. I would like to reclaim the Chair's time.

Mr. BRADY. You have been in power.

Mr. GARRETT. I wish that you wouldn't.

Chairman PAUL. But I do. This will conclude the first panel, and I do want to thank our two colleagues for a lively discussion. I appreciate you very much for being here. I now ask the second panel to be seated.

I would like to introduce the witnesses on our second panel: Dr. Jeffrey Herbener is the chairman of the Department of Economics at Grove City College; Dr. Peter Klein is associate professor of applied social sciences, and director of the McQuinn Center for Entrepreneurial Leadership at the University of Missouri; Dr. John Taylor is the Mary and Robert Raymond Professor of Economics at Stanford University, and the George P. Schultz Senior Fellow in Economics at the Hoover Institution; Dr. James Galbraith is the Lloyd M. Bentsen, Jr. Chair in Government/Business Relations, and professor of government at the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin; and Dr. Alice Rivlin is the senior fellow in economic studies at the Brookings Institution and is a former Vice Chair of the Federal Reserve Board of Governors.

Without objection, your written statements will be made a part of the record. You will now each be recognized for a 5-minute summary of your testimony.

And we will begin with Dr. Herbener.

STATEMENT OF JEFFREY M. HERBENER, PROFESSOR OF ECONOMICS, GROVE CITY COLLEGE

Mr. HERBENER. Chairman Paul, Ranking Member Clay, and distinguished members of the subcommittee, it is an honor to appear before you.

Left to the market, the production of all goods, including money, passes the profit and loss test of socially beneficial production. Like

all private enterprises, a gold mining company produces if the revenue from the sale of its output exceeds the cost of buying its inputs. Its production is socially beneficial because the value of inputs in producing the output to satisfy its customers exceeds the value of those inputs in producing other goods to satisfy other customers.

In the market, money production is regulated by profit and loss. Changes in demands bring forth more production. If the demand for money increases, making the value of gold coins rise, then minting companies would increase production to capture the profit. As the supply of gold coins increase, their value would decline, and as the demands for resources increase, their prices would rise. The profit would dissipate and resource allocation into and production of money would be optimal for society at large.

The production of fiat paper money and fiduciary media cannot be regulated by profit and loss. It is always profitable for a central bank to produce more fiat paper money since larger denomination bills have the same production cost as smaller denomination bills. It is always profitable for a commercial bank to issue more fiduciary media through credit creation since the interest it earns on the loan made always exceeds the nominal cost of issuing fiduciary media. Although the production of fiat money and fiduciary media cannot be justified by passing the market test of optimal production, it is claimed that an elastic currency will render an outcome superior to that of a monetary system of commodity money and 100 percent reserve money substitutes.

Let me address three such claims for an elastic currency. First, that it can keep the price level stable. There is no social benefit from a stable price level. Entrepreneurs earn profits and avoid losses by anticipating changes in prices of all goods, including money, and elastic currency makes the entrepreneurial task more difficult by adding another dimension of uncertainty to the purchasing power of money.

Second, it is claimed that an elastic currency can prevent price deflation. There is no social benefit from preventing price deflation. Faced with lower prices for their outputs, entrepreneurs reduce their demands for inputs, and their prices fall also. This leaves profit production and real incomes intact.

Looking at the evidence across 17 countries over 100 years, Andrew Atkinson and Patrick Kehoe in a 2004 American Economic Review article demonstrated that there is no correlation between price deflation and economic downturns.

The third claim for an elastic currency is that it can accelerate economic growth. There is no social benefit from attempting to accelerate economic growth beyond the rate people prefer. Instead of building up the capital structure of the economy more fully, monetary inflation through credit expansion generates the boom-bust cycle. In the research on the performance of the Fed published in Cato Working Papers in 2010, George Selgin, William Lastrapes, and Lawrence White concluded that under the Fed, the economy has suffered more instability than in the decades before the Fed's establishment, and that even its post-World War II performance has not clearly surpassed that of its predecessor, the National Banking System. Economic theory and historical evidence dem-

onstrate that an elastic currency system confers no benefit on society at large. Instead, it causes financial instability and business cycles.

The Fed should be abolished, and a market monetary system of commodity money and money certificates should be established. A direct route to achieve this end is to convert Federal Reserve Notes into redemption claims for gold with a 100 percent reserve of gold and to redeem the portion of reserve deposits banks hold at the Fed into cash so that banks hold 100 percent cash reserves against their checkable deposits. At that point, production of money and money substitutes should be done by private enterprises under the general laws of commerce. Thank you.

[The prepared statement of Dr. Herbener can be found on page 240 of the appendix.]

Chairman PAUL. I thank the gentleman.

I now recognize Dr. Klein for his 5-minute opening statement.

STATEMENT OF PETER G. KLEIN, ASSOCIATE PROFESSOR, APPLIED SOCIAL SCIENCES, AND DIRECTOR, MCQUINN CENTER FOR ENTREPRENEURIAL LEADERSHIP, UNIVERSITY OF MISSOURI

Mr. KLEIN. Thank you, Mr. Chairman, and members of the subcommittee for the opportunity to discuss such an important topic.

My testimony analyzes the Fed and the reforms considered today from the perspective of an organizational economist. How does the Federal Reserve system measure up as an organization? Are its objectives, as mandated by current law, achievable and appropriate for a government agency? Are these objectives consistent with a healthy and growing economy? Is the Fed effectively structured, managed, and governed? Do key decisionmakers have the information and the incentives to make good decisions? Are they penalized for making mistakes?

My answers to these questions are very strongly negative. The Fed has been given a task, managing and stabilizing the U.S. economy, that is impossible for any government planning board. The Fed has vast authority and very little accountability. The Fed can take actions that do enormous harm to the U.S. economy.

Since 2008, the Fed has done exactly that. It has pumped money into the financial system at unprecedented rates. It has kept interest rates near zero, thus discouraging prudent behavior among consumers, entrepreneurs, and government actors, while encouraging reckless spending and the accumulation of vast public and private debts.

The Fed has done everything it can to prevent the market adjustments needed for recovery from the financial crisis. All of this has happened without oversight, without external checks and balances, and without public discussion and debate. This kind of set-up is a recipe for disaster.

Everything we know about organizations with vast authority and without external checks and balances tells us that they cannot possibly work well.

Industrial planning fails because planners cannot, and should not, pick winners and losers among firms and industries. Likewise, monetary planners lack the incentives and information to make ef-

ficient decisions about open market operations, the discount rate, and reserve requirements. The Fed simply does not know the optimal supply of money or the optimal intervention in the banking system. No one does.

Add the problems facing any public bureaucracy—inefficiency, waste, mission creep—and it is increasingly hard to justify giving so much discretion to a single unaccountable independent entity.

Mismanagement of the money supply not only affects the general price level, it also distorts the relative prices of goods and services. This makes it more difficult for entrepreneurs to weigh the costs and benefits of alternative actions, encouraging them to invest in the wrong activities, that is, to make investments that are not consistent with what consumers are willing and able to buy.

Devaluing the currency and raising prices by injecting liquidity into the financial system rewards debtors while punishing savers, just as artificially low interest rates reward some market participants at the expense of others. Instead of winner-picking, we should allow market forces to determine the value of money, the price of loans, the levels of borrowing and saving, and the direction of investment.

I do support eliminating the dual mandate, getting the Fed out of the full employment business. But I would drop the price stability requirement also.

The belief that we need a central bank to fight inflation is based on a misunderstanding of the nature and causes of inflation. Price levels rise because the central bank has created too much money, not because the economy is somehow overheating, needing the government to cool it off. Central banks don't fight inflation; they create it.

Nor do we need a lender of last resort, which protects not mom-and-pop savers and investors but incompetent bank executives and their financial partners.

I agree with Mr. Brady that a discretionary bailout policy encourages moral hazard. But an explicit, transparent, and evenhanded lender-of-last-resort policy has the same result. If you know the government stands ready to bail you out, you will take risks you should not take. Instead, we should allow banks to compete with each other and succeed or fail based on their ability to satisfy their customers.

Reforms such as increasing the number of Fed Governors, shortening their terms, or changing how they are selected are fine but do not get at the root of the problem. Instead, we should replace the old-fashioned central bank with a modern, progressive, market-based alternative, such as a commodity standard or competition among currencies. A market-based system would free entrepreneurs from the unpredictable and seemingly arbitrary whims of government planners, unleashing entrepreneurs to invest, innovate, and grow the economy, not only in the long run, but now when we so desperately need it. Thank you.

[The prepared statement of Dr. Klein can be found on page 256 of the appendix.]

Chairman PAUL. Thank you.

I recognize Dr. Taylor for 5 minutes.

STATEMENT OF JOHN B. TAYLOR, MARY AND ROBERT RAYMOND PROFESSOR OF ECONOMICS, STANFORD UNIVERSITY, AND GEORGE P. SCHULTZ SENIOR FELLOW IN ECONOMICS, STANFORD'S HOOVER INSTITUTION

Mr. TAYLOR. Thank you, Mr. Chairman, and Ranking Member Clay for the opportunity and thanks for bringing these important issues for public discussion.

In your opening remarks, Mr. Chairman, you mentioned that we have nearly 100 years of Federal Reserve history to learn from, and it seems to me the lesson is very clear. Highly discretionary policy leads to problems and poor performance. More systematic, rules-based policies, steady-as-you-go policy, leads to far superior performance.

In the Great Depression, the Federal Reserve cut the growth rate of the money supply. That raised unemployment to unprecedented levels.

In the 1970s, a discretionary go-stop policy led to double-digit unemployment, eventually double-digit inflation, low economic growth, and double-digit interest rates.

In the 1980s and 1990s, a more focused policy, more systematic, more rules-based, in my view, led to long expansions, low inflation, declining unemployment, and eventually, higher economic growth.

And, unfortunately, more recently, we have moved back to a more interventionist, discretionary policy, much less systematic, and the results have been a major financial crisis, a major recession and now an abysmally low-growth recovery.

So you can look at the details, but it seems to me the evidence is pretty clear that we need to improve the degree to which monetary policy is rules-based rather than discretion.

I think the legislation to change the dual mandate and focus on price stability, which is in Congressman Brady's bill, and also in Congressman Pence's bill, would help in this regard. So many of these interventions have been based on an effort to address unemployment, and the result has been exactly the opposite. It created these discretionary actions, which has been harmful.

So for those who are worried that removing the dual mandate will actually increase unemployment, I think the historical evidence is exactly the opposite. You can look at the 1970s: This highly interventionist policy, very little systematic behavior, led to very high unemployment.

You looked at the period in the 1980s and 1990s was less interventions, less focus, and the Chairman of the Federal Reserve, at that point Paul Volcker, explicitly tried to interpret the dual mandate in a way that focused more on price stability. The results were dramatically better unemployment.

And of course, now you have the Federal Reserve citing the dual mandate more than it has ever had before to justify these interventions.

So I think the evidence is clear, and the idea is this unemployment rate is unacceptable. It is way too high, and I think part of the reason for that is monetary policy.

Now I agree, Mr. Chairman, that the dual mandate is not the whole answer. So I would also encourage the Congress to require that the Federal Reserve go back to the reporting requirements

that were removed in 2000. There were requirements that the Fed had explicitly to report its goals for money growth and credit growth. And those were removed for whatever reason. But things like that could be replaced, a requirement that the Federal Reserve explicitly report its strategy for setting the instruments of policy, whether it is money growth or interest rates, whatever they want to do.

It is their job to determine that strategy, of course, not yours. And in fact, if there is an emergency, and they want to deviate from it, that is their business. But they need to explain why. They need to come back here and say why we deviated from the strategy which we told you we would follow earlier.

There seem to be these kinds of changes in addition to the restrictions that the Federal Reserve not purchase vast quantities of private securities, or the idea that we balance the voting responsibility among all the presidents, not just give special voting responsibility to some of the presidents, I think those reforms in Congressman Brady's bill would also help a lot.

And in general, it seems to me these kinds of reforms go a long way to having the Congress exercise its responsibility for oversight of an independent agency and at the same time not get involved in the day-to-day operations, micromanaging that agency.

Thank you very much, Mr. Chairman.

[The prepared statement of Dr. Taylor can be found on page 275 of the appendix.]

Chairman PAUL. I thank you.

And I now recognize Dr. Galbraith for his statement.

STATEMENT OF JAMES K. GALBRAITH, LLOYD M. BENTSEN, JR. CHAIR IN GOVERNMENT/BUSINESS RELATIONS, LYNDON B. JOHNSON SCHOOL OF PUBLIC AFFAIRS, THE UNIVERSITY OF TEXAS AT AUSTIN

Mr. GALBRAITH. Chairman Paul, Ranking Member Clay, it is an honor to be here, especially given that I am a former member of the staff of this committee and I served on the team who drafted the Humphrey-Hawkins Full Employment and Balanced Growth Act.

I wish to speak mainly today in defense of the dual mandate, the plural mandate, the flexible and practical language of present law. That law was drafted at a time of acute theoretical conflict in economics.

And on the staff. I was a young full employment liberal. One of our colleagues, James Pierce, former Federal Reserve Research Director, was a mainstream Keynesian at the time. Two other colleagues, Robert Auerbach and Robert Weintraub, were Chicago monetarists trained by Milton Friedman.

We compromised on language that gave clear reporting transparency and accountability requirements to the Federal Reserve in the presence of ultimate objectives but that did not impose anyone's theoretical views. Had we done so, I fear the oversight process would have failed long ago, perhaps when mainstream economics adopted the concept of a natural rate of unemployment in the early 1980s, perhaps when classical monetarism and the relationship between money and prices fell apart shortly after that.

Instead, being flexible, the process has survived for over 35 years, even though the theories come and go.

Now price stability is written into current law as an objective of monetary policy. It is the presence of the maximum employment objective, alongside price stability, in my view, that gives the Federal Reserve leeway to pursue inflation targeting at some rate other than zero if it chooses to do that.

Similarly, if in some alternate universe, the Federal Reserve were to pursue a full employment strategy at all costs, the presence of the price stability language would give you legitimate cause to question its policy and the reasoning behind it.

Having price stability alone in the charter would put the Federal Reserve in the position presently occupied by the European Central Bank, a very difficult position, obliged to pretend to ignore unemployment, even as that issue becomes increasingly important in the politics of the region that it is responsible for; obliged to pretend to respect its charter when circumstances dictate that, in fact, it deviate from it; and it would put the Federal Reserve in a perpetually difficult, I think false, position before Congress, really make it very difficult for the Federal Reserve to report forthrightly on what it is doing; and I think it would equally put the Congress in an extremely difficult position as, unlike the European Central Bank, which is an independent entity, the Federal Reserve is not and cannot be independent of Congress. It is a creature of Congress under the Constitution.

I think also that creating a single rigid price stability mandate would bring back the technical difficulties that we experienced in the 1970s and 1980s over the definition of money. The definition of price stability would become similarly problematic. If one looked at the notional definitions of inflation presently in use, I think you would find that the Federal Reserve did not, in fact, violate its price stability mandate in the run up to the great crisis. It would be very hard to know before the fact when it was doing something that was not consonant with that mandate.

Finally, this is a time of ferment in economics, once again, as the 1970s were. The profession fell into complacency before the great crisis, and the crisis delivered a shock from which economics has not recovered. Issues of the cost of resources, of the as yet I think unfinished project of financial reform, remain unresolved. Unemployment is not going away as many prominent forecasters believed it would have by now. And there are limits to what the Federal Reserve can achieve.

Reasonable price stability, which was the language in the Humphrey-Hawkins preamble, as I recall, is an important objective, but so is full or maximum employment. And I think Congress would be well advised not to commit to either one at the sacrifice of the other.

I do urge Congress to continue to pursue the goals of oversight, accountability, and to probe deeply what the Federal Reserve is doing but within the framework of present law. Thank you very much.

[The prepared statement of Dr. Galbraith can be found on page 230 of the appendix.]

Chairman PAUL. I thank you.

Now, I recognize Dr. Rivlin.

STATEMENT OF ALICE M. RIVLIN, SENIOR FELLOW, ECONOMIC STUDIES, BROOKINGS INSTITUTION, AND FORMER VICE CHAIR, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Ms. RIVLIN. Thank you, Mr. Chairman.

I am happy to have this opportunity to testify before this subcommittee as you consider the diverse set of bills about the Federal Reserve.

I will concentrate my remarks on the dual mandate. I believe that the dual mandate has served the United States well and that it would be a mistake to restrict the Fed's policy actions to fostering stable prices alone.

I would like to make clear at the outset, Mr. Chairman, that I believe in a strong, independent central bank. Without a strong, independent central bank functioning to mitigate economic and financial instability, I believe the United States would have a weaker, far more chaotic economy, and would lose its leadership position in the global economy.

The objective of economic policy, including monetary policy, should be a rising standard of living for most people over the long run. Controlling inflation is a crucial element of the larger objective because high and especially rising inflation is a serious threat to sustained growth.

I believe the dual mandate is simply a reflection of what average citizens ought to expect their central bank to do: Let the economy create as many jobs as possible, but don't let inflation interfere with that job growth.

Economists translate that commonsense exhortation into a monetary policy aimed at keeping the economy as close as possible to its long-run potential growth without seriously overshooting in either direction. This concept is enshrined in Professor Taylor's famous rule.

The problem for the Federal Reserve decisionmakers is that the potential growth is not observable because it depends on trends and productivity growth, which can shift unexpectedly. In the stagflation of the 1970s, hindsight indicates that monetary policymakers overestimated potential growth and did not tighten soon enough to avoid the acceleration of inflation at the end of the decade.

In the 1990s, when I was at the Fed, we faced a happier version of the same uncertainty. We had unemployment that was very low but no inflation. We held off tightening the presumption, which proved correct, that accelerating productivity growth had raised potential growth and reduced the risk of inflation.

Partly thanks to the Fed, we had a very good decade in the 1990s. We also balanced the budget. The sooner we get back to those conditions, the better.

But the late 1990s also illustrated the inadequacy of the Fed's tool kit in response to asset price bubbles. The dot-com bubble, if the Fed had raised interest rates to deal with the dot-com bubble, I think it would have tipped the economy into recession, punishing workers and companies across the country for no good reason.

Influencing the Federal funds rate through open market operations is simply not an effective way of calming an asset price bubble. We learned that lesson again in the early 2000s.

While we should not have needed a catastrophe to learn this lesson, the Dodd-Frank Act gives the Fed and the Financial Stability Oversight Council responsibility for financial stability and new tools with which to help achieve it.

The dual mandate is not inconsistent with strong emphasis on controlling inflation when appropriate and even with an explicit target for inflation. Indeed, last January, the Fed confirmed a long-run inflation goal of 2 percent.

Operating under the dual mandate, the Fed has successfully controlled inflation for 3 decades. To change the language of the law to imply that the Fed's only concern should be inflation would send a misleading signal to a public rightly concerned with jobs and growth as well as inflation. It would imply that inflation is a serious current threat to American prosperity, which seems to me unwarranted.

What we need now is a continuation of accommodative monetary policy plus fiscal policy that combines additional investment in long-run growth in jobs with credible long-run action to stabilize the debt.

In short, monetary policy, as executed by the Fed under the dual mandate, has a positive track record and is currently appropriate. I would urge the Congress not to tamper with legislative language that has served us well. Thank you.

[The prepared statement of Dr. Rivlin can be found on page 272 of the appendix.]

Chairman PAUL. I thank the panel, and I now yield myself 5 minutes for questioning.

First off, I would like to address my question to Dr. Herbener and Dr. Klein.

Today, with our previous panel and this panel, we have heard a lot about the dual mandate, and it seems like that is what we have spent most of our time on today.

Could you put that in perspective? How crucial is that? How much difference would it make? I know you have a different opinion about the overall picture and the monetary system, but if we are—we are not on the verge of having a commodity standard and restraint on the authorities, but how crucial do you think this debate is, and how much difference does it make whether there is a single or a dual mandate?

Dr. Herbener?

Mr. HERBENER. I don't see too much evidence—

Chairman PAUL. Make sure I can hear you.

Mr. HERBENER. I don't see too much evidence that in the performance of the Fed, the concentration on one wing of the mandate or another has changed their actual performance. So the Fed was in the 1980s concentrating on price stability more than the unemployment mandate, and yet they inflated to the extent of creating the bubble, the stock market bubble of 1987 that burst and gave us a recession in 1990, 1991.

In other eras where they have concentrated more on unemployment, their performance likewise has not been spectacular. It has

been somewhat similar, I think. And so, I don't think in practice that the dual mandate has been effective in restraining the Fed's monetary policy or improving it one way or the other.

Chairman PAUL. Dr. Klein, do you have anything to add on that?

Mr. KLEIN. I agree with that.

I would add that if you look at the incentives of the central bank, the central bank always has a stronger incentive to increase, to be accommodative and increase credit rather than to be contractionary. So I would be more concerned about an emphasis on full employment, which sort of encourages the Fed to go in the direction that it wants to go anyway, and I would be less concerned about it, relatively speaking, on an emphasis on price stability, which would tend to constrain the Fed and go against the direction that it naturally wants to go.

Chairman PAUL. Of course, the argument that it didn't restrain them is precisely the reason they like the mandate because it allows them to expand money at will and of course we see this as a problem.

Quick question for Dr. Taylor, you are emphasizing some of these monetary rules, and even more monetary statistics, would you be in favor of the Fed once again issuing a report on the size and growth of M3?

Mr. TAYLOR. I would be in favor of the Fed doing that. I think the more emphasis on money statistics, the better, in my view. They didn't pay enough attention to that.

But I would say from the point of view of the Congress, it seems to me you want the Fed to report on its strategy, not to dictate exactly what the strategy should be. So that is the Fed's job. You come to this hearing and report the strategy explicitly like they did about the M3, which was I think constructive. But it also requires the Congress, this committee, to ask the questions about the strategy. I think that dialogue is very important. I wish we would go back to that.

Chairman PAUL. Dr. Galbraith, I tend to agree with you about the constitutionality of appointments to the Federal Reserve Board. We always have a different opinion about what we should be doing, monetary policy and the Federal Reserve. But where does this authority come from, constitutional authority, since you addressed the Constitution, the constitutional authority to actually emit the bills of credit, which is prohibited by the Constitution, the creation of a fiat monetary system. Where does that authority come from exactly?

Mr. GALBRAITH. I believe, Mr. Chairman, and I would be cautious about tangling with you on this, but the authority for the Federal Reserve Act simply comes from the authority given to Congress to coin money and regulate the value thereof and that the Federal Reserve Act has been a functional piece of American law for over a century now, so it would be a surprise to me if it were, per se, unconstitutional on that ground.

Chairman PAUL. Of course, if there is a prohibition in the Constitution, you can't change the Constitution by the Federal Reserve Act.

But Dr. Rivlin, I think the removal of the report on M3 came after you left the Fed, I am not sure. But why was that dropped?

What would it have harmed us to know a little bit about the broad money supply? It seemed like it emphasizes a point of money growth and many believe still that the true price inflation is a consequence of money growth. Is there any reason that we shouldn't have that figure presented to us? Why was it canceled out?

Ms. RIVLIN. I don't know. I believe that was after I left. But I am always in favor of more information rather than less.

But the emphasis on the monetary aggregates was declining, for a good reason. They weren't stable with respect to anything, and we have had all sorts of different kinds of money created in the last few decades, and the idea that it was mostly checking accounts and savings accounts has just disappeared.

Chairman PAUL. I, of course, would like to see more attention given to the stableness or the definition or explanation or defining what the monetary unit is rather than trying to concentrate on the consequences of an unstable currency. But we don't have much time to get into that, so now I am going to yield 5 minutes to Mr. Clay.

Mr. CLAY. Thank you, Mr. Chairman.

Welcome back, Dr. Rivlin.

Dr. Rivlin, at any time during your tenure on the Board of Governors, did the dual mandate interfere with the Board's ability to set monetary policy?

Ms. RIVLIN. No, I don't believe it did, Mr. Clay.

Setting monetary policy is really difficult. And you are always weighing different considerations. But we were very focused, when I was there, on what was happening to productivity growth, which was something of a mystery. We weren't very worried about inflation because it was falling, and so we continued, I think, thinking we were in conjunction with both mandates to keep interest rates relatively low.

Mr. CLAY. And inflation was falling because the economy was robust. It was growing jobs, and that was because the Administration was working with Congress to help the economy along. Is that correct?

Ms. RIVLIN. We had strong growth in the economy. We had a restrictive fiscal policy in that period. We were trying to get back to a balanced budget, which sounds like a fantasy now, and we did it. So the Fed's job was easier at that moment because the fiscal policy was quite restrictive.

Mr. CLAY. Thank you for that response.

And Dr. Galbraith, as an architect of the dual mandate, can you share with this committee the vision and the need that the two legislative authors had for the dual mandate then, back then, Senator Humphrey and Congressman Hawkins?

Mr. GALBRAITH. Yes, Congressman. I had the privilege of working directly with Congressman Hawkins at that time. Of course, an economic policy mandate was not a new thing for the United States. We had the Full Employment Act of 1945, which stipulated maximum employment production and purchasing power as the goals of United States economic policy for the whole of the government.

The Humphrey-Hawkins Full Employment and Balanced Growth Act sought to modernize and to make a little more ambitious and

a little clearer the objective, particularly with respect to employment. And it also ended up clarifying what was meant by purchasing power, that is where the reasonable price stability came into the preamble. So it was a way of broadly specifying economic policy objectives for the entire government. But also with respect to the Federal Reserve, this was the moment that codified what we had set up through H. Con. Res. 133, in 1975, a process of dialogue with the Federal Reserve, regular oversight hearings, which goes on. And the Humphrey-Hawkins Act Federal Reserve provisions placed those into law and set a regular procedure, and that included, of course, as Professor Taylor said, goals for the growth of various monetary aggregates, which over time, as Dr. Rivlin has just said, became less useful because the relationship between those objectives or those statistics and anything you ultimately cared about became much noisier and less reliable.

Mr. CLAY. Thank you for that response.

Dr. Klein, being from Missouri, my home State, let me ask you about something that Americans are concerned about, and that is the rise in gasoline prices at the pump, especially the working class.

What measures could the Federal Reserve take to stabilize the recent rise in gas prices? Any suggestions?

Mr. KLEIN. The price of gasoline and the price of oil fall a little bit outside the mandate of the monetary authority. So certainly rising energy prices is one manifestation of a monetary policy that is overly accommodative. But on the whole, energy prices, especially for oil, gas, and so forth are set primarily in global energy markets over which U.S. policymakers have relatively little control. There are measures about increasing supply and so on that might be within the purview of Congress or the Executive Branch, but in my view, there is not much that the Federal Reserve System can or should be doing about that.

Mr. CLAY. Thanks for your response.

I yield back.

Chairman PAUL. I now recognize the gentlelady from New York, Dr. Hayworth.

Dr. HAYWORTH. Thank you, Mr. Chairman, and thank you again for holding this hearing and for your leadership on this crucial question.

I would like to ask this question of the panel: Is it fair to say that we probably would not have to debate as vigorously and as urgently as we do, and legitimately so, under these circumstances, the role of the Fed were it not for the fact that the Fed has, as our central bank, had to contend over the decades with an increasingly incontinent Federal fisc? To me, it strikes me that we talk about the mandates for the Fed and the way in which it operates, and again thinking about our conversations with Chairman Bernanke, that so much of what the Fed has felt compelled to do, if you will, I realize I am using a somewhat loose interpretation, has been in response to the fact that we have a Federal Government that fundamentally has continued, and at an accelerating rate over the past few years, to mismanage, if you will, large segments of the economy.

Dr. Klein, perhaps you could start with that, please?

Mr. KLEIN. I certainly think it is the case that the job that is given to the Fed becomes more difficult under the circumstances that you describe. But I am not sure it is right to think of other branches of the Federal Government, the Treasury, Congress and so on, and the Fed as being sort of antagonists, competing against each other or playing off each other.

One of the major functions performed by, in open market operations, is, as has already been discussed earlier this morning, monetizing the debt, so the Fed facilitates government expenditures and government borrowing that otherwise would not be politically feasible if the Fed were not there to monetize the debt.

I think the Fed and the rest of the Federal Government are much more likely to be seen as working hand-in-hand than opposing each other.

Dr. HAYWORTH. Which actually, is exactly what I meant. The Fed has been the government's enabler to a certain extent, the Federal Government's enabler, and that is part of our problem. It is very difficult to use monetary policy to endlessly accommodate what we have taken on.

Mr. KLEIN. Yes, I agree with that.

Dr. HAYWORTH. Thank you sir. Dr. Herbener?

Mr. HERBENER. Yes, I agree, as well. It creates a certain type of moral hazard to be able to appeal directly to a printing press or to some agency that would monetize debts that are issued. I would be profligate as well, anyone would, relative to not having that kind of accommodation.

Dr. HAYWORTH. Absolutely.

Dr. Taylor. Thank you.

Mr. TAYLOR. Yes. I think, if you hold out your shingle and say you are open for business, then people will come. I think that is what basically has happened. The Federal Reserve has provided what you describe as an alternative to some actions. It bought 77 percent last fiscal year of the debt issued by the government. That is a big, big intervention.

I think monetary policy is itself part of the problem now, given what it has done, but fiscal policy obviously is a problem, as is regulatory policy. So there is a whole gamut of policies. I think each of those should be addressed separately. Monetary policy can be improved and so can fiscal policy and regulatory policy. But the idea of working hand-in-hand, I think, leads to the kind of problems we have seen already. That is why I think questions about the mandate are important.

Dr. HAYWORTH. That indeed is why I myself have become a cosponsor of Representative Pence's bill, because of that moral hazard issue.

I am eager to hear from Dr. Galbraith and Dr. Rivlin.

Mr. GALBRAITH. I think many of our problems now are due to a disastrous deregulation and desupervision of the financial sector which led to a catastrophic meltdown of that industry and of the solvency of much of the American middle class, and the consequences, the effects that we see in the Federal budget are largely a consequence, not a cause, of that phenomena—tax revenues fall. Unemployment payments go up. Other kinds of stabilizing payments go up. We are much better off actually for having a large

Federal Government, a Federal budget that can stabilize the economy in this situation than we would be if we didn't have it.

We didn't have it in the 1930s, and our output fell by about one-third. The overall decline was much less this time around, and that was because incomes were substantially stabilized by the fiscal actions of the government.

Dr. HAYWORTH. Wow, we have a lot of food for thought there, Dr. Galbraith. You have defined the crux of the contrast between the two sides of this dais, and I realize we are out of time.

Thank you, Mr. Chairman, very much. I yield back.

Chairman PAUL. I now recognize the gentleman from Arizona, Mr. Schweikert.

Mr. SCHWEIKERT. Thank you, Mr. Chairman.

First, forgive me, but this is sort of an esoteric question, and no pointing and laughing, particularly for all of you with Ph.D.s. We take a look back over the last 30 years at many of the different asset bubbles, whether it be real estate or even certain commercial bubbles, whether it be the Internet bubble, where it was often large amounts of resources going in and inflating value beyond.

Is it theoretically possible to have a bubble on the Fed's balance sheet by acquiring so much U.S. sovereign paper, so much mortgage backed, MBS? At some point, does it create a type of distortion in the market, either by creating dramatically artificially low interest rates over here, and at some point, that is a bond bubble—it is a cascade effect—or actually on their own holdings itself? And is that just as—right now, we have the discussion about, are we heading towards a student loan bubble because we are $1 trillion there? We are heading to $3 trillion on the Federal balance sheet. It is a little esoteric, and it is not as—but is it one off?

Dr. Herbener, please, share with me, is my concern just sort of unfounded?

Mr. HERBENER. I think the Fed balance sheet, of course, exhibits the source of the bubbles that manifest in the economy. So when we see the Fed's balance sheet, they engage in open market operations, or they buy mortgage-backed securities from the banks and so on and generate reserves in the banking system, then it creates the possibility of the banks just creating credit on the basis of these reserves and channeling this credit into particular lines of activity where the bubbles arise. And so this is the very process by which the asset-priced bubbles are generated in the economy. We can't always tell exactly what lines they will be generated in just by looking at the Fed's balance sheet because the banks, of course, can generate credit in different lines.

Mr. SCHWEIKERT. Dr. Rivlin, I owe you—you will not remember, but many years ago, I ran into you walking down the street and you were very, very kind to me. You spent literally 10, 15 minutes just talking to me on the street about a couple of esoteric issues, so I have always been very appreciative of your time.

Ms. RIVLIN. Thank you. I am glad you have that memory.

I think asset bubbles are a real problem for the Fed, but not because of the balance sheet effect. Because monetary policy is not a good tool for dealing with asset price bubbles. It is a good tool for dealing with general price inflation.

So the Fed needs different tools, credit, specific credit controls and controls on excessive leverage to deal with bubbles. And the Dodd-Frank Act does put them in that business, and I think that is good.

Mr. SCHWEIKERT. Could current Fed action, and I would like Dr. Galbraith's opinion, could the current Fed sheet balance sheet, the mechanics there, could it also be leading to a bond bubble right now if we start to move toward more normalized interest rates, have we created so much paper that that is in many ways artificial rates? Does it create a cascade when we start to move?

Ms. RIVLIN. I don't think it has to. I think the Fed can get its balance sheet down quickly. It is always much easier for the Fed to be less accommodative than more. And I am not worried about this astonishing balance sheet. It is very big, but right now, the reason to worry would be to, that we had general inflation, and we don't.

Mr. GALBRAITH. I think it would be very hard for the Federal Reserve to raise interest rates rapidly. And I don't think it is likely to do so. One way to interpret your question is to ask whether there is a situation in which the markets might sell off U.S. bonds rapidly without that being controllable by monetary policy action. I think that is also unlikely under present conditions.

What the markets have shown us is that in adversity, people want to hold U.S. bonds. They want to hold U.S. bonds over practically any other asset because we are the largest, most liquid, and completely reliable market in the world for safe liquid asserts.

Mr. SCHWEIKERT. I am sorry, but how much more capacity do you believe is pragmatic for the Fed to continue to grow at? Do they go to $4 trillion, $5 trillion? How big do these balance sheets get?

Mr. GALBRAITH. That is a very interesting question for which, Congressman, I have to tell you, I don't have an answer.

Mr. SCHWEIKERT. Thank you for yielding to me, Mr. Chairman.

Chairman PAUL. We are going to have a brief second round if you are able to stay.

But I have a question for Dr. Rivlin and also for Dr. Klein. I don't want to get into so much on the cause, but I am trying to get an assessment of how serious you think the world financial crisis is? A lot of us put a lot of blame on monetary policy and the Federal Reserve and the dollar reserve standard and excessive debt and these issues. We are not going to resolve that today, who is to blame.

But do you consider the world financial situation to be a mess or just something that will be taken care of soon and there is not that much to worry about?

Ms. RIVLIN. I am very worried about Europe. I think the austerity policies are the wrong policies at the moment, that they—and they will make the situation worse, and that could be bad for us. The long-run debt situation in Europe is serious, but at the moment, I would focus attention on their getting out of the recession.

For us, I think we have to get out of this recession too, but we have to get our long-run debt under control. I think we can, but we haven't.

Chairman PAUL. Could you follow up, Dr. Klein, give me your assessment?

Mr. KLEIN. I think it is a huge crisis, both in Europe and in the United States, with tremendous consequences, not only the crisis itself but in my view, the response to the crisis by the monetary authority. The hugely accommodative policy, the zero interest rates and so on have taken a bad situation and sown the seeds for making that situation much, much worse. Of course, we haven't seen substantial rises in the overall price level since 2008. But if you look at the amount of money that has been pumped into the system, the increase in bank reserves and so on, there is simply no theoretical model of which I am aware, no empirical study that I can cite, in which those kinds of actions do not have very serious, long-run consequences on price inflation. So I think we haven't seen the worst of the results that our current policy is bringing about.

Chairman PAUL. Thank you, and I yield to Mr. Clay.

Mr. CLAY. Thank you, Mr. Chairman. I would like to start with a panel-wide question. Perhaps you can briefly try to answer it, starting with Dr. Herbener, do you think the Federal Reserve's monetary policy execution would be more effective if it set explicit inflation targets and was held accountable to those targets?

Mr. HERBENER. Not really. I think when the Fed engages in any kind of expansionary monetary policy, they always generate the same ill effect in the economy. They always generate some kind of credit expansion, which leads to a pattern of malinvestments, even when they keep overall price levels stable. They generate asset price inflation within the general price level, and these lines of malinvestment is the sort of thing that we saw in the 1920s, very similarly also in the 1980s.

So even if there were stable price-level targets that the Fed could hit, they would still generate the same kind of financial instability and patterns of malinvestments and then the necessary liquidation that we see in the bus.

Mr. CLAY. How about, Dr. Klein, your opinion?

Mr. KLEIN. Yes, sir, I think posing the problem as a trade-off between, say, inflation targeting as opposed to targeting nominal income is sort of a false dichotomy. Something that Representative Paul mentioned in the first round was the idea of increased productivity resulting in decreases in prices as, of course, we see in many industries, computers, information technology and so on.

There is no reason that we should expect or desire, "stable price level" of 2 percent a year or whatever. In a growing economy, we might easily expect the price level to fall. That is exactly what happened during the 19th Century in the United States, which is the period of the strongest sustained economic growth in U.S. history, that increased growth, which was driven by productivity improvements resulted in a decreasing, and decreasing average price levels. There is no reason for policy to try to prevent that.

Mr. CLAY. Thank you, Dr. Taylor.

Mr. TAYLOR. We already have an inflation target that is announced, 2 percent. But in the meantime we continue to do this highly interventionist policy, so it seems to me that is not enough, and that is why people are talking about the dual mandate. That

is why I am talking about returning to reporting about the strategy of the Fed. So I think you need more than that to get out of the terrible situation we are in now.

Mr. CLAY. Thank you. Dr. Galbraith?

Mr. GALBRAITH. I think explicit targets can be useful. In the Humphrey-Hawkins law, there was an interim target for 4 percent unemployment, 3 percent inflation to be achieved after 4 years. It took 22 years until Alice Rivlin was running things and it actually happened. But the difficulty, I think, was in setting too ambitious a target and allowing too long a timeframe for there to be real accountability.

If you are going to set targets, it should be on an interactive basis and something where you can come back in a year and say, look, how did you do in relation to those targets, and what have you learned about the world from your experience? That would make a useful contribution, it seems to me.

Mr. CLAY. Dr. Rivlin, your opinion?

Ms. RIVLIN. I would agree with that. I think that the 2 percent target is about right. I wasn't a big enthusiast of setting an explicit target, but 2 percent is about right as long as you don't take it too seriously, because there might be reasons to deviate in one direction or another.

Mr. CLAY. Thank you so much.

Mr. Chairman, I yield back.

Chairman PAUL. I now recognize the gentleman from Arizona for a follow-up.

Mr. SCHWEIKERT. Thank you. We were sort of heading on the question, I was going to start with Dr. Taylor and then move to Dr. Klein. How big can the balance sheet get?

Mr. TAYLOR. I already think it is too big. I think the quantitative easings, QE-1 and QE-2, are not appropriate, and that is why the balance sheet is as big as it is. If we had just done the interventions during the panic period, the balance sheet would already be back to normal.

I don't think see any evidence that those have been helpful, I have done research on QE-1, and I think that it is already too big. I do worry about the size of it already because it has to be pulled out, or there will be a bubble. In fact, right now we are already running the risk of a bubble because of the commitment to hold rates so low for so long.

I think, when you talk about bubbles, and we talk about the Fed's efforts to stop bubbles, I think the problem really is more is the Fed causing bubbles rather than the responsibility to deal with them.

So that, I see that concern in the housing bubble, I see some other bubbles in the past, and when you think about bubbles, let's not forget the fact that the Fed itself can and, in fact, has in the past caused bubbles and it may be doing that again right now.

Mr. SCHWEIKERT. Dr. Klein?

Mr. KLEIN. Yes. I agree strongly with what Dr. Taylor has said about the Fed being the cause of bubbles and the idea that the Fed needs additional tools to be able to pop bubbles when they emerge is taking the wrong view of the nature and sources of those bubbles. But as to your question about the balance sheet, I agree with

Dr. Taylor, but would add that it isn't just the overall size of the balance sheet that matters, it is the composition of the balance sheet.

And my concern, as a microeconomist in looking at quantitative easing and other interventions by the Fed, is not so much their effect on the Fed's overall balance sheet, but the effect on particular firms and industries. The winner picking, preventing restructurings that are needed to get the economy back on the right track is just as important as looking at the overall size of the balance sheet.

Mr. SCHWEIKERT. Dr. Galbraith, and then we are going to bounce back. Do you have a comment on, first, how big the balance sheets can get, and second, does the mix or the size or both create a distortive effect on the allocation of capital?

Mr. GALBRAITH. As I said earlier, I don't have a clear view on how big the balance sheet might get. I do think that as one looks at the composition of the balance sheet, what is in the portfolio, one has to evaluate the quality of the assets. And that is a process which has ramifications for the financial structure going forward. There comes a point when you do need to address those questions.

Mr. SCHWEIKERT. Okay. Dr. Herbener?

Mr. HERBENER. I would just add one thing. I think most of us would agree that the real problem is how exactly is the Fed going to unwind the balance sheet, not how big is it going to get, but what will be the process by which they take these assets off of their books, and what will the repercussions be in the markets when they begin this process seriously of unwinding things?

Mr. SCHWEIKERT. There goes my bond bubble concern. That is, what do I know. Dr. Rivlin, you also have been outspoken both on fiscal policy and that has always been appreciated to have other voices out there saying we are—we have some great difficulties.

Has the fact that the Fed has been able to grow its balance sheets to such extraordinary levels, has, in many ways, has that been a way to help Congress avoid fiscal policy?

Ms. RIVLIN. I don't think so. I think the Congress has not wanted to face up to the hard choices.

Mr. SCHWEIKERT. It is the same thing.

Ms. RIVLIN. And the Fed's buying bonds is a small part of the whole world buying bonds. As Dr. Galbraith said, counter to reality, the world believes that we are a very safe investment.

Mr. SCHWEIKERT. But in U.S. sovereign debt issues over the last 24 months, hasn't the Fed represented close to half?

Ms. RIVLIN. I don't know exactly what the figure is, but right now, we can't have a rapid reduction in our national borrowing because it would derail the recovery.

So I don't think the Fed has much of a choice. I would be cautious about increasing the balance sheet much further. I don't think there is an answer to your very good question about how big can it get, but right now, I think we need a double kind of fiscal policy.

It shouldn't be too severe in the short run, but we have to get the long run debt under control.

Mr. SCHWEIKERT. Mr. Chairman, thank you so kindly.

Chairman PAUL. I now recognize Mr. Green from Texas.

Mr. GREEN. Thank you, Mr. Chairman. I thank you and the ranking member for calling this hearing today, and I thank the witnesses for being in attendance.

Mr. Chairman, I also want to thank you because I am one of the Members who signed the letter requesting such a hearing, and I thank you for honoring the request to the witnesses.

Let's start with something very basic.

The bills that we have range from tweaking to the abolishing of the Fed, and I am curious as to how many of you are of the opinion that we should totally eliminate the Fed? Is there anyone who thinks that it should be abolished, one, two persons think we should abolish the Fed. And, if you could, just give me a quick, if you can, summary of why you think the Fed should be abolished. And then I would like to hear from your colleagues as to why you think we should maintain it, just quickly, because obviously time is of the essence.

And I will start with you, Dr. Herbener.

Mr. HERBENER. The Fed should be abolished because the conduct of monetary policy under the Fed can bring no benefit to society at large, as I mentioned in my previous remarks.

Mr. GREEN. The Fed will make bad decisions every time? There will be no good decisions made? It just can't have the positive impact on the economy?

Mr. HERBENER. Yes. I would say that there is no other instance where the government has completely monopolized the production of something on the market to impact society at large.

Mr. GREEN. All right. I am going to take that as your answer and move on to the next person. Dr. Klein?

Mr. KLEIN. Yes. We can talk about the Federal Reserve System per se as an example of the central bank or the institution of central banking more generally. And in my written testimony, I give some reasons why the institution of central banking is not only unneeded, but is also harmful to a market economy.

Mr. GREEN. But in your opinion, there should not be a central bank in the United States of America?

Mr. KLEIN. Yes, sir, we don't have a central automobile manufacturer or a central dairy or a central computer company.

Mr. GREEN. How do you juxtapose that with the central banks around the world, where major countries in the world all have central banks?

Mr. KLEIN. What I am expounding is certainly not the majority view among policymakers, but that hardly makes it incorrect.

Mr. GREEN. I think that is a fair statement. Dr. Taylor?

Mr. TAYLOR. Continuing, I think we should reform the Fed. I think the evidence, especially in the last few years, is that the policy is not working. I look back in history, and I see the 1980s and 1990s, a part of the time where Alice Rivlin was on the Fed and things worked pretty well.

They had—it wasn't intervening like it is doing now. It had a more steady-as-you-go policy. It had a lot of focus on the overall stance of policy, and it worked.

So I think we need to get back to that. I call it a rules-based policy, not a more systematic policy, and I think some of the reforms we are discussing today will help us get back to that.

Mr. GREEN. Dr. Galbraith?

Mr. GALBRAITH. I think on the whole, Congressman, that the 20th Century was better than the 19th Century, and that having a central bank was a modest, useful part of the institutional structure that gave us a very successful century.

I am very cautious about taking radical institutional steps when there is very little going on in the world that would give us confidence that they would be stabilizing rather than destabilizing.

Mr. GREEN. Dr. Rivlin?

Ms. RIVLIN. I feel strongly that we need a strong and independent central bank. I think the evidence of the 19th Century is not as encouraging as some would think, and the idea that the world's greatest economy could make due without a central bank, without a lender of last resort, without a monetary policy seems to me quite bizarre.

Mr. GREEN. Thank you. Let me go back now in reverse order. I will start with you, Dr. Rivlin, first.

The question is, would we be at a disadvantage if we had no central bank and other major economic powers have central banks?

Ms. RIVLIN. I think we would be, and I think we would lose our preeminence as a great—

Mr. GREEN. Currency supremacy. The dollar, as you know, is a fairly well-accepted currency around the world. Would it have an impact on the dollar?

Ms. RIVLIN. Yes. I think it would.

Mr. GREEN. Okay. Let me go to the next person please.

Mr. GALBRAITH. Yes, I think it would clearly have an impact. It would make the dollar, U.S. Treasury bonds much riskier.

Mr. GREEN. Mr. Taylor, and then I am going to go quickly because my time is about up.

Mr. TAYLOR. I don't recommend abolishing the Fed, I would recommend reforming the Fed.

Mr. GREEN. Would we be at a disadvantage, sir, Mr. Klein, if we had no central bank and other countries did?

Mr. KLEIN. Of course, it would depend on how such a reform would be implemented but, look, right now people are fleeing from the dollar and heading toward hard assets, like precious metals.

Mr. GREEN. Dr. Herbener?

Mr. HERBENER. If the dollar was backed by gold, I don't see how that could harm our—

Mr. GREEN. But you would back the dollar with gold?

Mr. HERBENER. Yes, sir.

Mr. GREEN. Thank you, Mr. Chairman.

Chairman PAUL. Thank you.

I now recognize the gentlelady from New York.

Dr. HAYWORTH. Thank you, Mr. Chairman.

I have a thought for us as we conclude, and I thank you so much for your insights, each of you. It strikes me that the size of the Fed's balance sheet is going to be largely determined given the structure of our representative democracy by the will of the American people to take in hand what we have created for ourselves at this juncture in our history.

Is there any sense that it is really going to take a lot of political will, if you will, to get our fisc in order for us really to, unless there

is some significant change in the role of the Fed or the structure of the Fed. I think so much of it is going to lie in how we manage our Federal budget going forward.

Dr. Rivlin, since I missed you last time?

Ms. RIVLIN. I strongly agree with that. I served on the Simpson-Bowles Commission and the Domenici-Rivlin Commission and there have been other groups that have all come to the conclusion that we really need to get our fiscal house in order so that the debt is not rising faster than our economy can grow, and that is going to take hard decisions, but we have to do it.

Dr. HAYWORTH. Thank you, Dr. Rivlin. Thank you for your service. It is much appreciated.

Dr. Klein, I will flip back around.

Mr. KLEIN. Of course, I agree, this is a tremendous political challenge. Whether it takes a major crisis to bring, call forth the political will to make the necessary changes, I don't know, but I would hope that this body and others would be able to push things in the right direction without waiting for the bottom to fall out.

Dr. HAYWORTH. Right. Now, Dr. Herbener, do you think what we are viewing in Europe, we should take as a portent of things to come if we don't do something?

Mr. HERBENER. I think our situation is perhaps even more precarious than theirs, given what the Fed has done in the wake of the crisis to bail out the banking system. So, again, it is going to take strong action against some of the political interests that exist here to turn things around before. As Dr. Klein said, there is a crisis, and then we have to do something.

Dr. HAYWORTH. All right. Dr. Taylor, your thoughts?

Mr. TAYLOR. Fiscal policy is certainly a mess right now, and it has to be fixed, or we will be like Europe. But please don't forget about monetary policy. It tends to be arcane, it tends to be too narrow, it is difficult, but it is essential right now to get it right.

I don't want to see a future where quantitative easing becomes the new monetary policy. When the economy slows down, we do gigantic quantitative easings. We don't even know their effect. We don't even know how large it should be; it is very dangerous. I think it will take some oversight exercise by Congress to prevent that in the future.

Dr. HAYWORTH. In view of what you have said, Dr. Taylor, regarding the Fed's purchase of Treasuries and the proportion of Treasuries that have gone to the Fed, is there a certain crowding-out effect that we might also be witnessing.

Mr. TAYLOR. Eventually, of course, but in the meantime, actually, the figure is 77 percent.

Dr. HAYWORTH. Yes.

Mr. TAYLOR. The amount of debt increase in Fiscal Year 2011, 77 percent of that was the Fed and that is a gigantic amount. And so crowding out, I believe there is crowding out about that, even though the economy is weak. Yes, crowding out in a weak economy.

Dr. HAYWORTH. So there are Federal budget concerns and the Federal investments are crowding out the private markets.

Mr. TAYLOR. Crowding out occurs because of the deficits and the borrowing. And even in a weak economy, I believe it occurs, but as the economy picks up, it will be even more of a concern.

Dr. HAYWORTH. And more so artificially, if you will, in a sense because of what the Fed is endeavoring to do or artificially making the picture for Treasuries look perhaps a bit rosier than it would be if we had a real marketplace for them.

Mr. TAYLOR. Actually, the way I think about what the Fed is doing now with respect to oversized balance sheets and effectively dictating what the short-term interest rate will be, it doesn't set it in the market. It dictates by telling what the Reserve's interest rates will be on reserves.

So it is effectively, as the Fed has replaced the entire money market with itself, and I tell you, we just don't know all the implications of that. Nobody on this panel knows the implications of that.

So the sooner we get back to normal where the supply and demand for money is dependent to determine that interest rate, and the interest rate is set according to reasonable methodology and reported to the Congress, the strategy for doing that, the better off we will be.

Dr. HAYWORTH. It is not really a central bank, it becomes an uber bank in a sense.

Mr. TAYLOR. Yes.

Dr. HAYWORTH. Thank you. Thank you all. Thank you again, Mr. Chairman.

Chairman PAUL. Thank you very much. I want to thank the panel today for your time and your testimony. I found the hearing very fascinating because even though we might not agree on the cause and exactly what we have to do, it seemed like there was a general consensus that we do have a problem and we have to deal with it. It is not just the United States; it is worldwide.

And my guess is that someday we will seriously not only look at the management of a central bank or whether or not we really need a central bank, but ultimately I think what we will have to do is talk about the nature of money, the definition of money, because it is pretty hard to manage something you can't even define. But, once again, thank you very much for coming today.

The Chair notes that some Members may have additional questions for this panel, which they may wish to submit in writing. Without objection, the hearing record will remain open for 30 days for Members to submit written questions to these witnesses and to place their responses in the record.

[Whereupon, at 12:30 p.m., the hearing was adjourned.]

A P P E N D I X

May 8, 2012

United States House of Representatives
Committee on Financial Services
Subcommittee on Domestic Monetary Policy & Technology
May 8, 2012

Congressman Ron Paul
Statement for the Record

Although it has taken nearly a century, it seems that the entire spectrum of the American political establishment has finally realized the destructive power of the Federal Reserve System. Whether left, right, or libertarian, politicians are lining up to attack Ben Bernanke and the Fed's destructive monetary policy. Where there is disagreement or lack of understanding, however, is on why the Fed's monetary policy is destructive, how it harms the economy, and what should be done about it. Today's hearing will examine the various proposals that have been put forth both to mend and to end the Fed. It is my hope that this hearing will spur a vigorous and long-lasting discussion about the Fed's problems, a discussion which will lead to concrete actions once and for all to rein in the Fed.

Much confusion exists over what the Federal Reserve System actually is. Some people claim that is a secret cabal of elite bankers, while others claim that it is part of the federal government. In reality it is a bit of both. The Federal Reserve Board is a government agency, while the Federal Reserve Banks are privately-run government-chartered institutions, and monetary policy decisions are made by the Federal Open Market Committee, which has members from both the Board and the Reserve Banks.

The Federal Reserve System is the epitome of crony capitalism. It exemplifies the collusion between big government and big business to profit at the expense of the taxpayers. The Fed's bailout of large banks during the financial crisis propped up poorly-run corporations that should have gone under, giving them an advantage that no other business in the United States would have received. The bailouts continue today, as banks maintain $1.5 trillion worth of excess reserves at the Fed, reserves which were created through the Fed's purchase of worthless securities from banks. The trillions of dollars that the Fed has injected into the system have the goal of forcing down interest rates. But the Fed fails to realize that interest rates are a price, the price of money and credit, and that forcing interest rates down will only create an even bigger bubble and an enormous economic depression when this entire house of cards comes falling down.

The Federal Reserve is statutorily required to focus on three aims when engaged in monetary policy: full employment, stables prices, and moderate long-term interest rates. In practice, only the first two have received any attention, the so-called "dual mandate." Some reformers have called for the full employment mandate to be repealed, in order to allow the Fed to focus solely on stable prices. But these critics ignore the fact that stable prices are not a desirable goal. After all, with increasing productivity and technological innovation, the natural trend for most goods is for prices to decrease. By calling for the prices of goods to remain stable, the Fed would have to inflate the money supply in order to counteract this trend towards price declines, pumping new money into the system and creating economic distortions. This is exactly what happened during the 1920s, as the Fed's monetary pumping was masked by rising productivity. The result was stable prices, but the malinvestment caused by the Fed's loose monetary policy became evident by 1929. There is no reason to expect that focusing on stable prices today would have a dissimilar outcome.

Other reformers have called for changes to the composition of the Federal Open Market Committee, the body which sets the Fed's monetary policy objectives. On Constitutional grounds, the FOMC is undoubtedly problematic, as government appointees and the heads of the private Federal Reserve Banks work together to set monetary policy objectives that directly impact the strength of the dollar. While all of the members of the FOMC ought to be confirmed by the Senate, debates about the

size of the FOMC or whether Reserve Bank Presidents should make up a majority of the members or whether they should even serve at all are largely a sideshow. While the only dissent to monetary policy decisions in recent years has come from Reserve Bank Presidents, there is no reason to think that expanding the FOMC to include more Reserve Bank Presidents would lead to any greater dissent or to any substantive changes to the conduct of monetary policy.

Another proposal for reform is for outright nationalization of the Fed or its functions. No longer would the Fed create money; that function would be taken up by the Treasury, issuing as much money as it sees fit. No longer would the Treasury issue debt to cover fiscal deficits, it would just issue new money to cover budget shortfalls. If what the Fed does now is bad, allowing the Treasury to print and issue money at will would be even worse. These types of proposals hearken back to the days of the first greenbacks, which the U.S. government began issuing in 1863. A pure fiat paper currency, unbacked by silver or gold, the greenbacks were widely reviled. Only once the greenbacks were made redeemable in gold were they accepted by the American people. The current system of Federal Reserve Notes is even worse than the greenback era in that there is no hope that they will ever be redeemable for gold or silver. The only limiting factor is that the Federal Reserve System only creates new money when purchasing assets, normally debt securities. Allowing the federal government to print money without at least a nominal check on the amount issued would inevitably lead to a Weimar-like hyperinflation.

So what then is the solution? The Fed maintains that a paper standard can be adequately managed without causing malinvestment, inflation, or other economic distortions. If the Fed were omniscient and knew the wishes, desires, and future actions of all Americans, this might be possible. But the Fed cannot possibly aggregate or act on the information necessary to engage in monetary policy. The actions of hundreds of millions of individuals, all seeking to better their position in life, acting purposefully towards that aim, cannot possibly be compiled into aggregates or calculated through mathematical equations or econometric models. Neither a single person, nor the members and staff of the FOMC, nor millions of people with millions of computers working in a new Goskomtsen will ever be able to accumulate, analyze, and act upon the information required to create a centrally planned monetary system. Centrally planned fiat paper standards such as the one currently in place in this country are doomed to failure.

This brings us to the question of the gold standard. The era of the classical gold standard was undoubtedly one of the greatest eras in human history. For a period of several decades in the late 19th century, largely uninterrupted by war, the West made enormous advances. Economic productivity increased, art and culture flourished, and living standards rose so that even the poorest citizens lived a life their forebears could have only dreamed of.

But the problem with the gold standard is that it was run by the government, which exercised a monopoly over monetary affairs. The temptation to suspend gold redemption, so often resorted to by governments throughout history, reared its head again with the outbreak of World War I. Once the tie to gold was severed and fiscal restraint thrown to the wind, undoing the damage would have required great fiscal austerity on the part of governments. Emancipated from the shackles of the gold standard, the Western world proceeded to set up a gold-exchange standard which lasted not even a decade before the easy money policies it enabled led to the Great Depression. While returning to the gold standard would certainly be far better than maintaining the current fiat paper system, as long as the government retains the power to go off gold we may end up repeating the same mistakes that occurred from 1934 to 1971 as the government went first off the gold coin standard and finally off the gold bullion exchange standard.

The only viable solution for monetary stability is to get government out of the money business permanently. The way to bring this about is through currency competition: allowing parallel currencies to circulate without any one currency receiving any special recognition or favor from the government. Fiat paper monetary standards throughout history have always collapsed due to their inflationary

nature, and our current fiat paper standard will be no different. The Federal Reserve is currently sowing the seeds of its own destruction through its loose and reckless monetary policy. The day of reckoning may still be many years in the future, but given the lack of understanding on the part of the Federal Reserve's decision makers, it is quickly coming upon us.

It is imperative that the American people be educated on the dangers of the Fed and the importance of restoring sound money. Now that nearly 50 years have elapsed since silver was removed from circulation, fewer and fewer Americans have firsthand familiarity with real money. The laying of the groundwork must begin today, so that the American people will be prepared for the day when the mirage the Fed has created evaporates completely.

Excerpts from the Minority Report of the United States Gold Commission

Chapter 2: A History of Money and Banking in the United States before the Twentieth Century

Chapter 3: A History of Money and Banking in the United States during the Twentieth Century

II. A History of Money and Banking in the United States Before the 20th Century

As an outpost of Great Britain, colonial America of course used British pounds, pence, and shillings as its money. Great Britain was officially on a silver standard, with the shilling defined as equal to 86 pure Troy grains of silver, and with silver as so defined legal tender for all debts (i.e., creditors were compelled to accept silver at that rate). However, Britain also coined gold and maintained a bimetallic standard by fixing the gold guinea, weighing 129.4 grains of gold, as equal in value to a certain weight of silver. In that way, gold became, in effect, legal tender as well. Unfortunately, by establishing bimetallism, Britain became perpetually subject to the evils known as Gresham's Law, which states that when government compulsorilyovervalues one money and undervalues another, the undervalued money will leave the country or disappear into hoards, while the overvalued money will flood into circulation. Hence, the popular catchphrase of Gresham's Law: "Bad money drives out good." But the important point to note is that the triumph of "bad" money is the result, *not* of perverse free-market competition, but of government using the compulsory legal tender power to privilege one money above another.

In 17th-and 18th-century Britain, the government maintained a mint ratio between gold and silver that consistently overvalued gold and undervalued silver in relation to world market prices, with the resultant disappearance and outflow of full-bodied silver coins, and an influx of gold, and the maintenance in circulation of only eroded and "lightweight" silver coins. Attempts to rectify the fixed bimetallic ratios were always too little and too late.[1]

In the sparsely settled American colonies, money, as it always does, arose in the market as a useful and scarce commodity and began to serve as a general medium of exchange. Thus, beaver fur and wampum

[1]In the late 17th and early 18th centuries, the British maintained fixed mint ratios of from 15.1:1 of silver grains in relation to gold grains, to about 15.5:1. Yet the world market ratio of weight, set by forces of supply and demand, was about 14.9:1. Thus, silver was consistently undervalued and gold overvalued. In the 18th century, the problem got even worse, for increasing gold production in Brazil and declining silver production in Peru brought the market ratio down to 14.1:1 while the mint ratios fixed by the British government continued to be the same.

were used as money in the North for exchanges with the Indians, and fish and corn also served as money. Rice was used as money in South Carolina, and the most widespread use of commodity money was tobacco, which served as money in Virginia. The pound-of-tobacco was the currency unit in Virginia, with warehouse receipts in tobacco circulating as money backed 100 percent by the tobacco in the warehouse.

While commodity money continued to serve satisfactorily in rural areas, as the colonial economy grew, Americans imported gold and silver coins to serve as monetary media in urban centers and in foreign trade. English coins were imported, but so too were gold and silver coins from other European countries. Among the gold coins circulating in America were the French guinea, the Portuguese "joe," the Spanish doubloon, and Brazilian coins, while silver coins included French crowns and livres.

It is important to realize that gold and silver are international commodities, and that therefore, when not prohibited by government decree, foreign coins are perfectly capable of serving as standard moneys. There is no need to have a national government monopolize the coinage, and indeed foreign gold and silver coins constituted much of the coinage in the United States until Congress outlawed the use of foreign coins in 1857. Thus, if a free market is allowed to prevail in a country, foreign coins will circulate naturally. Silver and gold coins will tend to be valued in proportion to their respective weights, and the ratio *between* silver and gold will be set by the market in accordance with their relative supply and demand.

Shilling/Dollar Manipulations

By far the leading specie coin circulating in America was the Spanish silver dollar, defined as consisting of 387 grains of pure silver. The dollar was divided into "pieces of eight," or "bits," each consisting of one-eighth of a dollar. Spanish dollars came into the North American colonies through the lucrative trade with the West Indies. The Spanish silver dollar had been the world's outstanding coin since the early 16th century, and was spread partially by dint of the vast silver output of the Spanish colonies in Latin America. More important, however, was the fact that the Spanish dollar, from the 16th to the 19th century, was relatively the most stable and least debased coin in the Western world.[2]

[2]The name "dollar" came from the "thaler," the name given to the coin of similar weight, the "Joachimsthaler" or "schlicken thaler," issued since the early 16th century by the Count of Schlick in Joachimsthal in Bohemia. The Joachimsthalers weigh 451 Troy grains of silver. So successful were these coins that similar thalers were minted in Bur-

Since the Spanish silver dollar consisted of 387 grains, and the English shilling consisted of 86 grains of silver, this meant the natural, free-market ratio between the two coins would be 4 shillings 6 pence per dollar.[3]

Constant complaints, both by contemporaries and by some later historians, arose about an alleged "scarcity of money," especially of specie, in the colonies, allegedly justifying numerous colonial paper money schemes to remedy that "shortage." In reality, there was no such shortage. It is true that England, in a mercantilist attempt to hoard specie, kept minting for its own prerogative and outlawed minting in the colonies; it also prohibited the export of English coin to America. But this did not keep specie from America, for, as we have seen, Americans were able to import Spanish and other foreign coin, including English, from other countries. Indeed, as we shall see, it was precisely paper money issues that led, by Gresham's Law, to outflows and disappearance of specie from the colonies.

In their own mercantilism, the colonial governments early tried to hoard their own specie by debasing their shilling standards in terms of Spanish dollars. Whereas their natural weights dictated a ratio of 4 shillings per 6 pence to the dollar, Massachusetts, in 1642, began a general colonial process of competitive debasement of shillings. Massachusetts arbitrarily decreed that the Spanish dollar be valued at 5 shillings; the idea was to attract an inflow of Spanish silver dollars into that colony, and to subsidize Massachusetts exports by making their prices cheaper in terms of dollars. Soon, Connecticut and other colonies followed suit, each persistently upping the ante of debasement. The result was to increase the supply of nominal units of account by debasing the shilling, inflating domestic prices and thereby bringing the temporary export stimulus to a rapid end. Finally, the English government brought a halt to this futile and inflationary practice in 1707.

But the colonial governments had already found another, and far more inflationary, arrow for their bow: the invention of government fiat paper money.

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gundy, Holland, France; most successful of these was the Maria Theresa thaler, which began being minted in 1751, and formed a considerable portion of American currency after that date. The Spanish "pieces of eight" adopted the name "dollar" after 1690.

[3]Since 20 shillings make £1, this meant that the natural ratio between the two currencies was £1 = $4.44.

Government Paper Money

Apart from medieval China, which invented both paper and printing centuries before the West, the world had never seen government paper money until the colonial government of Massachusetts emitted a fiat paper issue in 1690.[4,5] Massachusetts was accustomed to launching plunder expeditions against the prosperous French colony in Quebec. Generally, the expeditions were successful, and would return to Boston, sell their booty, and pay off the soldiers with the proceeds. This time, however, the expedition was beaten back decisively, and the soldiers returned to Boston in ill-humor, grumbling for their pay. Discontented soldiers are ripe for mutiny, so the Massachusetts government looked around in concern for a way to pay the soldiers. It tried to borrow 3–4,000 pounds from Boston merchants, but evidently the Massachusetts credit rating was not the best. Finally, Massachusetts decided in December 1690 to print £ 7,000 in paper notes and to use them to pay the soldiers. Suspecting that the public would not accept irredeemable paper, the government made a twofold pledge when it issued the notes: that it would redeem them in gold or silver out of tax revenue in a few years and that absolutely no further paper notes would be issued. Characteristically, however, both parts of the pledge went quickly by the board: The issue limit disappeared in a few months, and all the bills continued unredeemed for nearly 40 years. As early as February 1691, the Massachusetts government proclaimed that its issue had fallen "far short" and so it proceeded to emit £ 40,000 of new money to repay all of its outstanding debt, again pledging falsely that this would be the absolutely final note issue.

But Massachusetts found that the increase in the supply of money, coupled with a fall in the demand for paper because of growing lack of confidence in future redemption in specie, led to a rapid depreciation of new money in relation to specie. Indeed, in a year after the initial issue, the new paper pound had depreciated on the market by 40 percent against specie.

[4]Government paper redeemable in gold began in the early 9th century, and after three centuries the government escalated to irredeemable fiat paper, with the usual consequence of boom-bust cycles, and runaway inflation. See Gordon Tullock, "Paper Money—A Cycle in Cathay," *Economic History Review*, vol. IX, no. 3 (1957), pp. 393–396.

[5]The only exception was a curious form of paper money issued five years earlier in Quebec, to become known as Card Money. The governing *intendant* of Quebec, Monsieur Mueles, divided some playing cards into quarters, marked them with various monetary denominations, and then issued them to pay for wages and materials sold to the government. He ordered the public to accept the cards as legal tender, and this particular issue was later redeemed in specie sent from France.

By 1692, the government moved against this market evaluation by use of force, making the paper money compulsory legal tender for all debts at par with specie, and by granting a premium of five percent on all payment of debts to the government made in paper notes. This legal tender law had the unwanted effect of Gresham's Law: the disappearance of specie circulation in the colony. In addition, the expanding paper issues drove up prices and hampered exports from the colony. In this way, the specie "shortage" became the creature rather than the cause of the fiat paper issues. Thus, in 1690, before the orgy of paper issues began, £ 200,000 of silver money was available in New England; by 1711 however, with Connecticut and Rhode Island having followed suit in paper money issue, £ 240,000 of paper money had been issued in New England but the silver had almost disappeared from circulation.

Ironically, then, Massachusetts' and her sister colonies' issue of paper created rather than solved any "scarcity of money." The new paper drove out the old specie. The consequent driving up of prices and depreciation of paper scarcely relieved any alleged money scarcity among the public. But since the paper was issued to finance government expenditures and pay public debts, the *government*, not the public, benefited from the fiat issue.

After Massachusetts had emitted another huge issue of £ 500,000 in 1711 to pay for another failed expedition against Quebec, not only was the remainder of the silver driven from circulation, but despite the legal tender law, the paper pound depreciated 30 percent against silver. Massachusetts pounds, officially seven shillings to the silver ounce, had now fallen on the market to nine shillings per ounce. Depreciation proceeded in this and other colonies despite fierce governmental attempts to outlaw it, backed by fines, imprisonment, and total confiscation of property for the high crime of not accepting the paper at par.

Faced with a further "shortage of money" due to the money issues, Massachusetts decided to press on; in 1716, it formed a government "land bank" and issued £ 100,000 in notes to be loaned on real estate in the various counties of the province.

Prices rose so dramatically that the tide of opinion in Massachusetts began to turn against paper, as writers pointed out that the result of the issues was a doubling of prices in the past 20 years, depreciation of paper, and the disappearance of Spanish silver through the operation of Gresham's Law. From then on, Massachusetts, pressured by the Crown, tried intermittently to reduce the bills in circulation and return to a specie currency, but was hampered by its assumed obligations to honor the paper notes at par of its sister New England colonies.

In 1744, another losing expedition against the French led Massachusetts to issue an enormous amount of paper money over the next several years. From 1744 to 1748, paper money in circulation expanded from £ 300,000 to £ 2.5 million, and the depreciation of Massachusetts was such that silver had risen on the market to 60 shillings an ounce, 10 times the price at the beginning of an era of paper money in 1690.

By 1740, every colony but Virginia had followed suit in fiat paper money issues, and Virginia succumbed in the late 1750s in trying to finance part of the French and Indian War against the French. Similar consequences—dramatic inflation, shortage of specie, massive depreciation despite compulsory par laws—ensued in each colony. Thus, along with Massachusetts' depreciation of 11:1 of its notes against specie compared to the original par, Connecticut's notes had sunk to 9:1 and the Carolinas' at 10:1 in 1740, and the paper of virulently inflationist Rhode Island had sunk to 23:1 against specie. Even the least-inflated paper, that of Pennsylvania, had suffered an appreciation of specie to 80 percent over par.

A detailed study of the effects of paper money in New Jersey shows how it creatd a boom-bust economy over the colonial period. When new paper money was injected into the economy, an inflationary boom would result, to be followed by a deflationary depression when the paper money supply contracted.[6]

At the end of King George's War with France in 1748, Parliament began to pressure the colonies to retire the mass of paper money and return to a specie currency. In 1751, Great Britain prohibited all further issues of legal tender paper in New England and ordered a move toward redemption of existing issues in specie. Finally, in 1764, Parliament extended the prohibition of new issues to the remainder of the colonies and required the gradual retirement of outstanding notes.

Following the lead of Parliament, the new England colonies, apart from Rhode Island, decided to resume specie payment and retire their paper notes rapidly at the current depreciated market rate. The panicky opponents of specie resumption and monetary contraction made the usual predictions in such a situation: that the result would be a virtual absence of money in New England and the consequent ruination of all trade. Instead, however, after a brief adjustment, the resumption and retirement led to a far more prosperous trade and production—the harder money and lower prices attracting an inflow of specie. In fact,

[6]Donald L. Kemmerer, "Paper Money in New Jersey, 1668–1775," New Jersey Historical Society, *Proceedings* 74 (April 1956): 107–144.

with Massachusetts on specie and Rhode Island still on depreciated paper, the result was that Newport, which had been a flourishing center for West Indian imports for Western Massachusetts, lost its trade to Boston and languished in the doldrums.[7,8]

In fact, as one student of colonial Massachusetts has pointed out, the return to specie occasioned remarkably little dislocation, recession, or price deflation. Indeed, wheat prices fell by less in Boston than in Philadelphia, which saw no such return to specie in the early 1750s. Foreign exchange rates, after the resumption of specie, were highly stable, and "the restored specie system operated after 1750 with remarkable stability during the Seven Years War and during the dislocation of international payments in the last years before the Revolution."[9]

Not being outlawed by government decree, specie remained in circulation throughout the colonial period, even during the operation of paper money. Despite the inflation, booms and busts, and shortages of specie caused by paper issues, the specie system worked well overall: "Here was a silver standard. . . in the absence of institutions of the central government intervening in the silver market, and in the absence of either a public or private central bank adjusting domestic credit or managing a reserve of specie or foreign exchange with which to stabilize exchange rates. The market. . . kept exchange rates remarkably close to the legislated par. . . . What is most remarkable in this context is the

[7]Before Massachusetts went back to specie, it was committed to accept the notes of the other New England colonies at par. This provided an incentive for Rhode Island to inflate its currency wildly, for this small colony, with considerable purchases to make in Massachusetts, could make these purchases in inflated money at par. Thereby Rhode Island could export its inflation to the larger colony, but make its purchases with the new money before Massachusetts prices could rise in response. In short, Rhode Island could expropriate wealth from Massachusetts and impose the main cost of its inflation on the latter colony.

[8]If Rhode Island was the most inflationary of the colonies, Maryland's monetary expansion was the most bizarre. In 1733, Maryland's public land bank issued £ 70,000 of paper notes, of which £ 30,000 was *given away* in a fixed amount to each inhabitant of the province. This was done to universalize the circulation of the new notes, and is probably the closest approximation in history of Milton Friedman's "helicopter" model, in which a magical helicopter lavishes new paper money in fixed amounts of proportions to each inhabitant. The result of the measure, of course, was rapid depreciation of new notes. However, the inflationary impact of the notes was greatly lessened by tobacco still being the major money of the new colony. Tobacco was legal tender in Maryland and the paper was not receivable for all taxes.

[9]Roger W. Weiss, "The Colonial Monetary Standard of Massachusetts," *Economic History Review* 27 (November 1974): 589.

continuity of the specie system through the seventeenth and eighteenth centuries."[10]

Private Bank Notes

In contrast to government paper, private bank notes and deposits, redeemable in specie, had begun in Western Europe in Venice in the 14th century. Firms granting credit to consumers and businesses had existed in the ancient world and in medieval Europe, but these were "money lenders" who loaned out their own savings. "Banking" in the sense of lending out the savings of others only began in England with the "scriveners" of the early 17th century. The scriveners were clerks who wrote contracts and bonds and were therefore in a position to learn of mercantile transactions and engage in money lending and borrowing.[11]

There were, however, no banks of deposit in England until the Civil War in the mid-17th century. Merchants had been in the habit of storing their surplus gold in the King's Mint for safekeeping. The habit proved to be unfortunate, for when Charles I needed money in 1638, shortly before the outbreak of the Civil War, he confiscated the huge sum of £200,000 of gold, calling it a "loan" from the owners. Although the merchants finally got their gold back, they were understandably shaken by the experience, and foresook the Mint, depositing their gold instead in the coffers of private goldsmiths, who, like the Mint, were accustomed to storing the valuable metal. The warehouse receipts of the goldsmiths soon came to be used as a surrogate for the gold itself. By the end of the Civil War, in the 1660s, the goldsmiths fell prey to the temptation to print pseudo-warehouse receipts not covered by gold and lend them out; in this way fractional-reserve banking came to England.[12]

[10]Ibid., p. 591.

[11]During the 16th century, before the rise of the scriveners, most English money-lending was not even conducted by specialized firms, but by wealthy merchants in the clothing and woollen industries, as outlets for their surplus-capital. See J. Milnes Holden, *The History of Negotiable Instruments in English Law* (London: The Athlone Press, 1955), pp. 205–206.

[12]Once again, ancient China pioneered in deposit banking, as well as in fractional-reserve banking. Deposit banking *per se* began in the 8th century A.D., when shops would accept valuables, in return for warehouse receipts, and receive a fee for keeping them safe. After a while, the deposit receipts of these shops began to circulate as money. Finally, after two centuries, the shops began to issue and lend out more receipts than they had on deposit; they had caught on to fractional reserve banking. (Tullock, "Paper Money," p. 396.)

Very few private banks existed in colonial America, and they were shortlived. Most prominent was the Massachusetts Land Bank of 1740, issuing notes and lending them out on real estate. The Land Bank was launched as an inflationary alternative to government paper, which the royal governor was attempting to restrict. The land bank issued frankly irredeemable notes, and fear of its unsound issue generated a competing private silver Bank, which emitted notes redeemable in silver. The Land Bank promptly issued over £ 49,000 in irredeemable notes, which depreciated very rapidly. In six months' time the public was almost universally refusing to accept the bank's notes and Land Bank sympathizers vainly accepting the notes. The final blow came in 1741, when Parliament, acting at the request of several Massachusetts merchants and the royal governor, outlawed both the law and the silver banks.

One intriguing aspect of both the Massachusetts Land Bank and other inflationary colonial schemes is that they were advocated and lobbied for by some of the wealthiest merchants and land speculators in the respective colonies. Debtors benefit from inflation and creditors lose; realizing this fact, older historians assumed that debtors were largely poor agrarians and creditors were wealthy merchants and that therefore the former were the main sponsors of inflationary nostrums. But, of course, there are no rigid "classes" of debtors and creditors; indeed, wealthy merchants and land speculators are often the heaviest debtors. Later historians have demonstrated that members of the latter group were the major sponsors of inflationary paper money in the colonies.[13,14]

[13]On the Massachusetts Land Bank, see the illuminating study by George Athan Billias, "The Massachusetts Land Bankers of 1740." *University of Maine Bulletin* LXI (April 1959). On merchant enthusiasm for inflationary banking in Massachusetts, see Herman J. Belz, "Paper Money in Colonial Massachusetts," Essex Institute, *Historical Collections* 101 (April 1965): 146–163; and Belz, "Currency Reform in Colonial Massachusetts, 1749–1750." Essex Institute, *Historical Collections* 103 (January 1967): 66–84. On the forces favoring colonial inflation in general, see Bray Hammond, *Banks and Politics in America* (Princeton University Press, 1957), Chap. 1; Joseph Dorfman, *The Economic Mind in American Civilization, 1606–1865* (New York: Viking Press, 1946), p. 142.

[14]For an excellent bibliographical essay on colonial money and banking, see Jeffrey Rogers Hummel, "The Monetary History of America to 1789: A Historiographical Essay," *Journal of Libertarian Studies* 2 (Winter 1978): 373–389. For a summary of colonial monetary experience, see Murray N. Rothbard, *Conceived in Liberty, Vol. II, Salutary Neglect, The American Colonies in the First Half of the 18th Century* (New Rochelle, N.Y.: Arlington House, 1975), pp. 123–140. A particularly illuminating analysis is in the classic work by Charles Jesse Bullock, *Essays on the Monetary History of the United States* (1900, New York: Greenwood Press, 1969), pp. 1–59. Up-to-date data on the period is in Roger W. Weiss, "The Issue of Paper Money in the American Colonies, 1720–1774," *Journal of Economic History* 30 (December 1970): 770–784.

Revolutionary War Finance

To finance the Revolutionary War, which broke out in 1775, the Continental Congress early hit on the device of issuing fiat paper money. The leader in the drive for paper money was Gouverneur Morris, the highly conservative young scion of the New York landed aristocracy. There was no pledge to redeem the paper, even in the future, but it was supposed to be retired in seven years by taxes levied pro rata by the separate states. Thus, a heavy future tax burden was supposed to be added to the inflation brought about the new paper money. The retirement pledge, however, was soon forgotten, as Congress, enchanted by this new, seemingly costless form of revenue, escalated its emissions of fiat paper. As a historian has phrased it, "such was the beginning of the 'federal trough,' one of America's most imperishable institutions."[15]

The total money supply of the United States at the beginning of the Revolution has been estimated at $12 million. Congress launched its first paper issue of $2 million in late June 1775, and before the notes were printed it had already concluded that another $1 million was needed. Before the end of the year, a full $6 million in paper issues were issued or authorized, a dramatic increase of 50 percent in the money supply in one year.

The issue of this fiat "continental" paper rapidly escalated over the next few years. Congress issued $6 million in 1775, $19 million in 1776, $13 million in 1777, $64 million in 1778, and $125 million in 1779. This was a total issue of over $225 million in five years superimposed upon preexisting money supply of $12 million. The result was, as could be expected, a rapid price inflation in terms of the paper notes, and a corollary accelerating depreciation of the paper in terms of specie. Thus, by the end of 1776, the Continentals were worth $1 to $1.25 in specie; by the fall of the following year, its value had fallen to 3 to 1; by December 1778 the value was 6.8 to 1; and by December 1779 to the negligible 42 to 1. By the spring of 1781, the Continentals were virtually worthless, exchanging on the market at 168 paper dollars to one dollar in specie. This collapse of the Continental currency gave rise to the phrase, "not worth a Continental."

To top this calamity, the several states issued their own paper money, and each depreciated at varying rates. Virginia and the Carolinas led

[15]Edmund Cody Burnett, *The Continental Congress* (New York: W.W. Norton, 1964), p. 83.

the inflationary move, and by the end of the war, state issues added a total of 210 million depreciated dollars to the nation's currency.

In an attempt to stem the inflation and depreciation, various states levied maximum price controls and compulsory par laws. The result was only to create shortages and impose hardships on large sections of the public. Thus, soldiers were paid in Continentals, but farmers understandably refused to accept payment in paper money despite legal coercion. The Continental Army then moved to "impress" food and other supplies, seizing the supplies and forcing the farmers and shopkeepers to accept depreciated paper in return. By 1779, with Continental paper virtually worthless, the Continental Army stepped up its impressments, "paying" for them in newly issued paper tickets or "certificates" issued by the army quartermaster and commissary departments. The states followed suit with their own massive certificate issues. It understandably took little time for these certificates, federal and state, to depreciate in value to nothing; by the end of the war, federal certificate issues alone totalled $200 million.

The one redeeming feature of this monetary calamity was that the federal and state governments at least allowed these paper issues to sink into worthlessness without insisting that taxpayers shoulder another grave burden by being forced to redeem these issues specie at par, or even to redeem them at all.[16] Continentals were not redeemed at all, and state paper was only redeemed at depreciating rates, some at the greatly depreciated market value.[17] By the end of the war, all the wartime state paper had been withdrawn from circulation.

Unfortunately, the same policy was not applied to another important device that Congress turned to after its Continental paper had become almost worthless in 1779: loan certificates. Technically, loan certificates were public debt, but they were scarcely genuine loans. They were simply notes issued by the government to pay for supplies and accepted by the merchants because the government would not pay anything else. Hence, the loan certificates became a form of currency, and rapidly depreciated. As early as the end of 1779, they had depreciated to 24 to

[16]As one historian explained, "Currency and certificates were the 'common debt' of the Revolution, most of which at war's end had been sunk at its depreciated value. Public opinion. . .tended to grade claims against the government according to their real validity. Paper money had the least status. . . ." E. James Ferguson, *The Power of the Purse: A History of American Public Finance, 1776–1790* (Chapel Hill, N.C.: University of North Carolina Press, 1961), p. 68.

[17]In Virginia and Georgia, the state paper was redeemed at the highly depreciated market rate of 1,000 to 1 in specie.

1 in specie. By the end of the war, $600 million of loan certificates had been issued. Some of the later loan certificate issues were liquidated at a depreciated rate, but the bulk remained after the war to become the substantial core of the permament, peacetime federal debt.

The mass of federal and state debt could have depreciated and passed out of existence by the end of the war, but the process was stopped and reversed by Robert Morris, wealthy Philadelphia merchant and virtual economic and financial czar of the Continental Congress in the last years of the war. Morris, leader of the nationalist forces in American politics, moved to make the depreciated federal debt ultimately redeemable in par and also agitated for federal assumption of the various state debts. The reason was twofold: (a) to confer a vast subsidy on speculators who had purchased the public debt at highly depreciated values, by paying interest and principal at par in specie;[18] and (b) to build up the agitation for taxing power in the Congress, which the Articles of Confederation refused to allow to the federal government. The decentralist policy of the states' raising taxes or issuing new paper money to pay off the *pro rata* federal debt as well as their own was thwarted by the adoption of the Constitution, which brought about the victory of the nationalist program, led by Morris's youthful disciple and former aide, Alexander Hamilton.

The Bank of North America

Robert Morris's nationalist vision was not confined to a strong central government, the power of the federal government to tax, and a massive public debt fastened permanently upon the taxpayers. Shortly after he assumed total economic power in Congress in the spring of 1781, Morris introduced a bill to create the first commercial bank, as well as the first central bank, in the history of the new Republic. This bank, headed by Morris himself, the Bank of North America, was not only the first fractional-reserve commercial bank in the U.S.; it was to be a privately owned central bank, modelled after the Bank of England. The money system was to be grounded upon specie, but with a controlled monetary inflation pyramiding an expansion of money and credit upon a reserve of specie.

The Bank of North America, which quickly received a federal charter and opened its doors at the beginning of 1782, received the privilege

[18]As Morris candidly put it, this windfall to the public debt speculators at the expense of the taxpayers would cause wealth to flow "into those hands which could render it most productive." (Ferguson, *Power of the Purse*, p. 124).

from the government of its notes being receivable in all duties and taxes to all governments, at par with specie. In addition, no other banks were to be permitted to operate in the country. In return for its monopoly license to issue paper money, the bank would graciously lend most of its newly created money to the federal government to purchase public debt and be reimbursed by the hapless taxpayer. The Bank of North America was made the depository for all congressional funds. The first central bank in America rapidly loaned $1.2 million to the Congress, headed also by Robert Morris.[19]

Despite Robert Morris's power and influence, and the monopoly privileges conferred upon his bank, it was perceived in the market that the Bank's notes were being inflated compared with specie. Despite the nominal redeemability of the Bank of North America's notes in specie, the market's lack of confidence in the inflated notes led to their depreciation outside its home base in Philadelphia. The Bank even tried to shore up the value of its notes by hiring people to urge redeemers of its notes not to ruin everything by insisting upon specie—a move scarcely calculated to improve ultimate confidence in the Bank.

After a year of operation, however, Morris, his political power slipping after the end of the war, moved quickly to end his Bank's role as a central bank and to shift it to the status of a private commercial bank chartered by the state of Pennsylvania. By the end of 1783, all of the federal government's stock in the Bank of North America, which had the previous year amounted to 5/8 of its capital, had been sold by Morris into private hands, and all the U.S. government debt to the bank had been repaid. The first experiment with a central bank in the United States had ended.[20]

At the end of the Revolutionary War, the contraction of the swollen mass of paper money, combined with the resumption of imports from Great Britain, combined to cut prices by more than half in a few years.

[19]When Morris failed to raise the legally required specie capital to launch the Bank of North America, Morris, in an act tantamount to embezzlement, simply appropriated specie loaned to the U.S. by France and invested it for the government in his own Bank. In this way, the bulk of specie capital for his Bank was appropriated by Morris out of government funds. A multiple of these funds was then borrowed back from Morris's bank by Morris as government financier for the pecuniary benefit of Morris as banker; and finally, Morris channeled most of the money into war contracts for his friends and business associates. Murray N. Rothbard, *Conceived in Liberty, Vol. IV, The Revolutionary War, 1775–1784* (New Rochelle, N.Y.: Arlington House, 1979), p. 392.

[20]See Rothbard, *The Revolutionary War*, pp. 409–410. On the Bank of North America and on Revolutionary War finance generally, see Curtis P. Nettels, *The Emergence of a National Economy, 1775–1815* (New York: Holt, Rinehart, and Winston, 1962), pp. 23–34.

Vain attempts by seven state governments, in the mid-1780s, to cure the "shortage of money" and reinflate prices were a complete failure. Part of the reason for the state paper issues was a frantic attempt to pay the wartime public debt, state and *pro rata* federal, without resorting to crippling burdens of taxation. The increased paper issues merely added to the "shortage" by stimulating the export of specie and the import of commodities from abroad. Once again, Gresham's Law was at work. State paper issues—despite compulsory par laws—merely depreciated rapidly, and aggravated the shortage of specie. A historian discusses what happened to the paper issues of North Carolina:

> In 1787-1788 the specie value of the paper had shrunk by more than 50 percent. Coin vanished, and since the paper had practically no value outside the state, merchants could not use it to pay debts they owed abroad; hence they suffered severe losses when they had to accept it at inflated values in the settlement of local debts. North Carolina's performance warned merchants anew of the menace of depreciating paper money which they were forced to receive at par from their debtors but which they could not pass on to their creditors.[21]

Neither was the situation helped by the expansion of banking following the launching of the Bank of North America in 1782. The Bank of New York and the Massachusetts Bank (Boston) followed two years later, with each institution enjoying a monopoly of banking in its region.[22] Their expansion of bank notes and deposits helped to drive out specie, and in the following year the expansion was succeeded by a contraction of credit, which aggravated the problems of recession.[23]

The United States: Bimetallic Coinage

Since the Spanish silver dollar was the major coin circulating in North America during the colonial and Confederation periods, it was generally agreed that the "dollar" would be the basic currency unit of the new United States of America.[24] Article I, section 8 of the new Constitution gave to Congress the power "to coin money, regulate the value thereof, and of foreign coin"; the power was exclusive because the state

[21]Nettels, *National Economy*, p. 82.

[22]See Hammond, *Banks and Politics*, pp. 67, 87–88.

[23]Nettels, *National Economy*, pp. 61–62. Also see ibid; pp. 77–80, 85.

[24]As Jefferson put it at the time: "The unit or dollar is a known coin, and the most familiar of all to the mind of the public. It is already adopted from South to North, has identified our currency, and therefore happily offers itself a unit already introduced." Cited in J. Laurence Laughlin, *The History of Bimetallism in the United States*, 4th ed. (New York: D. Appleton and Co., 1901), p. 11n.

governments were prohibited, in Article I, section 10, from coining money, emitting paper money, or making anything but gold and silver coin legal tender in payment of debts. (Evidently the Founding Fathers were mindful of the bleak record of colonial and revolutionary paper issues and provincial juggling of the weights and denominations of coin.) In accordance with this power, Congress passed the Coinage Act of 1792 on the recommendation of Secretary of Treasury Alexander Hamilton's *Report on the Establishment of a Mint* of the year before.[25]

The Coinage Act established a bimetallic dollar standard for the United States. The dollar was defined as *both* a weight of 371.25 grains of pure silver *and/or* a weight of 24.75 grains of pure gold—a fixed ratio of 15 grains of silver to 1 grain of gold.[26] Anyone could bring gold and silver bullion to the Mint to be coined, and silver and gold coins were both to be legal tender at this fixed ratio of 15:1. The basic silver coin was to be the silver dollar, and the basic gold coin the 10-dollar eagle, containing 247.5 grains of pure gold.[27]

The 15:1 fixed bimetallic ratio almost precisely corresponded to the market gold/silver ration of the early 1790s,[28] but of course the tragedy of any bimetallic standard is that the fixed mint ratio must always come a cropper against inevitably changing market ratios, and that Gresham's Law will then come inexorably into effect. Thus, Hamilton's express desire to keep both metals in circulation in order to increase the supply of money was doomed to failure.[29]

Unfortunately for the bimetallic goal, the 1780s saw the beginning of a steady decline in the ratio of the market values of silver to gold, largely due to the massive increases over the next three decades of silver production from the mines of Mexico. The result was that the market ratio fell to 15.5:1 by the 1790s, and after 1805 fell to approximately 15.75:1. The latter figure was enough of a gap between the market and mint ratios to set Gresham's Law into operation so that by

[25]The text of the Coinage Act of 1792 may be found in Laughlin, *History of Bimetallism*, pp. 300–301. Also see ibid; pp. 21–23; Hepburn, *History of Currency*, pp. 43–45.

[26]The current Spanish silver dollars in use were lighter than the earlier dollars weighing 387 grains. See Laughlin, *History of Bimetallism, pp. 16–18.*

[27]Golden half-eagles (worth $5) and quarter-eagles (worth $2.50) were also to be coined, of corresponding proportional weights, and, for silver coins, half-dollars, quarter-dollars, dimes, and half-dimes of corresponding weights.

[28]Silver had declined in market value from the 14.1:1 ratio of 1760, largely due to the declining production of gold from Russian mines in this period and therefore the rising relative value of gold.

[29]See Laughlin, *History of Bimetallism*, p. 14.

1810 gold coins began to disappear from the United States and silver coins to flood in. The fixed government ratio now significantly overvalued silver and undervalued gold, and so it paid people to bring in silver to exchange for gold, melt the gold coins into bullion and ship it abroad. From 1810 until 1834, only silver coin, domestic and foreign, circulated in the United States.[30]

Originally, Congress in 1793 provided that all foreign coins circulating in the United States be legal tender. Indeed, foreign coins have been estimated to form 80 percent of American domestic specie circulation in 1800. Most of the foreign coins were Spanish silver, and while the legal tender privilege was progressively cancelled for various foreign coins by 1827, Spanish silver coins continued as legal tender and to predominate in circulation.[31] Spanish dollars however, soon began to be heavier in weight by one to five percent over their American equivalents, even though they circulated at face value here, and so the American mint ratio overvalued American more than Spanish dollars. As a result, the Spanish silver dollars were re-exported, leaving American silver dollars in circulation. On the other hand, fractional Spanish silver coins—half-dollars, quarter-dollars, dimes, and half dimes—were considerably over-valued in the U.S., since they circulated at face value and yet were far lighter weight. Gresham's Law again came into play, and the result was that American silver fractional coins were exported and disappeared, leaving Spanish silver fractional coins as the major currency. To make matters still more complicated, American silver dollars, though lighter weight than the Spanish, circulated equally by name in the West Indies. As a result, American silver dollars were exported to the Caribbean. Thus, by the complex workings of Gresham's Law, the United States was left, especially after 1820, with no gold coins and only Spanish fractional silver coin in circulation.[32]

[30]For a lucid explanation of the changing silver/gold ratios and how Gresham's Law operated in this period, see Laughlin, *History of Bimetallism*, pp. 10-51. Also see Laughlin, *A New Exposition of Money, Credit and Prices* (Chicago: University of Chicago Press, 1931), pp. 93-111.

[31]These "Spanish" coins were almost exclusively minted in the Spanish colonies of Latin America. After the Latin American nations achieved independence in the 1820s, the coins circulated freely in the United States without being legal tender.

[32]On the complex workings of fractional as against dollar coins in this period, see the excellent article by David A. Martin, "Bimetallism in the United States before 1850," *Journal of Political Economy* 76 (May-June 1968): 428-434.

The First Bank of the United States 1791-1811

A linchpin of the Hamiltonian financial program was a central bank, the First Bank of the United States, replacing the abortive Bank of North America experiment. Hamilton's *Report on a National Bank* of December 1790 urged such a bank, to be owned privately with the government owning one-fifth of the shares. Hamilton argued that the alleged "scarcity" of specie currency needed to be overcome by infusions of paper, and the new Bank was to issue such paper, to be invested in the assumed federal debt and in subsidy to manufacturers. The Bank notes were to be legally redeemable in specie on demand, and its notes were to be kept at par with specie by the federal government's accepting its notes in taxes—giving it a quasi-legal tender status. Also, the federal government would confer upon the Bank the prestige of being depository for its public funds.

In accordance with Hamilton's wishes, Congress quickly established the First Bank of the United States in February 1791. The charter of the Bank was for 20 years, and it was assured a monopoly of the privilege of having a national charter during that period. In a significant gesture of continuity with the Bank of North America, the latter's long-time president and former partner of Robert Morris, Thomas Willing of Philadelphia, was made president of the new Bank of the United States.

The Bank of the United States promptly fulfilled its inflationary potential by issuing millions of dollars in paper money and demand deposits, pyramiding on top of $2 million in specie. The Bank of the United States invested heavily in loans to the United States government. In addition to $2 million invested in the assumption of preexisting long-term debt assumed by the new federal government, the Bank of the United States engaged in massive temporary lending to the government, which reached $6.2 million by 1796.[33] The result of the outpouring of credit and paper money by the new Bank of the United States was an inflationary rise in prices. Thus, wholesale prices rose from an index of 85 in 1791 to a peak of 146 in 1796, an increase of 72

[33]Schultz and Caine are severely critical of these operations: "In indebting itself heavily to the Bank of the United States, the Federal Government was obviously misusing its privileges and seriously endangering the Bank's stability." They also charged that "the Federalists had saddled the government with a military and interest budget that threatened to topple the structure of federal finances. Despite the addition of tax after tax to the revenue system, the Federal Government's receipts through the decade of the 90's were barely able to cling to the skirts of its expenditures." William J. Schultz and M.R. Caine, "Federalist Finance," in G.R. Taylor, ed. *Hamilton and the National Debt* (Boston: D.C. Heath and Co., 1950), pp. 6-7.

percent.[34] In addition, speculation boomed in government securities and real estate values were driven upward.[35] Pyramiding on top of the Bank of the United States expansion and aggravating the paper money expansion and the inflation was a flood of newly created commercial banks. Whereas there were only three commercial banks before the founding of the United States, and only four by the establishment of the Bank of the United States, eight new banks were founded shortly thereafter, in 1791 and 1792, and 10 more by 1796. Thus, the Bank of the United States and its monetary expansion spurred the creation of 18 new banks in five years.[36]

The establishment of the Bank of the United States precipitated a grave constitutional argument, the Jeffersonians arguing that the Constitution gave the federal government no power to establish a bank. Hamilton, in turn, paved the way for virtually unlimited expansion of federal power by maintaining that the Constitution "implied" a grant of power for carrying out vague national goals. The Hamiltonian interpretation won out officially in the decision of Supreme Court Justice John Marshall in *McCulloch* v. *Maryland* (1819).[37]

Despite the Jeffersonian hostility to commercial and central banks, the Democratic-Republicans, under the control of quasi-Federalist moderates rather than militant Old Republicans, made no move to repeal the charter of the Bank of the United States before its expiration in 1811 and happily multiplied the number of state banks and bank credit in the next two decades.[38] Thus, in 1800 there were 28 state banks; by 1811, the number had escalated to 117, a fourfold increase. In 1804, there were 64 state banks, of which we have data on 13, or 20 percent

[34]Similar movements occurred in wholesale prices in Philadelphia, Charleston, and the Ohio River Valley. U.S. Department of Commerce, *Historical Statistics of the United States, Colonial Times to 1957* (Washington, D.C.: Government Printing Office, 1960), pp. 116, 119-121.

[35]Nettels, *National Economy*, pp. 121-122.

[36]J. Van Fenstermaker, "The Statistics of American Commercial Banking, 1782-1818," *Journal of Economic History* (September, 1965), p. 401.; Van Fenstermaker, *The Development of American Commercial Banking 1782-1837* (Kent, Ohio: Kent State University, 1965), pp. 111-183; William M. Gouge, *A Short History of Paper Money and Banking in the United States* (1833, New York: Augustus M. Kelley, 1968), p. 42.

[37]Marshall, a disciple of Hamilton, repeated some of Hamilton's arguments virtually word for word in the decision. See Gerald T. Dunne, *Monetary Decisions of the Supreme Court* (New Brunswick, N.J.: Rutgers University Press, 1960), p. 30.

[38]On the quasi-Federalists as opposed to the Old Republicans, on banking and on other issues, see Richard E. Ellis, *The Jeffersonian Crisis: Courts and Politics in the Young Republic* (New York: Oxford University Press, 1971), p. 277 and *passim*.

of the banks. These reporting banks had $0.98 million in specie, as against notes and demand deposits outstanding of $2.82 million, a reserve ratio of .35 (or, a notes + deposits pyramiding on top of specie of 2.88:1). By 1811, 26 percent of the 117 banks reported a total of $2.57 million; but the two-and-a-half fold increase in specie was more than matched by an emission of $10.95 million of notes and deposits, a nearly fourfold increase. This constituted a pyramiding of 4.26:1 on top of specie, or a reserve ratio of these banks of .23.[39]

As for the Bank of the United States, which acted in conjunction with the federal government and with the state banks, in January 1811 it had specie assets of $5.01 million, and notes and deposits outstanding of $12.87 million, a pyramid ratio of 2.57:1, or a reserve ratio of .39.[40]

Finally, when the time for rechartering the Bank of the United States came in 1811, the recharter bill was defeated by one vote each in the House and Senate. Recharter was fought for by the Madison administration aided by nearly all the Federalists in Congress, but was narrowly defeated by the bulk of the Democratic-Republicans, including the hard-money Old Republican forces. In view of the widely held misconception among historians that Central Banks serve, and are looked upon, as restraints upon state or private bank inflation, it is instructive to note that the major forces in favor of recharter were merchants, chambers of commerce, and most of the state banks. Merchants found that the Bank had expended credit at cheap rates and had eased the eternal complaint about a "scarcity of money." Even more suggestive is the support of the state banks, which hailed the Bank as "advantageous" and worried about the contraction of credit if the Bank were forced to liquidate. The Bank of New York, which had been founded by Alexander Hamilton, in fact lauded the Bank of the United States because it had been able "in case of any sudden pressure upon the

[39]Van Fenstermaker notes that there has been a tendency of historians to believe that virtually all bank emissions were in the form of notes, but that actually a large portion was in the form of demand deposits. Thus, in 1804, bank liabilities were $1.70 million in notes and $1.12 million in deposits; in 1811 they were $5.68 million and $5.27 respectively. He points out that deposits exceeded notes in the large cities such as Boston and Philadelphia, some times by two or threefold, whereas bank notes were used far more widely in rural areas for hand-to-hand transactions. Van Fenstermaker, "Statistics," pp. 406-411.

[40]Of Bank of the United States liabilities, bank notes totalled $5.04 million and demand deposits $7.83 million. John Jay Knox, *A History of Banking in the United States* (New York: Bradford Rhodes & Co., 1900), p. 39. There are no other reports for the Bank of the United States extant except for 1809. The others were destroyed by fire. John Thom Holdsworth, *The First Bank of the United States* (Washington, D.C.: National Monetary Commission, 1910), pp. 111ff., 138-144.

merchants to step forward to their aid in a degree which the state institutions were unable to do."[41]

The War of 1812 and Its Aftermath

War has generally had grave and fateful consequences for the American monetary and financial system. We have seen that the Revolutionary War occasioned a mass of depreciated fiat paper, worthless Continentals, a huge public debt, and the beginnings of central banking in the Bank of North America. The Hamiltonian financial system, and even the Constitution itself, was in large part shaped by the Federalist desire to fund the federal and state public debt via federal taxation, and a major reason for the establishment of the First Bank of the United States was to contribute to the funding of the newly assumed federal debt. The Constitutional prohibition against state paper money, and the implicit rebuff to all fiat paper were certainly influenced by the Revolutionary War experience.

The War of 1812–15 had momentous consequences for the monetary system. An enormous expansion in the number of banks and in bank notes and deposits was spurred by the dictates of war finance. New England banks were more conservative than in other regions, and the region was strongly opposed to the war with England, so little public debt was purchased in New England. Yet imported goods, textile manufactures, and munitions had to be purchased in that region by the federal government. The government therefore encouraged the formation of new and recklessly inflationary banks in the Mid-Atlantic, Southern, and Western states, which printed huge quantities of new notes to purchase government bonds. The federal government thereupon used these notes to purchase manufactured goods in New England.

Thus, from 1811 to 1815 the number of banks in the country increased from 117 to 212; in addition, there had sprung up 35 private unincorporated banks, which were illegal in most states but were allowed to function under war conditions. Specie in the 30 reporting banks, 26 percent of the total number of 1811, amounted to $2.57 million in 1811;

[41]Holdsworth, *First Bank*, p. 83. Also see ibid., pp. 83-90. Holdsworth, the premier historian of the First Bank of the United States, saw the overwhelming support by the state banks, but still inconsistently clung to the myth that the Bank of the United States functioned as a restraint on their expansion: "The state banks, *though their note issues and discounts had been kept in check by the superior resources and power of the Bank of the United States*, favored the extension of the charter, and memorialized Congress to that effect." (italics added) Ibid., p. 90.

this figure had risen to $5.40 million in the 98 reporting banks in 1815, or 40 percent of the total. Notes and deposits, on the other hand, were $10.95 million in 1811 and had increased to $31.6 million in 1815 among the reporting banks.

If we make the heroic assumption that we can estimate the money supply for the country by multiplying by the proportion of unreported banks and we then add in the BUS totals for 1811, specie in all banks would total $14.9 million in 1811 and $13.5 million in 1815, or a 9.4 percent decrease. On the other hand, total bank notes and deposits aggregated to $42.2 million in 1811, and $79.0 million four years later, so that an increase of 87.2 percent, pyramided on top of a 9.4 percent decline in specie. If we factor in the Bank of the United States, then, the bank pyramid ratio was 3.70:1 and the reserve ratio .27 in 1811; while the pyramid ratio four years later was 5.85:1 and the reserve ratio .17.

But the aggregates scarcely tell the whole story since, as we have seen, the expansion took place solely outside of New England, while New England banks continued on their relatively sound basis and did not inflate their credit. The record expansion of the number of banks was in Pennsylvania, which incorporated no less than 41 new banks in the month of March 1814, contrasting to only four banks which had existed in that state—all in Philadelphia—until that date. It is instructive to compare the pyramid ratios of banks in various reporting states in 1815: only 1.96:1 in Massachusetts, 2.7:1 in New Hampshire, and 2.42:1 in Rhode Island, as contrasted to 19.2:1 in Pennsylvania, 18.46:1 in South Carolina, and 18.73:1 in Virginia.[42]

This monetary situation meant that the United States government was paying for New England manufactured goods with a mass of inflated bank paper outside the region. Soon, as the New England banks called upon the other banks to redeem their notes in specie, the mass of inflating banks faced imminent insolvency.

It was at this point that a fateful decision was made by the U.S. government and concurred in by the governments of the states outside New England. As the banks all faced failure, the governments, in August 1814, permitted all of them to suspend specie payments—that is to stop all redemption of notes and deposits in gold or silver—and

[42]Van Fenstermaker, "Statistics," pp. 401–409. For the list of individual incorporated banks, see Van Fenstermaker, "Development," pp. 112–183, with Pennsylvania on pp. 169–173.

yet to continue in operation. In short, in one of the most flagrant violations of property rights in American history, the banks were permitted to waive their contractual obligations to pay in specie while they themselves could expand their loans and operations and force their own debtors to repay their loans as usual.

Indeed, the number of banks, and bank credit, expanded rapidly during 1815 as a result of this governmental carte blanche. It was precisely during 1815 when virtually all the private banks sprang up, the number of banks increasing in one year from 208 to 246. Reporting banks increased their pyramid ratios from 3.17:1 in 1814 to 5.85:1 the following year, a drop of reserve ratios from .32 to .17. Thus, if we measure bank expansion by pyramiding and reserve ratios, we see that a major inflationary impetus during the War of 1812 came during the year 1815 after specie payments had been suspended throughout the country by government action.

Historians dedicated to the notion that central banks restrain state or private bank inflation have placed the blame for the multiplicity of banks and bank credit inflation during the War of 1812 on the absence of a central bank. But as we have seen, both the number of banks and bank credit grew apace during the period of the First BUS, pyramiding on top of the latter's expansion, and would continue to do so under the Second Bank, and, for that matter, the Federal Reserve System in later years. And the federal government, not the state banks themselves, is largely to blame for encouraging new, inflated banks to monetize the war debt. Then, in particular, it allowed them to suspend specie payment in August 1814, and to continue that suspension for two years after the war was over, until February 1817. Thus, for two and a half years banks were permitted to operate and expand while issuing what was tantamount to fiat paper and bank deposits.

Another neglected responsibility of the U.S. government for the wartime inflation was its massive issue of treasury notes to help finance the war effort. While this treasury paper was interest-bearing and was redeemable in specie in one year, the cumulative amount outstanding functioned as money, as they were used in transactions among the public and were also employed as reserves or "high-powered money" by the expanding banks. The fact that the government received the treasury notes for all debts and taxes gave the notes a quasi-legal tender status. Most of the treasury notes were issued in 1814 and 1815, when their outstanding total reached $10.65 million and $15.46 million respectively. Not only did the treasury notes fuel the bank inflation, but their quasi-legal tender status brought Gresham's Law into operation and

specie flowed out of the banks and public circulation outside of New England, and into New England and out of the country.[43]

The expansion of bank money and treasury notes during the war drove up prices in the United States. Wholesale price increases from 1811 to 1815 averaged 35 percent, with different cities experiencing a price inflation ranging from 28 percent to 55 percent. Since foreign trade was cut off by the war, prices of imported commodities rose far more, averaging 70 percent.[44] But more important than this inflation, and at least as important as the wreckage of the monetary system during and after the war, was the precedent that the two-and-a-half year-long suspension of specie payment set for the banking system for the future. From then on, every time there was a banking crisis brought on by inflationary expansion and demands for redemption in specie, state and federal governments looked the other way and permitted general suspension of specie payments while bank operations continued to flourish. It thus became clear to the banks that in a general crisis they would not be required to meet the ordinary obligations of contract law or of respect for property rights, so their inflationary expansion was permanently encouraged by this massive failure of government to fulfill its obligation to enforce contracts and defend the rights of property.

Suspensions of specie payments informally or officially permeated the economy outside of New England during the Panic of 1819, occurred everywhere outside of New England in 1837, and in all states south and west of New Jersey in 1839. A general suspension of specie payments occurred throughout the country once again in the panic of 1857.[45]

It is important to realize, then, in evaluating the American banking system before the Civil War, that even in the later years when there was no central bank, the system was not "free" in any proper economic sense. "Free" banking can only refer to a system in which banks are treated as any other business, and that therefore failure to obey contractual obligations—in this case, prompt redemption of notes and

[43]For a perceptive discussion of the nature and consequences of treasury note issue in this period, see Richard H. Timberlake, Jr., *The Origins of Central Banking in the United States* (Cambridge: Harvard University Press, 1978), pp. 13–18. The Gresham Law effect probably accounts for the startling decline of specie held by the reporting banks, from $9.3 million to $5.4 million, from 1814 to 1815. Van Fenstermaker, "Statistics," p. 405.

[44]*Historical Statistics*, pp. 115–124; Murray N. Rothbard, *The Panic of 1819: Reactions and Policies* (New York: Columbia University Press, 1962), p. 4.

[45]On the suspensions of specie payments, and on their importance before the Civil War, see Vera C. Smith, *The Rationale of Central Banking* (London: P.S. King & Son, 1936), pp. 38–46. Also see Dunne, *Monetary Decisions*, p. 26.

deposits in specie—must incur immediate insolvency and liquidation. Burdened by the tradition of allowing general suspensions that arose in the United States in 1814, the pre-Civil War banking system, despite strong elements of competition when not saddled with a central bank, must rather be termed in the phrase of one economist, as "Decentralization without Freedom."[46]

From the 1814–17 experience on, the notes of state banks circulated at varying rates of depreciation, depending on public expectations of how long they would be able to keep redeeming their obligations in specie. These expectations, in turn, were heavily influenced by the amount of notes and deposits issued by the bank as compared with the amount of specie held in its vaults.

In that era of poor communications and high transportation cost, the tendency for a bank note was to depreciate in proportion to its distance from the home office. One effective, if time-consuming, method of enforcing redemption on nominally specie-paying banks was the emergence of a class of professional "money brokers." These brokers would buy up a mass of depreciated notes of nominally specie-paying banks, and then travel to the home office of the bank to demand redemption in specie. Merchants, money brokers, bankers, and the general public were aided in evaluating the various state bank notes by the development of monthly journals known as "bank note detectors." These "detectors" were published by money brokers and periodically evaluated the market rate of various bank notes in relation to specie.[47]

[46]Smith, *Rationale*, p. 36. Smith properly defines "free banking" as "a regime where note-issuing banks are allowed to set up in the same way as any other type of business enterprise, so long as they comply with the general company law. The requirement for their establishment is not special conditional authorization from a government authority, but the ability to raise sufficient capital, and public confidence, to gain acceptance for their notes and ensure the profitability of the undertaking. Under such a system all banks would not only be allowed the same rights, but would also be subjected to the same responsibilities as other business enterprises. If they failed to meet their obligations they would be declared bankrupt and put into liquidation, and their assets used to meet the claims of their creditors, in which case the shareholders would lose the whole or part of their capital, and the penalty for failure would be paid, at least for the most part, by those responsible for the policy of the bank. Notes issued under this system would be 'promises to pay,' and such obligations must be met on demand in the generally accepted medium which we will assume to be gold. No bank would have the right to call on the government or on any other institution for special help in time of need. . . . A general abandonment of the gold standard is inconceivable under these conditions, and with a strict interpretation of the bankruptcy laws any bank suspending payments would at once be put into the hands of a receiver." Ibid., pp. 148–149.

[47]See Richard H. Timberlake, Jr., *Money, Banking and Central Banking* (New York: Harper & Row, 1965), p. 94.

"Wildcat" banks were so named because in that age of poor transportation, banks hoping to inflate and not worry about redemption attempted to locate in "wildcat" country where money brokers would find it difficult to travel. It shold be noted that if it were not for periodic suspension, there would have been no room for wildcat banks or for varying degrees of lack of confidence in the genuineness of specie redemption at any given time.

It can be imagined that the advent of the money broker was not precisely welcomed in the town of an errant bank, and it was easy for the townspeople to blame the resulting collapse of bank credit on the sinister stranger rather than on the friendly neighborhood banker. During the panic of 1819, when banks collapsed after an inflationary boom lasting until 1817, obstacles and intimidation were often the lot of those who attempted to press the banks to fulfill their contractual obligation to pay in specie.

Thus, Maryland and Pennsylvania, during the panic of 1819, engaged in almost bizarre inconsistency in this area. Maryland, on February 15, 1819, enacted a law "to compel . . . banks to pay specie for their notes, or forfeit their charters." Yet two days after this seemingly tough action, it passed another law relieving banks of any obligation to redeem notes held by money brokers, "the major force ensuring the people of this state from the evil arising from the demands made on the banks of this state for gold and silver by brokers." Pennsylvania followed suit a month later. In this way, these states could claim to maintain the virtue of enforcing contract and property rights while moving to prevent the most effective method of ensuring such enforcement.

During the 1814–1817 general suspension, noteholders who sued for specie payment seldom gained satisfaction in the courts. Thus, Isaac Bronson, a prominent Connecticut banker in a specie-paying region, sued various New York banks for payment of notes in specie. He failed to get satisfaction, and for his pains received only abuse in the New York press as an agent of "misery and ruin."[48]

The banks south of Virginia largely went off specie payment during the panic of 1819, and in Georgia at least general suspension continued almost continuously down to the 1830s. One customer complained

[48]Hammond, *Banks and Politics*, p. 179–180. Even before the suspension, in 1808, a Bostonian named Hireh Durkee who attempted to demand specie for $9,000 in notes of the state-owned Vermont State Bank, was met by an indictment for an attempt by this "evil-disposed person" to "realize a filthy gain" at the expense of the resources of the state of Vermont and the ability of "good citizens thereof to obtain money." Ibid., p. 179. Also see Gouge, *Short History*, p. 84.

during 1819 that in order to collect in specie from the largely state-owned Bank of Darien, Georgia, he was forced to swear before a justice of the peace in the bank that each and every note he presented to the bank was his own and that he was not a money broker or an agent for anyone else; he was forced to swear to the oath in the presence of at least five bank directors and the bank's cashier; and he was forced to pay a fee of $1.36 on each note in order to acquire specie on demand. Two years later, when a noteholder demanded $30,000 in specie at the Planters' Bank of Georgia, he was told he would be paid in pennies only, while another customer was forced to accept pennies handed out to him at the rate of $60 a day.[49]

During the panic, North Carolina and Maryland in particular moved against the money brokers in a vain attempt to prop up the depreciated notes of their states' banks. In North Carolina, banks were not penalized by the legislature for suspending specie payments to "brokers," while maintaining them to others. Backed by government, the three leading banks of the state met and agreed, in June 1819, not to pay specie to brokers or their agents. Their notes immediately fell to a 15 percent discount outside the state. However, the banks continued to require—ignoring the inconsistency—that their own debtors pay them at par in specie. Maryland, during the same year, moved to require a license of $500 per year for money brokers, in addition to an enormous $20,000 bond to establish the business.

Maryland tried to bolster the defense of banks and the attack on brokers by passing a compulsory par law in 1819, prohibiting the exchange of specie for Maryland bank notes at less than par. The law was readily evaded, however, the penalty merely adding to the discount as compensation for the added risk. Specie furthermore was driven out of the state by the operation of Gresham's Law.[50]

In Kentucky, Tennessee, and Missouri, stay laws were passed requiring creditors to accept depreciated and inconvertible bank paper in payment of debts, else suffer a stay of execution of the debt. In this way, quasi-legal tender status was conferred on the paper.[51] Many states permitted banks to suspend specie payment, and four Western

[49]Gouge, *Short History*, pp. 141–142. Secretary of the Treasury William H. Crawford, a Georgia politician, tried in vain to save the Bank of Darien from failure by depositing Treasury funds there during the panic. Rothbard, *The Panic of 1819*, p. 62.

[50]Rothbard, *Panic of 1819*, pp. 64–68. Other compulsory par laws were passed by Ohio and Delaware.

[51]The most extreme proposal was that of Tennessee politician Felix Grundy's scheme, never adopted, to compel creditors to accept bank notes of the state bank or forfeit the

states—Tennessee, Kentucky, Missouri, and Illinois—established state-owned banks to try to overcome the depression by issuing large issues of inconvertible paper money. In all states trying to prop up inconvertible bank paper, a quasi-legal status was also conferred on the paper by agreeing to receive the notes in taxes or debts due to the state. The result of all the inconvertible paper schemes was rapid and massive depreciation, disappearance of specie, succeeded by speedy liquidation of the new state-owned banks.[52]

An amusing footnote on the problem of banks being protected against their contractual obligations to pay in specie occurred in the course of correspondence between one of the earliest economists in America, the young Philadelphia State Senator Condy Raguet, and the eminent English economist David Ricardo. Ricardo had evidently been bewildered by Raguet's statement that banks technically required to pay in specie were often not called upon to do so. On April 18, 1821, Raguet replied, explaining the power of banks in the United States:

> You state in your letter that you find it difficult to comprehend, why persons who had a right to demand coin from the Banks in payment of their notes, so long forebore to exercise it. This no doubt appears paradoxical to one who resides in a country where an act of parliament was necessary to protect a bank, but the difficulty is easily solved. The whole of our population are either stockholders of banks or in debt to them. It is not the *interest* of the first to press the banks and the rest are *afraid*. This is the whole secret. An independent man who was neither a stockholder or debtor, who would have ventured to compel the banks to do justice, would have been persecuted as an enemy of society. . . .[53]

The Second Bank of the United States, 1816-1833

The United States emerged from the War of 1812 in a chaotic monetary state, with banks multiplying and inflating ad lib, checked only by

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debt: that would have conferred full legal tender status on the bank. Rothbard, *Panic of 1819*, p. 91; Joseph H. Parks, "Felix Grundy and the Depression of 1819 in Tennessee," *Publications of the East Tennessee Historical Society* X (1938): 22.

[52]Only New England, New York, New Jersey, Virginia, Mississippi, and Louisiana were comparatively untouched by the inconvertible paper contagion, either in the form of suspended specie banks continuing in operation or new state-owned banks emitting more paper. For an analysis of the events and controversies in each state, see Rothbard, *Panic of 1819*, pp. 57–111.

[53]Rague to Ricardo, April 18, 1821, in David Ricardo, *Minor Papers on the Currency Question, 1809–23*, J. Hollander, ed. (Baltimore: Johns Hopkins Press, 1932), pp. 199–201; Rothbard, *Panic of 1819*, pp. 10–11. Also see Hammond, *Banks and Politics*, p. 242.

the varying rates of depreciation of their notes. With banks freed from redeeming their obligations in specie, the number of incorporated banks increased during 1816, from 212 to 232.[54] Clearly, the nation could not continue indefinitely with the issue of fiat money in the hands of discordant sets of individual banks. It was apparent that there were two ways out of the problem: one was the hard-money path, advocated by the Old Republicans and, for their own purposes, the Federalists. The federal and state governments would have sternly compelled the rollicking banks to redeem promptly in specie, and, when most of the banks outside of New England could not, to force them to liquidate. In that way, the mass of depreciated and inflated notes and deposits would have been swiftly liquidated, and specie would have poured back out of hoards and into the country to supply a circulating medium. The inflationary experience would have been over.

Instead, the Democratic-Republican establishment in 1816 turned to the old Federalist path: a new central bank, a Second Bank of the United States. Modelled closely after the First Bank, the Second Bank, a private corporation with one-fifth of the shares owned by the federal government, was to create a national paper currency, purchase a large chunk of the public debt, and receive deposits of Treasury funds. The BUS notes and deposits were to be redeemable in specie, and they were given quasi-legal tender status by the federal government's receiving them in payment of taxes.

That the purpose of establishing the BUS was to support the state banks in their inflationary course rather than crack down on them is seen by the shameful deal that the BUS made with the state banks as soon as it opened its doors in January 1817. At the same time it was establishing the BUS in April 1816, Congress passed the resolution of Daniel Webster, at that time a Federalist champion of hard money, requiring that after February 20, 1817, the United States should accept in payments for debts or taxes only specie, Treasury notes, BUS notes, or state bank notes redeemable in specie on demand. In short, no irredeemable state bank notes would be accepted after that date. Instead of using the opportunity to compel the banks to redeem, however,the BUS, in a meeting with representatives from the leading urban banks, excluding Boston, agreed to issue $6 million worth of credit in New York, Philadelphia, Baltimore, and Virginia before insisting on specie

[54]New note issue series by banks reached a heavy peak in 1815 and 1816 in New York and Pennsylvania. D.C. Wismar, *Pennsylvania Descriptive List of Obsolete State Bank Notes, 1782–1866* (Frederick, Md.: J.W. Stovell Printing Co., 1933); and idem, *New York Descriptive List of Obsolete Paper Money* (Frederick, Md.: J.W. Stovell Printing Co., 1931).

payments from debts due to it from the state banks. In return for that agreed-upon massive inflation, the state banks graciously consented to resume specie payments.[55] Moreover, the BUS and the state banks agreed to mutually support each other in any emergency, which of course meant in practice that the far stronger BUS was committed to the propping up of the weaker state banks.

The BUS was pushed through Congress by the Madison administration and particularly by Secretary of the Treasury Alexander J. Dallas, whose appointment was lobbied for, for that purpose. Dallas, a wealthy Philadelphia lawyer, was a close friend, counsel, and financial associate of Philadelphia merchant and banker Stephen Girard, reputedly one of the two wealthiest men in the country. Toward the end of its term, Girard was the largest stockholder of the first BUS, and during the War of 1812 Girard became a very heavy investor in the war debt of the federal government. Both as a prospective large stockholder and as a way to unload his public debt, Girard began to agitate for a new BUS. Dallas's appointment as Secretary of Treasury in 1814 was successfully engineered by Dallas and his close friend, wealthy New York merchant and fur trader John Jacob Astor, also a heavy investor in the war debt. When the BUS was established, Stephen Girard purchased the $3 million of the $28 million that remained unsubscribed, and he and Dallas managed to secure for the post of president of the new bank their good friend William Jones, former Philadelphia merchant.[56]

Much of the opposition to the founding of the BUS seems keenly prophetic. Thus, Senator William H. Wells, Federalist from Delaware, in arguing against the Bank bill, said that it was "ostensibly for the purpose of correcting the diseased state of our paper currency by restraining and curtailing the overissue of bank paper, and yet it came prepared to inflict upon us the same evil, being itself nothing more than simply a paper-making machine."[57] In fact, the result of the deal

[55]On the establishment of the BUS and on the deal with the state banks, see Ralph C.H. Catterall, *The Second Bank of the United States* (Chicago: University of Chicago Press, 1902), pp. 9–26, 479–490. Also see Hammond, *Banks and Politics*, pp. 230–248; David R. Dewey, *The Second United States Bank* (Washington, D.C.: National Monetary Commission, 1910), pp. 148–176.

[56]On the Girard-Dallas connection, see Hammond, *Banks and Politics*, pp. 231–246, 252; Philip H. Burch, Jr., *Elites in American History, Vol. I The Federalist Years to the Civil War* (New York: Holmes & Meier, 1981), pp. 88, 97, 116–117, 119–121; Kenneth L. Brown, "Stephen Girard, Promoter of the Second Bank of the United States." *Journal of Economic History*, November 1942, pp. 125–132.

[57]*Annals of Congress*, 14 Cong., 1 sess., April 1, 1816, pp. 267–270. Also see ibid., pp. 1066, 1091, 1110ff. Cited in Murray N. Rothbard, *The Case for a 100 Percent Gold Dollar*

with the state banks was that their resumption of specie payments after 1817 was more nominal than real, thereby setting the stage for the widespread suspensions of the 1819-21 depression. As Bray Hammond writes:

> . . . specie payments were resumed, with substantial shortcomings. Apparently the situation was better than it had been, and a pretense was maintained of its being better than it was. But redemption was not certain and universal; there was still a premium on specie and still a discount on bank notes, with considerable variation in both from place to place. Three years later, February 1820, Secretary [of the Treasury] Crawford reported to Congress that during the greater part of the time that had elapsed since the resumption of specie payments, the convertibility of bank notes into specie had been nominal rather than real in the largest portion of the Union.[58]

One problem is that the BUS lacked the courage to insist on payment of its notes from the state banks. As a result, state banks had large balances piled up against them at the BUS, totalling over $2.4 million during 1817 and 1818, remaining on the books as virtual interest-free loans. As Catterall points out, "so many influential people were interested in the [state banks] as stockholders that it was not advisable to give offense by demanding payment in specie, and borrowers were anxious to keep the banks in the humor to lend." When the BUS did try to collect on state bank notes in specie, President Jones reported, "the banks, our debtors, plead inability, require unreasonable indulgence, or treat our reiterated claims and expostulations with settled indifference."[59]

From its inception, the Second BUS launched a spectacular inflation of money and credit. Lax about insisting on the required payment of its capital in specie, the Bank failed to raise the $7 million legally supposed to have been subscribed in specie; instead, during 1817 and 1818, its specie held never rose above $2.5 million. At the peak of its initial expansion, in July 1818, BUS specie totalled $2.36 million, and its aggregate notes and deposits totalled $21.8 million. Thus, in a scant

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(Washington, D.C.: Libertarian Review Press, 1974), p. 18n. Also see Gouge, *Short History*, pp. 79–83.

[58]Hammond, *Banks and Politics*, p. 248. Also see Condy Raguet, *A Treatise on Currency and Banking* (2nd ed., 1840, New York: Augustus M. Kelley, 1967), pp. 302–303; Catterall, *Second Bank*, pp. 37–39; Walter Buckingham Smith, *Economic Aspects of the Second Bank of the United States* (Cambridge: Harvard University Press, 1953), p. 104.

[59]Catterall, *Second Bank*, p. 36.

year-and-a-half of operation, the BUS had added a net of $19.2 million to the nation's money supply, for a pyramid ratio of 9.24, or a reserve ratio of .11.

Outright fraud abounded at the BUS, especially at the Philadelphia and Baltimore branches, particularly the latter. It is no accident that three-fifths of all of the BUS loans were made at these two branches.[60] Also, the BUS attempt to provide a uniform currency throughout the nation floundered on the fact that the western and southern branches could inflate credit and bank notes and that the inflated notes would wend their way to the more conservative branches in New York and Boston, which would be obligated to redeem the inflated notes at par. In this way, the conservative branches were stripped of specie while the western branches could continue to inflate unchecked.[61]

The expansionary operations of the BUS, coupled with its laxity toward insisting on specie payment by the state banks, impelled a further inflationary expansion of state banks on top of the spectacular enlargement of the central bank. Thus, the number of incorporated state banks rose from 232 in 1816 to 338 in 1818. Kentucky alone chartered 40 new banks in the 1817-18 legislative session. The estimated total money supply in the nation rose from $67.3 million in 1816 to $94.7 million in 1818, a rise of 40.7% in two years. Most of this increase was supplied by the BUS.[62]

The huge expansion of money and credit impelled a full-scale inflationary boom throughout the country. Import prices had fallen in 1815, with the renewal of foreign trade after the war, but domestic prices were another story. Thus, the index of export staples in Charleston rose from 102 in 1815 to 160 in 1818; the prices of Louisiana staples at

[60]On the expansion and fraud at the BUS, see Catterall, *Second Bank*, pp. 28–50, 503. The main culprits were James A. Buchanan, president of the Baltimore mercantile firm of Smith & Buchanan, and the Baltimore BUS cashier James W. McCulloch, who was simply an impoverished clerk at the mercantile house. Smith, an ex-Federalist, was a senator from Maryland and a powerful member of the national Democrat-Republican establishment.

[61]As a result of the contractionary influence on the Boston branch of the BUS, the notes of the Massachusetts banks actually declined in this period, from $1 million in June 1815 to $850,000 in June 1818. See Rothbard, *Panic of 1819*, p. 8.

[62]Total notes and deposits of 39 percent of the nation's reporting state banks was $26.3 million in 1816, while 38 percent of the banks had total notes and deposits of $27.7 million two years later. Converting this pro rata to 100 percent of the banks gives an estimated $67.3 million in 1816, and $72.9 million in 1818. Add to the latter figure $21.8 million for BUS notes and deposits, and this yields $94.7 million in 1818, or a 40.7 percent increase. Adapted from tables in Van Fenstermaker, "Statistics," pp. 401, 405, 406.

New Orleans rose from 178 to 224 in the same period. Other parts of the economy boomed; exports rose from $81 million in 1815 to a peak of $116 million in 1818. Prices rose greatly in real estate, land, farm improvement projects, and slaves, much of it fueled by the use of bank credit for speculation in urban and rural real estate. There was a boom in turnpike construction, furthered by vast federal expenditures on turnpikes. Freight rates rose on steamboats, and shipbuilding shared in the general prosperity. Also, general boom conditions expanded stock trading so rapidly that traders, who had been buying and selling stocks on the curbs on Wall Street for nearly a century, found it necessary to open the first indoor stock exchange in the country, the New York Stock Exchange, in March 1817. Also, investment banking began in the United States during this boom period.[63]

Starting in July 1818, the government and the BUS began to see what dire straits they were in; the enormous inflation of money and credit, aggravated by the massive fraud, had put the BUS in real danger of going under and illegally failing to sustain specie payments. Over the next year, the BUS began a series of heroic contractions, forced curtailment of loans, contractions of credit in the south and west, refusal to provide uniform national currency by redeeming its shaky branch notes at par, and seriously enforcing the requirement that its debtor banks redeem in specie. In addition, it purchased millions of dollars of specie from abroad. These heroic actions, along with the ouster of President William Jones, managed to save the BUS, but the massive contraction of money and credit swiftly brought the United States its first widespread economic and financial depression. The first nationwide "boom-bust" cycle had arrived in the United States, impelled by rapid and massive inflation, quickly succeeded by contraction of money and credit. Banks failed, and private banks curtailed their credits and liabilities and suspended specie payments in most parts of the country.

Contraction of money and credit by the BUS was almost unbelievable, total notes and deposits falling from $21.9 million in June 1818 to $11.5 million only a year later. The money supply contributed by the BUS was thereby contracted by no less than 47.2 percent in one year. The number of incorporated banks at first remained the same, and then fell rapidly from 1819 to 1822, falling from 341 in mid-1819 to 267 three years later. Total notes and deposits of state banks fell from an esti-

[63]Rothbard, *Panic of 1819*, pp. 6–10; *Historical Statistics*, pp. 120, 122, 563. Also see George Rogers Taylor, *The Transportation Revolution, 1815–1860* (New York: Rinehart & Co., 1951), pp. 334–336.

mated $72.0 million in mid-1818 to $62.7 million a year later, a drop of 14.0 percent in one year. If we add in the fact that the U.S. Treasury contracted total treasury notes from $8.81 million to zero during this period, we get the following estimated total money supply: in 1818, $103.5 million; in 1819, $74.2 million, a contraction in one year of 28.3 percent.[64]

The result of the contraction was a massive rash of defaults, bankruptcies of business and manufacturers, and liquidation of unsound investments during the boom. There was a vast drop in real estate values and rents and in the prices of freight rates and of slaves. Public land sales dropped greatly as a result of the contraction, declining from $13.6 million in 1818 to $1.7 million to 1820.[65] Prices in general plummeted: The index of export staples fell from 158 in November 1818 to 77 in June 1819, an annualized drop of 87.9 percent during those seven months. South Carolina export staples dropped from 160 to 96 from 1818 to 1819, and commodity prices in New Orleans dropped from 200 in 1818 to 119 two years later.

Falling money incomes led to a precipitous drop in imports, which fell from $122 million in 1818 to $87 million the year later. Imports from Great Britain fell from $43 million in 1818 to $14 million in 1820, and cotton and woolen imports from Britain fell from over $14 million each in the former year to about $5 million in the latter.

The great fall in prices aggravated the burden of money debts, reinforced by the contraction of credit. Bankruptcies abounded, and one observer estimated that $100 million of mercantile debts to Europe were liquidated by bankruptcy during the crisis. Western areas, shorn of money by the collapse of the previously swollen paper and debt, often returned to barter conditions, and grain and whiskey were used as media of exchange.[66]

In the dramatic summing up of the hard-money economist and historian William Gouge, by its precipitous and dramatic contraction "the Bank was saved, and the people were ruined."[67]

[64]These estimates are adapted from the tables in Van Fenstermaker, "Statistics," pp. 401–406; Van Fenstermaker, *Development*, pp. 66–68. The data for 38 percent of incorporated banks in 1818, and for 54 percent in 1819, are converted pro rata to 100 percent figures. BUS figures are in Catterall, *Second Bank*, p. 502. On the contraction by the BUS see ibid., pp. 51–72.

[65]On Treasury note contraction in this period, see Timberlake, *Origins*, pp. 21–26.

[66]See Rothbard, *Panic of 1819*, pp. 11–16.

[67]Gouge, *Short History*, p. 110.

The Jacksonian Movement and the Bank War

Out of the bitter experiences of the Panic of 1819 emerged the beginnings of the Jacksonian movement, dedicated to hard money, the eradication of fractional-reserve banking in general, and of the Bank of the United States in particular. Andrew Jackson himself, Senator Thomas Hart ("Old Bullion") Benton of Missouri, future President James K. Polk of Tennessee, and Jacksonian economists Amos Kendall of Kentucky and Condy Raguet of Philadelphia, were all converted to hard money and 100 percent reserve banking by the experience of the Panic of 1819.[68] The Jacksonians adopted, or in some cases pioneered in, the Currency School analysis, which pinned the blame for boom-bust cycles on inflationary expansions followed by contractions of bank credit. Far from being the ignorant bumpkins that most historians have depicted, the Jacksonians were steeped in the knowledge of sound economics, particularly of the Ricardian Currency School.

Indeed, no movement in American politics has been as flagrantly misunderstood by historians as the Jacksonians. They were emphatically *not*, as historians until recently have depicted, either "ignorant anti-capitalist agrarians," or "representatives of the rising entrepreneurial class," or "tools of the inflationary state banks," or embodiments of an early proletarian anti-capitalist movement or a non-ideological power group or "electoral machine." The Jacksonians were libertarians, plain and simple. Their program and ideology were libertarian; they strongly favored free enterprise and free markets, but they just as strongly opposed special subsidies and monopoly privileges conveyed by government to business or to any other group. They favored absolutely minimal government, certainly at the federal level, but also at the state level. They believed that government should be confined to upholding the rights of private property. In the monetary sphere, this meant the separation of government from the banking system and a shift from inflationary paper money and fractional-reserve banking to pure specie and banks confined to 100 percent reserves.

In order to put this program into effect, however, the Jacksonians faced the grueling task of creating a new party out of what had become a one-party system after the War of 1812, in which the Democrat-Republicans had ended up adopting the Federalist program, including the reestablishing of the Bank of the United States. The new party, the Democratic Party, was largely forged in the mid-1820s by New York political leader, Martin Van Buren, newly converted by the aging Thomas

[68]Rothbard, *Panic of 1819*, p. 188.

Jefferson to the laissez-faire cause. Van Buren cemented an alliance with Thomas Hart Benton of Missouri and the Old Republicans of Virginia, but he needed a charismatic leader to take the Presidency away from Adams and what was becoming known as the National Republican Party. He found that leader in Andrew Jackson, who was elected President under the new Democratic banner in 1828.

The Jacksonians eventually managed to put into effect various parts of their free-market and minimal-government economic program, including a drastic lowering of tariffs, and for the first and probably the last time in American history, paying off the federal debt. But their major concentration was on the issue of money and banking. Here they had a coherent program, which they proceeded to install in rapidly succeeding stages.

The first important step was to abolish central banking, in the Jacksonian view the major inflationary culprit. The object was not to eliminate the BUS in order to free the state banks for inflationary expansion, but, on the contrary, to eliminate the major source of inflation before proceeding, on the state level, to get rid of fractional reserve banking. The BUS charter was up for renewal in 1836, but Jackson denounced the Bank in his first annual message, in 1829. The imperious Nicholas Biddle,[69] head of the BUS, decided to precipitate a showdown with Jackson before his reelection effort, so Biddle filed for renewal early, in 1831. The host of National Republicans and non-Jacksonian Democrats proceeded to pass the recharter bill, but Jackson, in a dramatic message, vetoed the bill, and Congress failed to pass it over his veto.

Triumphantly reelected on the Bank issue in 1832, President Jackson lost no time in disestablishing the BUS as a central bank. The critical action came in 1833, when Jackson removed the public Treasury deposits from the BUS and placed them in a number of state banks (soon labelled as "pet banks") throughout the country. The original number of pet banks was seven, but the Jacksonians were not interested in creating a privileged bank oligarchy to replace the previous monopoly; so the number of pet banks had increased to 91 by the end of 1836.[70] In that year, Biddle managed to secure a Pennsylvania charter for his bank, and the new United States Bank of Pennsylvania functioned as a much reduced but still influential state bank for a few years thereafter.

[69]Biddle continued the chain of control over both BUSs by the Philadelphia financial elite, from Robert Morris and William Bingham, to Stephen Girard and William Jones. See Burch, *Elites*, p. 147. Also see Thomas P. Govan, *Nicholas Biddle: Nationalist and Public Banker, 1786–1844* (Chicago: University of Chicago Press, 1959), pp. 45, 74–75, 79.

[70]Hammond, *Banks and Politics*, p. 420.

Orthodox historians have long maintained that by his reckless act of destroying the BUS and shifting government funds to the numerous pet banks, Andrew Jackson freed the state banks from the restraints imposed on them by a central bank. Thus, the banks were supposedly allowed to pyramid notes and deposits rashly on top of existing specie and precipitate a wild inflation that was later succeeded by two bank panics and a disastrous deflation.

Recent historians, however, have totally reversed this conventional picture.[71] In the first place, the record of bank inflation under the regime of the BUS was scarcely ideal. From the depth of the post-1819 depression in January 1820 to January 1823, under the regime of the conservative Langdon Cheves, the BUS increased its notes and deposits at an annual rate of 5.9 percent. The nation's total money supply remained about the same in that period. Under the far more inflationist regime of Nicholas Biddle, however, BUS notes and deposits rose, after January 1823, from $12 million to $42.1 million, an annual rate increase of 27.9 percent. As a consequence of this base of the banking pyramid inflating so sharply, the total money supply during this period vaulted from $81 million to $155 million, an annual increase of 10.2 percent. It is clear that the driving force for monetary expansion was the BUS, which acted as an inflationary rather than restraining force upon the state banks. Looking at the figures another way, the 1823 data represented a pyramid ratio of money liabilities to specie of 3.86:1 on the part of the BUS and 4:1 of the banking system as a whole, or respective reserve ratios of .26 and .25. By 1832, in contrast, the BUS reserve ratio had fallen to .17 and the country as a whole to .15. Both sets of institutions had inflated almost precisely proportionately on top of specie.[72]

The fact that wholesale prices remained about the same over this period is no indication that the monetary inflation was not improper and dangerous. As "Austrian" business cycle theory has pointed out, any bank credit inflation sets up conditions for boom-and-bust; there is no need for prices actually to rise. The reason that prices did not rise was that the increased production of goods and services sufficed to offset the monetary expansion during this period. But similar conditions of the 1920s precipitated the great crash of 1929, an event which

[71]For an excellent bibliographical essay and critique of historical interpretations of Jacksonism and the Bank War, see Jeffrey Rogers Hummel, "The Jacksonians, Banking, and Economic Theory: A Reinterpretation," *Journal of Libertarian Studies* 2 (Summer 1978): 151–165.

[72]For the BUS data, see Catterall, *Second Bank*, p. 503; for total money supply, see Peter Temin, *The Jacksonian Economy* (New York: W.W. Norton, 1969), p. 71.

shocked most economists, who had adopted the proto-monetarist position of Irving Fisher and other economists of the day that a stable wholesale price level cannot, by definition, be inflationary. In reality, the unhampered free-market economy will usually increase the supply of goods and services and thereby bring about a gently falling price level, as happened in most of the 19th century except during wartime.

What, then, of the consequences of Jackson's removal of the deposits? What of the fact that wholesale prices rose from 84 in April 1934, to 131 in February 1837, a remarkable increase of 52 percent in a little less than three years? Wasn't that boom due to the abolition of central banking?

An excellent reversal of the orthodox explanation of the boom of the 1830s, and indeed of the ensuing panic, has been provided by Professor Temin.[73] First, he points out that the price inflation really began earlier, when wholesale prices reached a trough of 82 in July 1930 and then rose by 20.7 percent in three years to reach 99 in the fall of 1833. The reason for the price rise is simple: The total money supply had risen from $109 million in 1830 to $159 million in 1833, an increase of 45.9 percent or an annual rise of 15.3 percent. Breaking the figures down further, the total money supply had risen from $109 million in 1830 to $155 million a year and a half later, a spectacular expansion of 35 percent. Unquestionably, this monetary expansion was spurred by the still flourishing BUS, which increased its notes and deposits from January 1830 to January 1832, from a total of $29 million to $42.1 million, a rise of 45.2 percent.

Thus, the price and money inflation in the first few years of the 1830s were again sparked by the expansion of the still dominant central bank. But what of the notable inflation after 1833? There is no doubt that the cause of the price inflation was the remarkable monetary inflation during the same period. For the total money supply rose from $150 million at the beginning of 1833 to $267 million at the beginning of 1837, an astonishing rise of 84 percent, or 21 percent per annum.

But as Temin points out, this monetary inflation was not caused by the liberated state banks expanding to a fare-thee-well. If it were true that the state banks used their freedom and their new federal government deposits to pyramid wildly on the top of specie, then their pyramid ratio would have risen a great deal, or, conversely, their reserve

[73]Temin, *Jacksonian Economy*, passim. Also see Hugh Rockoff, "Money, Prices, and Banks in the Jacksonian Era," in R. Fogel and S. Engerman, eds., *The Reinterpretation of American Economic History* (New York: Harper & Row, 1971), pp. 448–458.

ratio of specie to notes and deposits would have fallen sharply. Yet the banks' reserve ratio was .16 at the beginning of 1837. During the intervening years, the reserve ratio was never below this figure. But this means that the state banks did no more pyramiding after the demise of the BUS as a central bank than they had done before.[74]

Conventional historians, believing that the BUS *must* have restrained the expansion of state banks, naturally assumed that they were hostile to the central bank. But now Jean Wilburn has discovered that the state banks overwhelmingly supported the BUS:

> We have found that Nicholas Biddle was correct when he said, "state banks in the main are friendly." Specifically, only in Georgia, Connecticut, and New York was there positive evidence of hostility. A majority of state banks in some states of the South, such as North Carolina and Alabama, gave strong support to the Bank as did both the Southwest states of Louisiana and Mississippi. Since Virginia gave some support, we can claim that state banks in the South and Southwest for the most part supported the Bank. New England, contrary to expectations, showed the banks of Vermont and New Hampshire behind the Bank, but support of Massachusetts was both qualitatively and quantitatively weak. The banks of the Middle states all supported the Second Bank except for those of New York.[75]

What, then, was the cause of the enormous monetary expansion of the 1830s? It was a tremendous and unusual expansion of the stock of specie in the nation's banks. The supply of specie in the country had remained virtually constant at about $32 million, from the beginning of 1823 until the beginning of 1833. But the proportion of specie to bank notes, held by the public as money, dropped during this period from 23 percent to 5 percent, so that more specie flowed from the public into the banks to fuel the relatively moderate monetary expansion of the 1820s. But starting at the beginning of 1833, the total specie in the country rose swiftly from $31 million to $73 million at the beginning of 1837, for a rise of 141.9 percent or 35.5 percent per annum. Hence, even though increasing distrust of banks led the public to withdraw some specie from them, so that the public now held 13 percent of its money in specie instead of 5 percent, the banks were able to increase their notes and deposits at precisely the same rate as the expansion of specie flowing into their coffers.

[74]Temin, *Jacksonian Economy*, pp. 68–74.

[75]Jean Alexander Wilburn, *Biddle's Bank: The Crucial Years* (New York: Columbia University Press, 1970), pp. 118–119, Quoted in Hummel, "Jacksonians," p. 155.

Thus, the Jackson administration is absolved from blame for the 1833–37 inflation. In a sense, the state banks are as well; certainly, they scarcely acted as if being "freed" by the demise of the BUS. Instead, they simply increased their money issues proportionately with the huge increase of specie. Of course, the basic fractional reserve banking system is scarcely absolved from responsibility, since otherwise the monetary expansion in absolute terms would not have been as great.[76]

The enormous increase in specie was the result of two factors: first and foremost, a large influx of silver coin from Mexico, and secondly, the sharp cut in the usual export of silver to the Orient. The latter was due to the substantial increases in China's purchase of opium instead of silver from abroad. The influx of silver was the result of paper money inflation by the Mexican government, which drove Mexican silver coins into the United States, where they circulated as legal tender. The influx of Mexican coin has been attributed to a possible increase in the productivity of the Mexican mines, but this makes little sense, since the inflow stopped permanently as soon as 1837. The actual cause was an inflation of the Mexican currency by the Santa Anna regime, which financed its deficits during this period by minting highly debased copper coins. Since the debased copper grossly overvalued copper and undervalued gold and silver, both of the later metals proceeded to flow rapidly out of Mexico until they virtually disappeared. Silver, of course, and not gold, was flowing into the United States during this period. Indeed, the Mexican government was forced to rescind its actions in 1837 by shifting the copper coinage to its proper ratio. The influx of Mexican silver into the U.S. promptly ceased.[77]

A bank credit inflation of the magnitude of the 1830s is bound to run into shoals that cause the banks to stop the expansion and begin to contract. As the banks expand, and prices rise, specie is bound to flow out of the country and into the hands of the domestic public, and the pressure on the banks to redeem in specie will intensify, forcing cessation of the boom and even monetary contraction. In a sense, the immediate precipitating cause is of minor importance. Even so, the Jackson administration has been unfairly blamed for precipitating the Panic of 1837 by issuing the Specie Circular in 1836.

[76]Moreover, if the Jacksonians had been able to move more rapidly in returning the banking system to a 100 percent specie basis, they could have used the increase in specie to ease the monetary contraction required by a return to a pure specie money.

[77]Mexico was pinpointed as the source of the inflow of specie by Temin, *Jacksonian Economy*, p. 80, while the disclosure of the cause in Mexican copper inflation came in Rockoff, "Money, Prices, and Banks," p. 454.

In 1836 the Jackson administration decided to stop the enormous speculation in Western public lands that had been fueled during the past two years by the inflation of bank credit. Hence, Jackson decreed that public land payments would have to be made in specie. This had the healthy effect of stopping public land speculation, but recent studies have shown that the Specie Circular had very little impact in putting pressure on the banks to pay specie.[78] From the point of view of the Jacksonian program, however, it was as important as moving toward putting the U.S. government finances on a purely specie basis.

Another measure advancing the Jacksonian program was also taken in 1836. Jackson, embarrassed at the government having amassed a huge budget surplus during his eight years in office, ordered the Treasury to distribute the surplus proportionately to the states. The distribution was made in notes presumably payable in specie. But again, Temin has shown that the distribution had little impact on movements of specie between banks and therefore in exerting contractionist pressure upon them.[79]

What, then, was the precipitating factor in triggering the Panic of 1837? Temin plausibly argues that the Bank of England, worried about inflation in Britain, and the consequent outflow of gold, tightened the money supply and raised interest rates in the latter half of 1836. As a result, credit contraction severely restricted the American cotton export trade in London, exports declined, cotton prices fell, capital flowed into England, and contractionist pressure was put upon American trade and the American banks. Banks throughout the United States—including the BUS—promptly suspended specie payments in May 1837, their notes depreciated at varying rates, and interregional trade within the country was crippled.

While banks were able to evade specie payments and continue operations, they were still obliged to contract credit in order to go back on specie eventually, since they could not hope to be creating fiat money

[78]Public land sales by the federal government, which had been going steadily at approximately $4–6 million per year, suddenly spurted upward in 1835 and 1836, to $16.2 million and $24.9 million respectively. The latter was the largest sale of public lands in American history, and the 1835 figure was the second largest. Temin, *Jacksonian Economy*, p. 124. The first demonstration of the negligible impact of the Specie Circular on the position of the banks was Richard H. Timberlake, Jr., "The Specie Circular and Distribution of the Surplus," *Journal of Political Economy* 68 (April 1960): 109–117, reprinted in Timberlake, *Origins*, pp. 50–62. Timberlake defended his thesis in idem, "The Specie Circular and the Sale of Public Lands: A Comment," *Journal of Economic History* 25 (September 1965): 414–416.

[79]Temin, *Jacksonian Economy*, pp. 128–136.

indefinitely and be allowed to remain in business. Finally, the New York banks were compelled by law to resume paying their contractual obligations, and the other banks followed in the fall of 1838. During the year 1837, the money supply fell from $276 million to $232 million, a large drop of 15.6 percent in one year. Total specie in the country continued to increase in 1837, up to $88 million, but increased public distrust of the banks (reflected in an increased proportion of money held as specie from 13 to 23 percent) put enough pressure upon the banks to force the contraction. The banks' reserve ratio rose from .16 to .20. In response to the monetary contraction, wholesale prices fell precipitately, by over 30 percent in seven months, declining from 131 in February 1837 to 98 in September of that year.

In 1838 the economy revived. Britain resumed easy credit that year, cotton prices rose, and a short-lived boomlet began. Public confidence in the banks unwisely returned as they resumed specie payment, and as a result, the money supply rose slightly during the year, and prices rose by 25 percent, increasing from 98 in September 1837 to 125 in February 1839.

Leading the boom of 1838 were state governments, who, finding themselves with the unexpected windfall of a distributed surplus from the federal government, proceeded to spend the money wildly and borrow even more extravagantly on public works and other uneconomic forms of "investment." But the state governments engaged in rashly optimistic plans that their public works would be financed heavily from Britain and other countries, and the cotton boom on which these hopes depended again collapsed in 1839. The states had to abandon their projects en masse. Cotton prices declined, and severe contractionist pressure was put on trade. Furthermore, the Philadelphia-based BUS had heavily invested in cotton speculation, and the falling price of cotton forced the BUS, once again, to suspend payments in October 1839. This touched off a wave of general bank suspensions in the South and West, but this time the banks of New York and New England continued to redeem their obligations in specie. Finally, the Bank of the United States, having for the last time played a leading role in generating a recession and monetary crisis, was forced to close its doors two years later.

With the crisis of 1839 there ensued four years of massive monetary and price deflation. Unsound banks were finally eliminated; unsound investments generated in the boom were liquidated. The number of banks during these four years fell by 23 percent. The money supply fell from $240 million at the beginning of 1839 to $158 million in 1843,

a seemingly cataclysmic drop of 34 percent, or 8.5 percent per annum. Prices fell even further, from 125 in February 1839 to 67 in March 1843, a tremendous drop of 42 percent or 10.5 percent per year.

During the boom, as we have indicated, state governments went heavily into debt, issuing bonds to pay for wasteful public works. In 1820, the total indebtedness of American states was a modest $12.8 million; by 1830, it rose to $26.5 million. But then it started to escalate, reaching $66.5 million in 1835 and skyrocketing to $170 million by 1839. The collapse of money, credit banking, and prices after 1839 brought these state debts into jeopardy. At this point, the Whigs, taking a leaf from their forebearers, the Federalists, agitated for the federal government to bail out the states and assume their debts.[80] After the crisis of 1839 arrived, some of the southern and western states were clearly in danger of default, their plight made worse by the fact that the bulk of the debt was held by British and Dutch capitalists and that specie would have to be sent abroad to meet the heavy interest payments. The Whigs pressed further for federal assumption of the debt, with the federal government to issue $200 million worth of bonds in payment. Furthermore, British bankers put severe pressure on the United States to assume the state debts if it expected to float further loans abroad.

The American people, however, spurned federal aid, including even the citizens of the states in difficulty, and the advent of the Polk administration ended any prospects for federal assumption. The British noted in wonder that the average American was far more concerned about his personal debts to other individuals and banks than about the debts of his state. In fact, the people were quite willing to have the states repudiate their debts outright. Demonstrating an astute perception of the reckless course the states had taken, the typical American response to the problem: "Suppose foreign capitalists did not lend any more to the states?" was the sharp retort: "Well who cares if they don't? We are now as a community heels over head in debt and can scarcely pay the interest."[81] The implication was that the disappearance of foreign credit to the states would have the healthy effect of cutting off their wasteful spending—as well as avoiding the imposition of a crippling tax burden to pay for the interest and principal. There was in this response an awareness by the public that they and their government

[80]See Reginald C. McGrane, *Foreign Bondholders and American State Debts* (New York: Macmillan, 1935), pp. 6–7, 24ff.

[81]McGrane, *Foreign Bondholders*, pp. 39–40.

were separate and sometimes even hostile entities rather than one and the same organism.[82]

By 1847, four western and southern states (Mississippi, Arkansas, Michigan, and Florida) had repudiated all or part of their debts. Six other states (Maryland, Illinois, Indiana, Louisiana, Arkansas, and Pennsylvania) had defaulted from three to six years before resuming payment.

It is evident, then, that the 1839–43 contraction was healthful for the economy in liquidating unsound investments, debts and banks, including the pernicious Bank of the United States. But didn't the massive deflation have catastrophic effects—on production, trade, and employment, as we have been led to believe? In a fascinating analysis and comparison with the deflation of 1929–33 a century later, Professor Temin shows that the percentage of deflation over the comparable four years (1839–43, and 1929–33) was almost the same.[83] Yet the effects on real production of the two deflations were very different. Whereas in 1929–33 real gross investment fell catastrophically by 91 percent, real consumption by 19 percent, and real GNP by 30 percent; in 1839–43, investment fell by 23 percent, but real consumption *increased* by 21 percent and real GNP also rose by 16 percent. The interesting problem is to account for the enormous fall in production and consumption in the 1930s, as contrasted to the rise in production and consumption in the 1840s. It seems that only the initial months of the contraction worked a hardship on the American public and that most of the earlier deflation was a period of economic growth. Temin properly suggests that the reason can be found in the downward flexibility of prices in the 19th century, so that massive monetary contraction would lower prices but not particularly cripple the world of real production or standards of living. In contrast, in the 1930s government placed massive roadblocks on the downward fall of prices and wage rates and hence brought about severe and continuing depression of production and living standards.

[82]The Americans also pointed out that the banks, including the Bank of the United States, who were presuming to denounce repudiation of state debt, had already suspended specie payments and were largely responsible for the contraction. "Let the bondholders look to the United States Bank and to the other banks for their payment declared the people." McGrane, *Foreign Bankholders*, p. 48.

[83]From 1839–43, the money supply, as we have seen, fell by 34 percent, wholesale prices by 42 percent, and the number of banks by 23 percent. In 1929–33, the money supply fell by 27 percent, prices by 31 percent, and the number of banks by 42 percent. Temin, *Jacksonian Economy*, pp. 155ff.

The Jacksonians had no intention of leaving a permanent system of pet banks, and so after the retirement of Jackson, his successor, Martin Van Buren, fought to establish the Independent Treasury System, in which the federal government conferred no special privilege or inflationary prop on any bank; instead of a central bank or pet banks, the government was to keep its funds purely in specie, in its own treasury vaults—or its "subtreasury" branches—and simply take in and spend funds from there. Van Buren finally managed to establish the Independent Treasury System, which would last until the Civil War. At long last, the Jacksonians had achieved their dream of severing the federal government totally from the banking system and placing its finances on a purely hard-money, specie basis.

The Jacksonians and the Coinage Legislation of 1834

We have seen that the Coinage Act of 1792 established a bimetallic system in which the dollar was defined as equaling both 371.25 grains of pure silver and 24.75 grains of pure gold—a fixed weight ratio of 15 grains of silver to 1 grain of gold. But bimetallism foundered on Gresham's Law. After 1805, the world market value of silver fell to approximately 15.75 to 1, so that the U.S. fixed mint ratio greatly undervalued gold and overvalued silver. As a result gold flowed out of the country and silver flowed in, so that after 1810 only silver coin, largely overvalued Spanish-American fractional silver coin, circulated within the United States. The rest of the currency was inflated bank paper in various stages of depreciation.

The Jacksonians, as we have seen, were determined to eliminate inflationary paper money and substitute a hard money consisting of specie—or, at the most—of paper 100 percent-backed by gold or silver. On the federal level, this meant abolishing the Bank of the United States and establishing the Independent Treasury. The rest of the fight would have to be conducted, during the 1840s and later, at the state level where the banks were chartered. But one thing the federal government could do was readjust the specie coinage. In particular, the Jacksonians were anxious to eliminate small denomination bank notes ($20 and under) and substitute gold and silver coins for them. They reasoned that the average American largely used these coins, and they were the ones bilked by inflated paper money. For a standard to be really gold and silver, it was vital that gold or silver coins circulate and be used as a medium of exchange by the average American.

To accomplish this goal, the Jacksonians set about to establish a comprehensive program. As one vital step, one of the Coinage Acts of 1834 readjusted the old mint ratio of 15:1 that had undervalued gold and driven it out of circulation. The Coinage Act devalued the definition of the gold dollar from the original 24.75 grains to 23.2 grains, a debasement of gold by 6.26 percent. The silver dollar was left at the old weight of 371.25 grains, so that the mint ratio between silver and gold was now fixed at a ratio of 16:1, replacing the old 15:1. It was unfortunate that the Jacksonians did not appreciate silver (to 396 grains) instead of debasing gold, for this set a precedent for debasement that was to plague America in 1933 and after.[84]

The new ratio of 16:1, however, now undervalued silver and overvalued gold, since the world market ratio had been approximately 15.79:1 in the years before 1834. Until recently, historians have assumed that the Jacksonians deliberately tried to bring in gold and expel silver and establish a monometallic gold standard by the back door. Recent study has shown, however, that the Jacksonians only wanted to give gold inflow a little push through a slight undervaluation and that they anticipated a full coin circulation of both gold and silver.[85] In 1833, for example, the world market ratio was as high as 15.93:1. Indeed, it turns out that for two decades the Jacksonians were right, and that the slight one percent premium of silver over gold was not enough to drive the former coins out of circulation.[86] Both silver and gold were imported from then on, and silver and gold coins both circulated successfully side-by-side until the early 1850s. Lightweight Spanish fractional silver remained overvalued even at the mint ratio, so it flourished in circulation, replacing depreciated small notes. Even American silver dollars were now retained in circulation since they were "shielded" and kept

[84]Probably the Jacksonians did so in order to preserve the illusion that the original silver dollar, the "dollar of our fathers" and the standard currency of the day, remained fixed in value. Laughlin, *History of Bimetallism*, p. 70.

[85]For the illuminating discovery that the Jacksonians were interested in purging small bank notes by bringing in gold, see Paul M. O'Leary, "The Coinage Legislation of 1834," *Journal of Political Economy* 45 (February 1937): 80–94. For the development of this insight by Martin, who shows that the Jacksonians anticipated a coinage of both gold and silver, and reveals the comprehensive Jacksonian coinage program, see David A. Martin, "Metallism, Small Notes, and Jackson's War with the B.U.S.," *Explorations in Economic History*, 11 (Spring 1974): 227–247.

[86]For the next 16 years, from 1835–1850, the market ratio averaged 15.8:1, a silver premium of only 1 percent over the 16:1 mint ratio. For the data, see Laughlin, *History of Bimetallism*, p. 291.

circulating by the presence of new, heavyweight Mexican silver dollars, which were exported instead.[87]

In order to stimulate the circulation of both gold and silver coin instead of paper notes, the Jacksonians also passed two companion Coinage Acts in 1834. The Jacksonians were not monetary nationalists; specie was specie, and they saw that there was no reason that foreign gold or silver coins should not circulate with the same full privileges as American-minted coins. Hence, the Jacksonians, in two separate measures, legalized the circulation of all foreign silver and gold coins, and they flourished in circulation until the 1850s.[88,89]

A third plank in the Jacksonian coinage platform was to establish branch U.S. mints so as to coin the gold found in newly-discovered mines in Georgia and North Carolina. The Jackson administration finally succeeded in getting Congress to do so in 1835 when it set up branch mints to coin gold in North Carolina and Georgia, and silver and gold at New Orleans.[90]

Finally, on the federal level, the Jacksonians sought to levy a tax on small bank notes and to prevent the federal government from keeping its deposits in state banks, issuing small notes, or from accepting small bank notes in taxes. They were not successful, but the Independent Treasury eliminated public deposit in state banks and the Specie Circular, as we have seen, stopped the receipt of bank notes for public land sales. From 1840 on, the hard-money battle would be waged at the state level.

[87]Martin, "Bimetallism," pp. 435–437. Spanish fractional silver coins were from 5 to 15 percent underweight, and so their circulation in the U.S. at par by name (or "tale") meant that they were still considerably overvalued.

[88]As Jackson's Secretary of the Treasury Levi Woodbury explained the purpose of this broad legalization of foreign coins: "to provide a full supply and variety of coins, instead of bills below five and ten dollars," for this would be "particularly conducive to the security of the poor and middling classes, who, as they own but little in, and profit but little by, banks, should be subjected to as small risk as practicable by their bills." Quoted in Martin, "Metallism," p.242.

[89]In 1837 another Coinage Act made a very slight adjustment in the mint ratios. In order to raise the alloy composition of gold coins to have them similar to silver, the definition of the gold dollar was raised slightly from 23.2 to 23.22 grains. With the weight of the silver dollar remaining the same, the silver/gold ratio was now very slightly lowered from 16.002:1 to 15.998:1. Further slight adjustments in valuations of foreign coins in another Coinage Act of 1843 resulted in the undervaluation of many foreign coins and their gradual disappearance. The major ones—Spanish fractional silver—continued, however, to circulate widely. Martin, "Bimetallism," p. 436.

[90]Martin, "Metallism," p. 240.

In the early 1850s, Gresham's Law finally caught up with the bimetallist idyll that the Jacksonians had forged in the 1830s, replacing the earlier de facto silver monometallism. The sudden discovery of extensive gold mines in California, Russia, and Australia greatly increased gold production, reaching a peak in the early 1850s. From the 1720s through the 1830s, annual world gold production averaged $12.8 million, never straying very far from that norm. Then, world gold production increased to an annual average of $38.2 million in the 1840s, and spurted upward to a peak of $155 million in 1853. World gold production then fell steadily from that peak to an annual average of $139.9 million in the 1850s and to $114.7 million from 1876–1890. It was not to surpass this peak until the 1890s.[91]

The consequence of the burst in gold production was, of course, a fall in the price of gold relative to silver in the world market. The silver/gold ratio declined from 15.97 in January 1849 to an average of 15.70 in 1850 to 15.46 in 1851 and to an average of 15.32:1 in the eight years from 1853 to 1860.[92] As a result, the market premium of American silver dollars over gold quickly rose above the one-percent margin, which was the estimated cost of shipping silver coin abroad. That premium, which had hovered around one percent since the mid-1830s, suddenly rose to 4.5 percent at the beginning of 1851, and after falling back to about 2 percent at the turn of 1852, bounced back up and remained at the 4-5 percent level.

The result was a rapid disappearance of silver from the country, the heaviest and therefore most undervalued coins vanishing first. Spanish-milled dollars, which contained 1 percent to 5 percent more silver than American dollars, commanded a premium of 7 percent and went first. Then went the full-weight American silver dollars and after that, American fractional silver coins, which were commanding a 4 percent premium by the fall of 1852. The last coins left were the worn Spanish and Mexican fractions, which were depreciated by 10 to 15 percent. By the beginning of 1851, however, even these worn foreign silver fractions had gone to a one-percent premium, and were beginning to go.

It was clear that America was undergoing a severe small coin crisis. Gold coins were flowing into the country, but they were too valuable

[91]On gold production, see Laughlin, *History of Bimetallism*, pp. 283–286; David A. Martin, "1853: The End of Bimetallism in the United States," *Journal of Economic History* 33 (December 1973): 830.

[92]The silver/gold ratio began to slide sharply in October and November 1850. Laughlin, *History of Bimetallism*, pp. 194, 291.

to be technically usable for small denomination coins. The Democratic Pierce administration saw with horror a flood of millions of dollars of unauthorized private small notes flood into circulation in early 1853 for the first time since the 1830s. The Jacksonians were in grave danger of losing the fight for hard-money coinage, at least for the smaller and medium denominations. Something had to be done quickly.[93]

The ultimate breakdown of bimetallism had never been clearer. If bimetallism is in the long run not viable, this leaves two free-market, hard-money alternatives: (a) silver monometallism with the dollar defined as a weight of silver only, and gold circulating freely by weight at freely-fluctuating market rates; or (b) gold monometallism with the dollar defined only as a weight of gold, with silver circulating by weight. Each of these is an example of what has been called "parallel standards" or "free metallism," in which two or more metal coins are allowed to fluctuate freely within the same area and exchange at free-market prices. As we have seen, colonial America was an example of such parallel standards, since foreign gold and silver coins circulated freely and at fluctuating market prices.[94]

The United States could have taken this opportunity of monetary crisis to go on either version of a parallel standard.[95] Apparently, how-

[93]Martin, "Metallism," p. 240

[94]For an account of how parallel standards worked in Europe from the medieval period through the 18th century, see Luigi Einaudi, "The Theory of Imaginary Money from Charlemagne to the French Revolution," in F. Lane and J. Riemersma, eds., *Enterprise and Secular Change* (Homewood, Ill.: Irwin, 1953), pp. 229–261. Robert Lopez contrasts the ways in which Florence and Genoa each returned to gold coinage in the mid-13th century, after a gap of half a millenium: "Florence, like most medieval states, made bimetallism and trimetallism a base of its monetary policy . . . it committed the government to the Sysiphean labor of readjusting the relations between different coins as the ratio between the different metals changes, or as one or another coin was debased . . . Genoa on the contrary, *in conformity with the principle of restricting state intervention as much as possible* [italics ours], did not try to enforce a fixed relation between coins of different metals . . . Basically, the gold coinage of Genoa was not meant to integrate the silver and bullion coinages but to form an independent system." Robert Sabatino Lopez, "Back to Gold, 1252," *Economic History Review*, April 1956, p.224. Also see James Rolph Edwards, "Monopoly and Competition in Money," *Journal of Libertarian Studies* IV (Winter 1980): 116. For an analysis of parallel standards, see Ludwig von Mises, *The Theory of Money and Credit* 3rd ed. (Indianapolis: Liberty Classics, 1980), pp. 87, 89–91, 205–207.

[95]Given parallel standards, the ultimate, admittedly remote solution would be to eliminate the term "dollar" altogether, and simply have both gold and silver coins circulate by regular units of weight: "Grain," "Ounce," or "Gram." If that were done, all problems of bimetallism, debasement, Gresham's Law, etc., would at last disappear. While such a

ever, few thought of doing so. Another viable though inferior solution to the problem of bimetallism was to establish a monometallic system, either de facto or de jure, with the other metal circulating in the form of lightweight, and therefore overvalued, or "token" coinage. Silver monometallism was immediately unfeasible since it was rapidly flowing out of the country, and because gold, being far more valuable than silver, could not technically function easily as a lightweight, subsidiary coin. The only feasible solution, then, within a monometallic framework, was to make gold the basic standard and let highly overvalued, essentially token, silver coins function as subsidiary small coinage. Certainly if a parallel standard was not to be adopted, the latter solution would be far better than allowing depreciated paper notes to function as small currency.

Under pressure of the crisis, Congress decided, in February 1853, to keep the de jure bimetallic standard but to adopt a de facto gold monometallic standard, with fractional silver coins circulating as a deliberately overvalued subsidiary coinage, legal tender up to a maximum of only five dollars. The fractional silver coins were debased by 6.91 percent. With silver commanding about a 4 percent market premium over gold, this meant that fractional silver was debased 3 percent below gold. At that depreciated rate, fractional silver was not overvalued in relation to gold, and remained in circulation. By April, the new subsidiary quarter dollars proved to be popular and by early 1854 the problem of the shortage of small coins in America was over.

In rejecting proposals either to go over completely to de jure gold monometallism, or to keep the existing bimetallic system, Congress was choosing a gold standard temporarily, but keeping its options open. The fact that it continued the old full-bodied silver dollar, the "dollar of our fathers," demonstrates that an eventual return to de facto bimetallism was by no means being ruled out—albeit Gresham's Law could not then maintain the American silver dollar in circulation.[96]

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pure free-market solution seems remote today, the late 19th century saw a series of important international monetary conferences trying to move toward a universal gold or silver gram, with each national currency beginning as a simple multiple of each other, and eventually only units of weight being used. Before the conferences foundered on the gold/silver problem, such a result was not as remote or Utopian as we might now believe. See the fascinating account of these conferences in Henry B. Russell, *International Monetary Conferences* (New York: Harper & Bros., 1898).

[96]For an excellent portrayal of the congressional choice in 1853, see Martin, "1853," pp. 825–844.

In 1857, an important part of the Jacksonian coinage program was repealed, as Congress, in an exercise of monetary nationalism, eliminated all legal tender power of foreign coins.[97]

Decentralized Banking from the 1830s to the Civil War

After the central bank was eliminated in the 1830s, the battle for hard money largely shifted to the state governmental arena. During the 1830s, the major thrust was to prohibit the issue of small notes, which was accomplished for notes under five dollars in 10 states by 1832, and subsequently, five others restricted or prohibited such notes.[98]

The Democratic Party became ardently hard-money in the various states after the shock of the financial crisis of 1837 and 1839. The Democratic drive was toward the outlawry of all fractional reserve bank paper. Battles were fought, also, in the late 1840s, at constitutional conventions of many states, particularly in the West. In some western states the Jacksonians won temporary success, but soon the Whigs would return and repeal the bank prohibition. The Whigs, trying to find some way to overcome the general revulsion against banks after the crisis of the late 1830s, adopted the concept of "free" banking, which had been enacted by New York and Michigan in the late 1830s. From New York, the idea spread outward to the rest of the country and triumphed in 15 states by the early 1850s. On the eve of the Civil War, 18 out of the 33 states in the Union had adopted "free" banking laws.[99]

It must be realized that "free" banking, as it came to be known in the United States before the Civil War, was unrelated to the philosophic concept of free banking analyzed by economists. As we have seen earlier, genuine free banking is a system where entry into banking is totally free, the banks are neither subsidized nor regulated, and at the first sign of failure to redeem in specie payments, the bank is forced to declare insolvency and close its doors.

"Free" banking before the Civil War, on the other hand, was very different.[100] As we have pointed out, the government allowed periodic

[97]Only Spanish-American fractional silver coins were to remain legal tender, and they were to be received quickly at government offices and immediately reminted into American coins. Hepburn, *History of Currency*, pp. 66–67.

[98]See Martin, "Metallism," pp. 242–243.

[99]Hugh Rockoff, *The Free Banking Era: A Re-Examination* (New York: Arno Press, 1975), pp. 3–4.

[100]Rockoff goes so far as to call free banking the "antithesis of *laissez-faire* banking laws." Hugh Rockoff, "Varieties of Banking and Regional Economic Development in the United

general suspensions of specie payments whenever the banks over-expanded and got into trouble—the latest episode was in the Panic of 1857. It is true that bank incorporation was now more liberal since any bank which met the legal regulations could become incorporated automatically without lobbying for special legislative charters, as had been the case before. But the banks were not subject to a myriad of regulations, including edicts by state banking commissioners and high minimum capital requirements which greatly restricted entry into the banking business. But the most pernicious aspect of "free" banking was that the expansion of bank notes and deposits was directly tied to the amount of state government securities which the bank had invested in and posted as bond with the state. In effect, then, state government bonds became the reserve base upon which the banks were allowed to pyramid a multiple expansion of bank notes and deposits. Not only did this system provide explicitly or implicitly for fractional reserve banking; but the pyramid was tied rigidly to the amount of government bonds purchased by the banks. This provision deliberately tied banks and bank credit expansion to the public debt; it meant that the more public debt the banks purchased, the more they could create and lend out new money. Banks, in short, were encouraged to monetize the public debt, state governments were thereby encouraged to go into debt, and hence, government and bank inflation were intimately linked.

In addition to allowing periodic suspension of specie payments, federal and state governments conferred upon the banks the privilege of their notes being accepted in taxes. Moreover, the general prohibition of interstate branch banking—and often of intrastate branches as well—greatly inhibited the speed by which one bank could demand payment from other banks in specie. In addition, state usury laws, pushed by the Whigs and opposed by the Democrats, made credit excessively cheap for the riskiest borrowers and encouraged inflation and speculative expansion of bank lending.

Furthermore, the desire of state governments to finance internal improvements was an important factor in subsidizing and propelling expansion of bank credit. As Hammond admits: "The wild-cats lent no money to farmers and served no farmer interest. They arose to meet the credit demands not of farmers (who were too economically astute

States, 1840–1860," *Journal of Economic History* 35 (March 1975): 162. Quoted in Hummel, "Jacksonians," p. 157.

to accept wildcat money) but of states engaged in public improvements."[101]

Despite the flaws and problems, the decentralized nature of the pre-Civil War banking system meant that banks were free to experiment on their own with improving the banking system. The most successful such device was the creation of the Suffolk system.

A Free-Market "Central Bank"

It is a fact, almost never recalled, that there once existed an American private bank that brought order and convenience to a myriad of privately issued banknotes. Further, the Suffolk Bank restrained the overissuance of these notes. In short, it was a private central bank that kept the other banks honest. As such, it made New England an island of monetary stability in an America contending with currency chaos.

Chaos was, in fact, that condition in which New England found herself just before the Suffolk Bank was established. There were a myriad of banknotes circulating in the area's largest financial center, Boston. Some were issued by Boston banks which all in Boston knew to be solvent. But others were issued by state-chartered banks. These could be quite far away, and in those days such distance impeded both general knowledge about their solvency and easy access in bringing the banks' notes in for redemption into gold or silver. Thus, while at the beginning these country notes were accepted in Boston at par value, this just encouraged some far-away banks to issue far more notes than they had gold to back them. So country bank notes began to be generally traded at discounts to par, of from 1 percent to 5 percent.

City banks finally refused to accept country bank notes altogether. This gave rise to the money brokers mentioned earlier in this chapter. But it also caused hardship for Boston merchants, who had to accept country notes whose real value they could not be certain of. When they exchanged the notes with the brokers, they ended up assuming the full cost of discounting the bills they had accepted at par.

A False Start

Matters began to change in 1814. The New England Bank of Boston announced it too would go into the money broker business, accepting

[101]Hammond, *Banks and Politics*, p. 627. On free banking, see Hummel, "Jacksonians," pp. 154–160; Smith, *Rationale*, pp. 44–45; and Hugh Rockoff, "American Free Banking Before the Civil War: A Reexamination," *Journal of Economic History* 32 (March 1972): 417–420. On the effect of usury laws, see William Graham Sumner, *A History of American Currency* (New York: Henry Holt & Co., 1876), p. 125. On the Jacksonians versus their

country notes from holders and turning them over to the issuing bank for redemption. The note holders, though, still had to pay the cost. In 1818, a group of prominent merchants formed the Suffolk Bank to do the same thing. This enlarged competition brought the basic rate of country note discount down from three percent in 1814 to one percent in 1818 and finally to a bare one-half of one percent in 1820. But this did not necessarily mean that country banks were behaving more responsibly in their note creation. By the end of 1820 the business had become clearly unprofitable, and both banks stopped competing with the private money brokers. The Suffolk became just another Boston bank.

Operation Begins

During the next several years city banks found their notes representing an ever smaller part of the total New England money supply. Country banks were simply issuing far more notes in proportion to their capital (i.e., gold and silver) than were the Boston banks.

Concerned about this influx of paper money of lesser worth, both Suffolk and New England Bank began again in 1824 to purchase country notes. But this time they did so not to make a profit on redemption, but simply to reduce the number of country notes in circulation in Boston. They had the foolish hope that this would increase the use of their (better) notes, thus increasing their own loans and profits.

But the more they purchased country notes, the more notes of even worse quality (particularly from far-away Maine banks) would replace them. Buying these latter involved more risk, so the Suffolk proposed to six other city banks a joint fund to purchase and send these notes back to the issuing bank for redemption. These seven banks, known as the Associated Banks, raised $300,000 for this purpose. With the Suffolk acting as agent and buying country notes from the other six, operations began March 24, 1824. The volume of country notes bought in this way increased greatly, to $2 million per month by the end of 1825. By then, Suffolk felt strong enough to go it alone. Further, it now had the leverage to pressure country banks into depositing gold and

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opponents on the state level after 1839, see William G. Shade, *Banks or No Banks: The Money Issue in Western Politics, 1832–1865* (Detroit: Wayne State University Press, 1972); Herbert Ershkowitz and William Shade, "Consensus or Conflict? Political Behavior in the State Legislatures During the Jacksonian Era," *Journal of American History* 58 (December 1971): 591–621; and James Roger Sharp, *Jacksonians versus the Banks: Politics in the States After the Panic of 1837* (New York: Columbia University Press, 1970).

silver with the Suffolk, to make note redemption easier. By 1838, almost every bank in New England did so, and were redeeming their notes through the Suffolk Bank.

The Suffolk ground rules from beginning (1825) to end (1858) were as follows: Each country bank had to maintain a permanent deposit of specie of at least $2,000 for the smallest bank, plus enough to redeem all its notes that Suffolk received. These gold and silver deposits did not have to be at Suffolk, so long as they were at some place convenient to Suffolk, so that the notes would not have to be sent home for redemption. But in practice, nearly all reserves were at Suffolk. (City banks had only to deposit a fixed amount, which decreased to $5,000 by 1835.) No interest was paid on any of these deposits. But, in exchange, the Suffolk began performing an invaluable service: It agreed to accept at par all the notes it received as deposits from other New England banks in the system, and credit the depositor banks' accounts on the following day.

With the Suffolk acting as a "clearing bank," accepting, sorting, and crediting bank notes, it was now possible for any New England bank to accept the notes of any other bank, however far away, and at face value. This drastically cut down on the time and inconvenience of applying to each bank separately for specie redemption. Moreover, the certainty spread that the notes of the Suffolk member banks would be valued at par: It spread at first among other bankers and then to the general public.

The Country Banks Resist

How did the inflationist country banks react to this? Not very well, for as one can see the Suffolk system put limits on the amount of notes they could issue. They resented par redemption and detested systematic specie redemption because that forced them to stay honest. But the country banks knew that any bank that did not play by the rules would be shunned by the banks that did (or at least see their notes accepted only at discount, and not in a very wide area, at that). All legal means to stop Suffolk failed: The Massachusetts Supreme Court upheld in 1827 Suffolk's right to demand gold or silver for country bank notes, and the state legislature refused to charter a clearing bank run by country banks; probably rightly assuming that these banks would run much less strict operations. Stung by these setbacks, the country banks played by the rules, bided their time, and awaited their revenge.

Suffolk's Stabilizing Effects

Even though Suffolk's initial objective had been to increase the circulation of city banks, this did not happen. In fact, by having their notes redeemed at par, country banks gained a new respectability. This came, naturally, at the expense of the number of notes issued by the worst former inflationists. But at least in Massachusetts, the percentage of city bank notes in circulation fell from 48.5 percent in 1826 to 35.8 percent in 1833.

Circulation of the Notes of Massachusetts Banks (in Thousands)

Date	All Banks	Boston Banks	Boston Percentage
1823	$3,129	$1,354	43.3
1824	3,843	1,797	46.8
1825	4,091	1,918	46.9
1826	4,550	2,206	48.5
1827	4,936	2,103	42.6
1828	4,885	2,067	42.3
1829	4,748	2,078	43.8
1830	5,124	2,171	42.3
1831	7,139	3,464	44.8
1832	7,123	3,060	43.0
1833	7,889	2,824	35.8

Source: Wilfred S. Lake, *The End of the Suffolk System*, p. 188.

The biggest, most powerful weapon Suffolk had to keep stability was the power to grant membership into the system. It accepted only banks whose notes were sound. While Suffolk could not prevent a bad bank from inflating, denying it membership ensured that the notes would not enjoy wide circulation. And the member banks which were mismanaged could be stricken from the list of Suffolk-approved New England banks in good standing. This caused the offending banks' notes to trade at a discount at once, even though the bank itself might be still redeeming its notes in specie.

In another way, Suffolk exercised a stabilizing influence on the New England economy. It controlled the use of overdrafts in the system. When a member bank needed money, it could apply for an overdraft, that is, a portion of the excess reserves in the banking system. If Suffolk decided that a member bank's loan policy was not conservative enough, it could refuse to sanction that bank's application to borrow reserves

at Suffolk. The denial of overdrafts to profligate banks thus forced those banks to keep their assets more liquid. (Few government central banks today have succeeded in that.) This is all the more remarkable when one considers that Suffolk—or any central bank—could have earned extra interest income by issuing overdrafts irresponsibly.

But Dr. George Trivoli, whose excellent monograph, *The Suffolk Bank*, we rely on in this study, states that by providing stability to the New England banking system "it should not be inferred that the Suffolk bank was operating purely as public benefactor." Suffolk, in fact, made handsome profits. At its peak in 1858, the last year of existence, it was redeeming $400 million in notes, with a total annual salary cost of only $40,000. The healthy profits were derived primarily from loaning out those reserve deposits which Suffolk itself, remember, did not pay interest on. These amounted to over $1 million in 1858. The interest charged on overdrafts augmented that. Not surprisingly, Suffolk stock was the highest priced bank stock in Boston, and by 1850, regular dividends were 10 percent.

The Suffolk Difference

That the Suffolk system was able to provide note redemption much more cheaply than the U.S. government was stated by a U.S. Comptroller of the Currency. John Jay Knox compared the two systems from a vantage point of half a century: ". . . in 1857 the redemption of notes by the Suffolk Bank was almost $400,000,000 as against $137,697,696 in 1875, the highest amount ever reported under the National Banking system. The redemptions in 1898 were only $66,683,476 at a cost of $1.29 per thousand. The cost of redemption under the Suffolk system was ten cents per $1,000, which does not appear to include transportation. If this item is deducted from the cost of redeeming National Bank notes, it would reduce it to about ninety-four cents. This difference is accounted for by the relatively small amount of redemptions by the Treasury, and the increased expense incident to the necessity of official checks by the Government, and by the higher salaries paid. But allowing for these differences, the fact is established that private enterprise could be entrusted with the work of redeeming the circulating notes of the banks, and it could thus be done as safely and much more economically than the same services can be performed by the Government."[102]

[102]John Jay Knox, *A History of Banking in the United States* (New York: Augustus M. Kelley, 1969 [1900]), pp. 368–69.

The volume of redemptions was much larger under Suffolk than under the National Banking system. During Suffolk's existence (1825–57) they averaged $229 million per year. The average of the National system from its start in 1863 to about 1898 is put by Mr. Knox at only $54 million. Further, at its peak in 1858, $400 million was redeemed. But the New England money supply was only $40 million. This meant that, astoundingly, the average note was redeemed 10 times per year, or once every five weeks.

Bank capital, note circulation, and deposits, considered together as "banking power," grew in New England on a per capita basis much faster than in any other region of the country from 1803 to 1850. And there is some evidence that New England banks were not as susceptible to disaster during the several banking panics during that time. In the Panic of 1837 not one Connecticut bank failed, nor did any suspend specie payments. All remained in the Suffolk system. And when in 1857 specie payment was suspended in Maine, all but three banks remained in business. As the Bank Commission of Maine stated, "The Suffolk system, though not recognized in banking law, has proved to be a great safeguard to the public; whatever objections may exist to the system in theory, its practical operation is to keep the circulation of our banks within the bounds of safety."

The Suffolk's Demise

The extraordinary profits—and power—that the Suffolk had by 1858 attained spawned competitors. The only one to become established was a Bank for Mutual Redemption in 1858. This bank was partially a response to the somewhat arrogant behavior of the Suffolk by this time, after 35 years of unprecedented success. But further, and more importantly, the balance of power in the state legislature had shifted outside of Boston, to the country bank areas. The politicians were more amenable to the desires of the overexpanding country banks. Still, it must be said that Suffolk acted toward the Bank of Mutual Redemption with spite where conciliation would have helped. Trying to force Mutual Redemption out of business, Suffolk, starting October 9, 1858, refused to honor notes of banks having deposits in the newcomer. Further, Suffolk in effect threatened any bank withdrawing deposits from it. But country banks rallied to the newcomer, and on October 16, Suffolk announced that it would stop clearing any country bank notes, thus becoming just another bank.

Only the Bank for Mutual Redemption was left, and though it soon had half the New England banks as members, it was much more lax

toward overissuance by country banks. Perhaps the Suffolk would have returned amid dissatisfaction with its successor, but in 1861, just over two years after Suffolk stopped clearing, the Civil War began and all specie payments were stopped. As a final nail in the coffin, the National Banking System Act of 1863 forbade the issuance of any state bank notes, giving a monopoly to the government that has continued ever since.

While it lasted, though, the Suffolk banking system showed that it is possible in a free-market system to have private banks competing to establish themselves as efficient, safe, and inexpensive clearing houses limiting overissue of paper money.

The Civil War

The Civil War exerted an even more fateful impact on the American monetary and banking system than had the War of 1812. It set the United States, for the first time except for 1814–17, on an irredeemable fiat currency that lasted for two decades and led to reckless inflation of prices. This "greenback" currency set a momentous precedent for the post-1933 United States, and even more particularly for the post-1971 experiment in fiat money.

Perhaps an even more important consequence of the Civil War was the permanent change wrought in the American banking system. The federal government in effect outlawed the issue of state bank notes, and created a new, quasi-centralized, fractional reserve national banking system which paved the way for the return of outright central banking in the Federal Reserve System. The Civil War, in short, ended the separation of the federal government from banking, and brought the two institutions together in an increasingly close and permanent symbiosis. In that way, the Republican Party, which inherited the Whig admiration for paper money and governmental control and sponsorship of inflationary banking, was able to implant the soft-money tradition permanently in the American system.

Greenbacks

The Civil War led to an enormous ballooning of federal expenditures, which skyrocketed from $66 million in 1861 to $1.30 billion four years later. To pay for these swollen expenditures, the Treasury initially attempted, in the fall of 1861, to float a massive $150 million bond issue, to be purchased by the nation's leading banks. However, Secretary of

the Treasury Salmon P. Chase, a former Jacksonian, tried to require the banks to pay for the loan in specie that they did not have. This massive pressure on their specie, as well as an increased public demand for specie due to a well-deserved lack of confidence in the banks, brought about a general suspension of specie payments a few months later, at the end of December 1861. This suspension was followed swiftly by the Treasury itself, which suspended specie payments on its Treasury notes.

The U.S. government quickly took advantage of being on an inconvertible fiat standard. In the Legal Tender Act of February 1862, Congress authorized the printing of $150 million in new "United States Notes" (soon to be known as "greenbacks") to pay for the growing war deficits. The greenbacks were made legal tender for all debts, public and private, except that the Treasury continued its legal obligation of paying the interest on its outstanding public debt in specie.[103] The greenbacks were also made convertible at par into U.S. bonds, which remained a generally unused option for the public, and was repealed a year later.

In creating greenbacks in February, Congress resolved that this would be the first and last emergency issue. But printing money is a heady wine, and a second $150 million issue was authorized in July, and still a third $150 million in early 1863. Greenbacks outstanding reached a peak in 1864 of $415.1 million.

Greenbacks began to depreciate in terms of specie almost as soon as they were issued. In an attempt to drive up the price of government bonds, Secretary Chase eliminated the convertibility of greenbacks in July 1863, an act which simply drove down their value further. Chase and the Treasury officials, instead of acknowledging their own premier responsibility for the continued depreciation of the greenbacks, conveniently placed the blame on anonymous "gold speculators." In March 1863, Chase began a determined campaign, which would last until he was driven from office, to stop the depreciation by controlling, assaulting, and eventually eliminating the gold market. In early March, he had Congress levy a stamp tax on gold sales and to forbid loans on a

[103]To be able to keep paying interest in specie, Congress provided that customs duties, at least, had to be paid in gold or silver. For a comprehensive account and analysis of the issue of greenbacks in the Civil War, see Wesley Clair Mitchell, *A History of the Greenbacks* (Chicago: University of Chicago Press, 1903). For a summary, see Paul Studenski and Herman E. Kross, *Financial History of the United States* (New York: McGraw-Hill, 1952), pp. 141–149.

collateral of coin above its par value. This restriction on the gold market had little effect, and when depreciation resumed its march at the end of the year, Chase decided to de facto repeal the requirement that customs duties be paid in gold. In late March 1864, Chase declared that importers would be allowed to deposit greenbacks at the Treasury and receive gold in return at a premium below the market. Importers could then use the gold to pay the customs duties. This was supposed to reduce greatly the necessity for importers to buy gold coin on the market and therefore to reduce the depreciation. The outcome, however, was that the greenback, at 59 cents in gold when Chase began the experiment, had fallen to 57 cents by mid-April. Chase was then forced to repeal his customs duties scheme.

With the failure of this attempt to regulate the gold market, Chase promptly escalated his intervention. In mid-April, he sold the massive amount of $11 million in gold in order to drive down the gold premium of greenbacks. But the impact was trifling, and the Treasury could not continue this policy indefinitely, because it had to keep enough gold in its vaults to pay interest on its bonds. At the end of the month, the greenback was lower than ever, having sunk to below 56 cents in gold.

Indefatigably, Chase tried yet again. In mid-May 1864, he sold foreign exchange in London at below-market rates in order to drive down pounds in relation to dollars, and, more specifically, to replace some of the U.S. export demand for gold in England. But this, too, was a failure, and Chase ended this experiment before the end of the month.

Finally, Secretary Chase decided to take off the gloves. He had failed to regulate the gold market; he would therefore end the depreciation of greenbacks by destroying the gold market completely. By mid-June, he had driven through Congress a truly despotic measure to prohibit under pain of severe penalties all futures contracts in gold, as well as all sales of gold by a broker outside his own office.

The result was disaster. The gold market was in chaos, with wide ranges of prices due to the absence of an organized market. Businessmen clamored for repeal of the "gold bill," and, worst of all, the object of the law—to lower the depreciation of the paper dollar—had scarcely been achieved. Instead, public confidence in the greenback plummeted, and its depreciation in terms of gold got far worse. At the beginning of June, the greenback dollar was worth over 52 cents in gold. Apprehensions about the emerging gold bill drove the greenback down slightly to 51 cents in mid-June. Then, after the passage of the bill, the greenback plummeted, reaching 40 cents at the end of the month.

The disastrous gold bill was hastily repealed at the end of June, and perhaps not coincidentally, Secretary Chase was ousted from office at the same time. The war against the speculators was over.[104,105]

As soon as greenbacks depreciated to less than 97 cents in gold, fractional silver coins became undervalued and so were exported to be exchanged for gold. By July 1862, in consequence, no coin higher than the copper/nickel penny remained in circulation. The U.S. government then leaped in to fill the gap with small tickets, first issuing postage stamps for the purpose, then bits of unglued paper, and finally, after the spring of 1863, fractional paper notes.[106] A total of $28 million in postage currency and fractional notes was issued by the middle of 1864. Even the nickel/copper pennies began to disappear from circulation, as greenbacks depreciated, and the nickel/copper coin began to move toward being undervalued. The expectation and finally the reality of undervaluation drove the coins into hoards and then into exports. Postage and fractional notes did not help matters, because their lowest denominations were 5 cents and 3 cents respectively. The penny shortage was finally alleviated when a debased and lighter weight penny was issued in the spring of 1864, consisting of bronze instead of nickel and copper.[107]

As soon as the nation's banks and the Treasury itself suspended specie payments at the end of 1861, Gresham's Law went into operation and gold coin virtually disappeared from circulation, except for the government's interest payments and importers' customs duties. The

[104]Chase and the administration should have heeded the advice of Sen. Jacob Collamer (R-Vt.): "Gold does not fluctuate in price . . . because they gamble in it; but they gamble in it because it fluctuates . . . . But the fluctuation is not in the gold; the fluctuation is in the currency, and it is a fluctuation utterly beyond the control of individuals." Mitchell, *History of Greenbacks*, pp. 229–230.

[105]On the war against the gold speculators, see Mitchell, *History of Greenbacks*, pp. 223–235. The greenbacks fell further to 35 cents in mid-July on news of military defeats for the North. Military victories, and consequently rising prospects of possible future gold redemption of the greenbacks, caused a rise in greenbacks in terms of gold, particularly after the beginning of 1865. At war's end the greenback dollar was worth 69 cents in gold. Ibid., pp. 232–238, 423–428.

[106]Some of the greenbacks had been decorated with portraits of President Lincoln ($5) and Secretary Chase ($1). However, when Spencer Clark, chief clerk of the Treasury's National Currency Division, put his own portrait on 5-cent fractional notes, the indignant Rep. Martin R. Thayer (R-Pa.) put through a law, still in force, making it illegal to put the picture of any living American on any coin or paper money. See Gary North, "Greenback Dollars and Federal Sovereignty, 1861–1865," in H. Sennholz, ed., *Gold Is Money* (Westport, Conn.: Greenwood Press, 1975), pp. 124, 150.

[107]See Mitchell, *History of Greenbacks*, pp. 156–163.

swift issuance of legal tender greenbacks, which the government forced creditors to accept at par, insured the continued disappearance of gold from then on.

The fascinating exception was California. There were very few banks during this period west of Nebraska, and in California the absence of banks was insured by the fact that note-issuing banks, at least, were prohibited by the California constitution of 1849.[108] The California gold discoveries of the late 1840s insured a plentiful supply for coinage.

Used to a currency of gold coin only, with no intrusion of bank notes, California businessmen took steps to maintain gold circulation and avoid coerced payment in greenbacks. At first, the merchants of San Francisco, in November 1862, jointly agreed to refrain from accepting or paying out greenbacks at any but the (depreciated) market value, and to keep gold as the monetary standard. Any firms that refused to abide by the agreement would be blacklisted and required to pay gold in cash for any goods which they might purchase in the future.

Voluntary efforts did not suffice to overthrow the federal power standing behind legal tender, however, and so California merchants obtained the passage in the California legislature of a "specific contracts act" at the end of April 1863. The specific contract provided that contracts for the payment of specific kinds of money would be enforceable in the courts. After passage of that law, California businessmen were able to protect themselves against tenders of greenbacks by inserting gold coin payment clauses in all their contracts. Would that the other states, and even the federal government, had done the same![109] Furthermore, the private banks of deposit in California refused to accept greenbacks on deposit, newspapers used their influence to warn citizens about the dangers of greenbacks, and the state government refused to accept greenbacks in payment of taxes. In that way, all the major institutions in California joined in refusing to accept or give their imprimatur to federal inconvertible paper.

Judicial institutions also helped maintain the gold standard and repel the depreciated U.S. paper. Not only did the California courts uphold

[108]Banks of deposit existed in California, but of course they could not supply the public's demand for cash. See John Jay Knox, *A History of Banking in the United States* (New York: Bradford Rhodes & Co., 1900), pp. 843–845.

[109]This experience illustrates a continuing problem in contract law: It is not sufficient for government to allow contracts to be made in gold or gold coin. It is necessary for government to enforce *specific performance* of the contracts so that debtors must pay in the weight or value of the gold (or anything else) required in the contract, and not in some paper dollar equivalent decided by law or the courts.

the constitutionality of the specific contracts act, but the California Supreme Court ruled in 1862 that greenbacks could not be accepted in state or county taxes, since the state constitution prohibited any acceptance of paper money for taxes.

The state of Oregon was quick to follow California's lead. Oregon's constitution had also outlawed banks of issue, and gold had for years been the exclusive currency. Two weeks after the agreement of the San Francisco merchants, the merchants of Salem, Oregon, unanimously backed gold as the monetary standard and refused to accept greenbacks at par. Two months later, the leading merchants of Portland agreed to accept greenbacks only at rates current in San Francisco; the merchants in the rest of the state were quick to follow suit. The Portland merchants issued a circular warning of a blacklist of all customers who insisted on settling their debts in greenbacks, and they would be quickly boycotted, and dealings with them would only be in cash.

Oregon deposit banks also refused to accept greenbacks, and the Oregon legislature followed California a year and a half later in passing a specific performance law. Oregon, too, refused to accept greenbacks in taxes and strengthened the law in 1864 by requiring that "all taxes levied by state, counties, or municipal corporations therein, shall be collected and paid in gold and silver coin of the United States and not otherwise."[110]

In the same year, the Oregon Supreme Court followed California in ruling that greenbacks could not constitutionally be received in payment of taxes.

The banking story during the Civil War is greatly complicated by the advent of the national banking system in the latter part of the war. But it is clear that the state banks, being able to suspend specie and to pyramid money and credit on top of the federal greenbacks, profited greatly by being able to expand during this period. Thus, total state bank notes and deposits were $510 million in 1860, and by 1863 the amount rose to $743 million, an increase in state bank demand liabilities in those three years of 15.2 percent per year.[111]

[110]Cited in Richard A. Lester, *Monetary Experiments* (1939, London: David & Charles Reprints, 1970), p. 166. On the California and Oregon maintenance of the gold standard during this period, see ibid., pp. 161–171. On California, see Bernard Moses, "Legal Tender Notes in California," *Quarterly Journal of Economics*, (October 1892): 1–25; Mitchell, *History of Greenbacks*, pp. 142–144. On Oregon, see James H. Gilbert, *Trade and Currency in Early Oregon* (New York: Columbia University Press, 1907), pp. 101–122.

[111]*Historical Statistics*, pp. 625, 648–649.

It is no wonder, then, that contrary to older historical opinion, many state banks were enthusiastic about the greenbacks, which provided them with legal tender that could function as a reserve base upon which they could expand. As Hammond puts it, "Instead of being curbed (as some people supposed later), the powers of the banks were augmented by the legal tender issues. As the issues increased, the deposits of the banks would increase."[112] Indeed, Sen. Sherman (R-Ohio) noted that the state banks favored greenbacks. And the principal author of the greenback legislation, Rep. Elbridge G. Spaulding (R-N.Y.), the chairman of the House Ways and Means subcommittee that introduced the bill, was himself a Buffalo banker.

The total money supply of the country (including gold coin, state bank notes, subsidiary silver, U.S. currency including fractional and greenbacks) amounted to $745.4 million in 1860. By 1863, the money supply had skyrocketed to $1.435 billion, an increase of 92.5 percent in three years, or 30.8 percent per annum. By the end of the war, the money supply, which now included national bank notes and deposits, totalled $1.773 billion, an increase in two years of 23.6 percent or 11.8 percent per year. Over the entire war, the money supply rose from $45.4 million to $1.773 billion, an increase of 137.9 percent, or 27.69 percent per annum.[113]

The response to this severe monetary inflation was a massive inflation of prices. It is no wonder that the greenbacks, depreciating rapidly in terms of gold, depreciated in terms of goods as well. Wholesale prices rose from 100 in 1860, to 210.9 at the end of the war, a rise of 110.9 percent or 22.2 percent per year.[114]

The Republican administration argued that their issue of greenbacks was required by stern wartime "necessity." The spuriousness of this argument is seen by the fact that greenbacks were virtually not issued after the middle of 1863. There were three alternatives to the issuance of legal tender fiat money. 1) The government could have issued paper

[112]Bray Hammond, *Sovereignty and an Empty Purse: Banks and Politics in the Civil War* (Princeton: Princeton University Press, 1970), pp. 246, 249–250. Also see North, "Greenback Dollars," pp. 143–148.

[113]*Historical Statistics*, pp. 625, 648–649. In a careful analysis North estimates the total money supply at approximately $2 billion, and also points out that counterfeit notes in the Civil War have been estimated to amount to no less than one-third of the total currency in circulation. North, "Greenback Dollars," p. 134. The counterfeiting estimates are in William P. Donlon, *United States Large Size Paper Money, 1861 to 1923*, 2nd ed. (Iola, Wis.: Krause, 1970), p. 15.

[114]Ralph Andreano, ed., *The Economic Impact of the American Civil War* (Cambridge, Mass: Schenckman, 1961), p. 178.

money but not made it legal tender; it would have depreciated even more rapidly. At any rate, they would have had quasi-legal tender status by being receivable in federal dues and taxes. 2) It could have increased taxes to pay for the war expenditures. 3) It could have issued bonds and other securities and sold the debt to banks and non-bank institutions. In fact, the government employed both the latter alternatives, and after 1863 stopped issuing greenbacks and relied on them exclusively, especially a rise in the public debt. The accumulated deficit piled up during the war was $2.614 billion, of which the printing of greenbacks only financed $431.7 million. Of the federal deficits during the war, greenbacks financed 22.8 percent in fiscal 1862, 48.5 percent in 1863, 6.3 percent in 1864, and none in 1865.[115] This is particularly striking if we consider that the peak deficit came in 1865, totalling $963.8 million. All the rest was financed by increased public debt. Taxes also increased greatly, revenues rising from $52 million in 1862 to $333.7 million in 1865. Tax revenues as a percentage of the budget rose from the miniscule 10.7 percent in fiscal 1862 to over 26 percent in 1864 and 1865.

It is clear, then, that the argument from "necessity" in the printing of greenbacks was specious, and indeed the greenback advocates conceded that it was perfectly possible to issue public debt, provided that the administration was willing to see the prices of its bonds rise and its interest payments rise considerably. At least for most of the war, they were not willing to take their chances in the competitive bond market.[116]

[115]The Confederacy, on the other hand, financed virtually all of its expenditures through mammoth printing of fiat paper, the Southern version of the greenback. Confederate notes, which were first issued in June 1861 to a sum of $1.1 million, skyrocketed until the total supply of confederate notes in January 1864 was no less than $826.8 million, an increase of 750.6 percent for three and a half years, or 214.5 percent per year. Bank notes and deposits in the Confederacy rose from $119.3 million to $268.1 million in this period, so that the total money supply rose from $120.4 million to $1.095 billion, or an increase of 1,060 percent—302.9 percent per year. Prices in the Eastern Confederacy rose from 100 in early 1861 to no less than over 4,000 in 1864, and 9,211 at the end of the war in April 1865. Thus, in four year, prices rose by 9,100 percent or an average of 2,275 percent per annum. See Eugene M. Lerner, "Inflation in the Confederacy, 1862–65," in M. Friedman, ed., *Studies in the Quantity Theory of Money* (Chicago: University of Chicago Press, 1956), pp. 163–175; Lerner, "Money, Prices and Wages in the Confederacy, 1861–65," in Andreano, *Economic Impact*, pp. 11–40.

[116]Mitchell, *History of the Greenbacks*, pp. 61–74; 119f., 128–131. Also see Don C. Barrett, *The Greenbacks and Resumption of Specie Payments, 1862–1879* (Cambridge: Harvard University Press, 1931), pp. 25–57.

The Public Debt and the National Banking System

The public debt of the Civil War brought into American financial history the important advent of one Jay Cooke. The Ohio-born Cooke had joined the moderately successful Philadelphia investment banking firm of Clark and Dodge as a clerk at the age of 18. In a few years, Cooke worked himself up to the status of junior partner, and, in 1857, he left the firm to branch out on his own in canal and railroad promotion and other business ventures. There he doubtless would have remained, except for the lucky fact that he and his brother Henry, editor of the leading Republican newspaper in Ohio, the *Ohio State Journal*, were close friends of U.S. Sen. Salmon P. Chase. Chase, a veteran leader of the anti-slavery movement, fought for and lost the Republican Presidential nomination in 1860 to Abraham Lincoln. At that point, the Cookes determined that they would feather their nest by lobbying to make Salmon Chase Secretary of the Treasury. After heavy lobbying by the Cookes, the Chase appointment was secured, so Jay Cooke quickly set up his own investment banking house of Jay Cooke & Co.

Everything was in place; it now remained to seize the opportunity. As the Cooke's father wrote of Henry: "I took up my pen principally to say that H.S.'s [Henry's] plan in getting Chase into the Cabinet and [John] Sherman into the Senate is accomplished, and that now is the time for making money, by honest contracts out of the government."[117]

Now indeed was their time for making money, and Cooke lost no time in doing so. It did not take much persuasion, including wining and dining, for Cooke to induce his friend Chase to take an unprecedented step in the fall of 1862: granting the House of Cooke a monopoly on the underwriting of the public debt. With enormous energy, Cooke hurled himself into the task of persuading the mass of public to buy U.S. government bonds. In doing so, Cooke perhaps invented the art of public relations and of mass propaganda; certainly, he did so in the realm of selling bonds. As Kirkland writes:

> With characteristic optimism, he [Cooke] flung himself into a bond crusade. He recruited a small army of 2,500 subagents among bankers, insurance men, and community leaders and kept them inspired and informed by mail and telegraph. He taught the American people to buy bonds, using lavish advertising in newspapers, broadsides, and

[117]In Henrietta Larson, *Jay Cooke, Private Banker* (Cambridge: Harvard University Press, 1936), p. 103. Also see Edward C. Kirkland, *Industry Comes of Age: Business, Labor and Public Policy, 1860–1897* (New York: Holt, Rinehart and Winston, 1961), p. 20.

> posters. God, destiny, duty, courage, patriotism—all summoned "Farmers, Mechanics, and Capitalists" to invest in loans. . .[118]

—loans which of course they had to purchase from Jay Cooke.

And purchase the loans they did, for Cooke's bond sales soon reached the enormous figure of one to two million dollars a day. Perhaps $2 billion in bonds were bought and underwritten by Jay Cooke during the war. Cooke lost his monopoly in 1864, under pressure of rival bankers; but a year later he was reappointed to keep that highly lucrative post until the House of Cooke crashed in the Panic of 1873.

In the Civil War, Jay Cooke began as a moderately successful promoter; he emerged at war's end a millionaire, a man who had spawned the popular motto, "as rich as Jay Cooke." Surely he must have counted the $100,000 he had poured into Salmon Chase's political fortunes by 1864 one of the most lucrative investments he had ever made.

It is not surprising that Jay Cooke acquired enormous political influence in the Republican administration of the Civil War and after. Hugh McCulloch, Secretary of the Treasury from 1865 to 1869, was a close friend of Cooke's and when McCulloch left office he assumed the post of head of Cooke's London office. The Cooke brothers were also good friends of General Grant, so they wielded great influence during the Grant administration.

No sooner had Cooke secured the monopoly of government bond underwriting than he teamed up with his associates, Secretary of the Treasury Chase and Ohio's Senator John Sherman, to drive through a measure which was destined to have far more fateful effects than greenbacks on the American monetary system: the National Banking Acts. The National Banking Acts destroyed the previously decentralized and fairly successful state banking system, and substituted a new, centralized, and far more inflationary banking system under the aegis of Washington and a handful of Wall Street banks. Whereas the effects of the greenbacks were finally eliminated by the resumption of specie payments in 1879, the effects of the National Banking System are still with us. Not only was this system in place until 1913, but it paved the way for the Federal Reserve System by instituting a quasi-central banking type of monetary system. The "inner contradictions" of the National Banking System were such that the nation was driven either to go onward to a frankly central bank or else to scrap centralized banking altogether and go back to decentralized state banking. Given the inner

[118]Kirkland, *Industry*, pp. 20–21.

dynamic of state intervention to keep intensifying, coupled with the almost universal adoption of statist ideology after the turn of the 20th century, which course the nation would take was unfortunately inevitable.

Chase and Sherman drove the new system through under cover of war necessity, but it was designed to alter the banking system permanently. The wartime ground was to set up national banks, which were so structured as to necessarily purchase large amounts of U.S. government bonds. Patterned after the "free" banking systems, this tied in the nation's banks with the federal government and the public debt in a close symbiotic relationship. The Jacksonian embarrassment of the independent treasury was de facto swept away, and the Treasury would now keep its deposits in a new series of "pets": the national banks, chartered directly by the federal government. In this way, the Republican Party was able to use the wartime emergency to fulfill the Whig-Republican dream of a federally-controlled centralized banking system able to inflate the supply of money and credit in a uniform manner. Meshing with this was a profound political goal: As Sherman expressly pointed out, a vital object of the National Banking System was to eradicate the embarrassing doctrine of state's rights and to nationalize American politics.[119]

As established in the Bank Acts of 1863 and 1864, the National Banking System provided for the chartering of national banks by the Comptroller of the Currency in Washington, D.C. The banks were "free" in the sense that any institution meeting the requirements could obtain a charter, but the requirements were so high (from $50,000 for rural banks to $200,000 in the bigger cities) that small national banks were ruled out, particularly in the large cities.[120]

[119]In his important work on Northern intellectuals and the Civil War, George Frederickson discusses an influential article by one Samuel Fowler written at the end of the war: " 'The Civil War which has changed the current of our ideas, and crowded into a few years the emotions of a lifetime,' Fowler wrote, 'has in measure given to the preceding period of our history the character of a remote state of political existence.' Fowler described the way in which the war, a triumph of nationalism and a demonstration of 'the universal tendency to combination,' had provided the *coup de grace* for the Jefferson philosophy of government with its emphasis on decentralization and the protection of local and individual liberties." George Frederickson, *The Inner Civil War: Northern Intellectuals and the Crisis of the Union* (New York: Harper & Row, 1965), p. 184. Also see Merrill D. Peterson, *The Jeffersonian Image in the American Mind* (New York: Oxford University Press, 1960), pp. 217–218.

[120]For a particularly lucid exposition of the structure of the national banking system, see John J. Klein, *Money and the Economy*, 2nd ed. (New York: Harcourt, Brace and World, 1970), pp. 140–147.

The National Banking System created three sets of national banks: *central reserve city*, which was only New York; *reserve city*, other cities with over 500,000 population; and *country*, which included all other national banks.

Central reserve city banks were required to keep 25 percent of their notes and deposits in reserve of vault cash or "lawful money," which included gold, silver, and greenbacks. This provision incorporated the "reserve requirement" concept which had been a feature of the "free" banking system. Reserve city banks, on the other hand, were allowed to keep one-half of their required reserves in vault cash, while the other half could be kept as demand deposits (checking deposits) in central reserve city banks. Finally, country banks only had to keep a minimum reserve ratio of 15 percent to their notes and deposits; and only 40 percent of these reserves had to be in the form of vault cash. The other 60 percent of the country banks' reserves could be in the form of demand deposits either at the reserve city or central reserve city banks.

The upshot of this system was to replace the individualized structure of the pre-Civil War state banking system by an inverted pyramid of country banks expanding on top of reserve city banks, which in turn expanded on top of New York City banks. Before the Civil War, every bank had to keep its own specie reserves, and any pyramiding of notes and deposits on top of that was severely limited by calls for redemption in specie by other, competing banks as well as by the general public. But now, reserve city banks could keep half of their reserves as deposits in New York City banks, and country banks could keep most of theirs in one or the other, so that as a result, all the national banks in the country could pyramid in two layers on top of the relatively small base of reserves in the New York banks. And furthermore, those reserves could consist of inflated greenbacks as well as specie.

A simplified schematic diagram can portray the essence of this revolution in American banking:

Figure 1

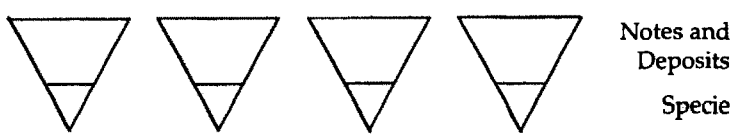

Figure 1 shows state banks in the decentralized system before the Civil War. Every bank must stand or fall on its bottom. It can pyramid notes

and deposits on top of specie, but its room for such inflationary expansion is limited, because any bank's expansion will cause increased spending by its clients on the goods or services of other banks. Notes or checks on the expanding bank will go into the coffers of other banks, which will call on the expanding bank for redemption. This will put severe pressure on the expanding bank, which cannot redeem all of its liabilities as it is, and whose reserve ratio has declined, and so it will be forced to contract its loans and liabilities or else go under.

Figure 2

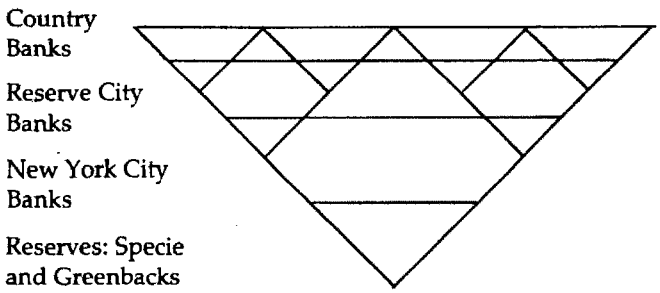

Figure 2 depicts the inverted pyramid of the National Banking System. New York City banks pyramid notes and deposits on top of specie and greenbacks; reserve city banks pyramid their notes and deposits on top of specie, greenbacks *and* deposits at New York City; and country banks pyramid on top of both. This means that, for example, if New York City banks inflate and expand their notes and deposits, they will not be checked by other banks calling upon them for redemption. Instead, reserve city banks will be able to expand their own loans and liabilities by pyramiding on top of their own increased deposits at New York banks. In turn, the country banks will be able to inflate their credit by pyramiding on top of their increased deposits at both reserve city and New York banks. The whole nation is able to inflate uniformly and relatively unchecked by pyramiding on top of a few New York City banks.

The national banks were not compelled to keep part of their reserves as deposits in larger banks, but they tended to do so—in the long run, so that they could expand uniformly on top of the larger banks, and in the short run because of the advantages of having a line of credit with

a larger "correspondent" bank as well as earning interest on demand deposits at that bank.[121]

Let us illustrate in another way how the National Banking System pyramided by centralizing reserves. Let us consider the hypothetical balance sheets of the various banks.[122] Suppose that the country banks begin with $1 million in vault cash as their reserves. With the National Banking System in place, the country banks can now deposit three-fifths, or $600,000 of their cash in reserve city banks, in return for interest-paying demand deposits at those banks.

The balance-sheet changes are now as follows:

Country Banks

Assets		Liabilities + Equity	
Reserves			
Vault cash	−$600,000		
Deposits at reserve city banks	+$600,000		

Reserve City Banks

Assets		Liabilities + Equity	
Reserves			
Vault cash	+$600,000	Demand deposits due country banks	+$600,000

Total reserves for the two sets of banks have not changed. But now because the country banks can use as their reserves deposits in reserve city banks, the same total reserves can now be used by the banks to expand far more of their credit. For now $400,000 in cash supports the same total of notes and deposits that the country banks had previously backed by $1 million, and the reserve city banks can now expand $2.4 million on top of the new $600,000 in cash—or rather, $1.8 million in addition to the $600,000 due to the city banks. In short, country bank

[121]Banks generally paid interest on demand deposits until the practice was outlawed in 1934.

[122]Adapted from Klein, *Money and the Economy*, pp. 144–145.

reserves have remained the same, but reserve city bank reserves have increased by $600,000, and they can engage in 4:1 pyramiding of credit on top of that.

But that is not all. For the reserve city banks can deposit half of their reserves at the New York banks. When they do that, the balance sheets of the respective banks change as follows:

Reserve City Banks

Assets		Liabilities + Equity	
Reserves			
Vault cash	+$300,000		
Deposits at central reserve city banks	+$300,000	Demand deposits due country banks	+$600,000

Central Reserve City Banks

Assets		Liabilities + Equity	
Vault cash	+$300,000	Demand deposits due reserve city banks	+$300,000

Note that since the reserve city banks are allowed to keep half of their reserves in the central reserve city banks, the former can still pyramid $2.4 million on top of their new $600,000, and yet deposit $300,000 in cash at the New York banks. The latter, then, can expand another 4:1 on top of the new cash of $300,000, or increase their total notes and deposits to $1.2 million.

In short, not only did the national banking system allow pyramiding of the entire banking structure on top of a few large Wall Street banks, the very initiating of the system allowed a multiple expansion of all bank liabilities by centralizing a large part of the nation's cash reserves from the individual state banks into the hands of the larger, and especially the New York, banks. For the expansion of $1.2 million on top of the new $300,000 at New York banks served to expand the liabilities going to the smaller banks, which in turn could pyramid on top of their increased deposits. But even without that further expansion, $1 million which, we will assume, originally supported $6 million in notes and deposits, will now support, in addition to that $6 million, $2.4 million

issued by the reserve city banks, and $1.2 million by the New York banks—to say nothing of further expansion by the latter two sets of banks which will allow country banks to pyramid more liabilities.

In June 1874, the fundamental structure of the National Banking System was changed when Congress, as part of an inflationist move after the Panic of 1873, eliminated all reserve requirements on notes, keeping them only on deposits. This released over $20 million of lawful money from bank reserves, and allowed a further pyramiding of demand liabilities.[123] In the long run, it severed the treatment of notes from deposits, with notes tied rigidly to bank holdings of government debt, and demand deposits pyramiding on top of reserve ratios in specie and greenbacks.

But this centralized inverse pyramiding of bank credit was not all. For, in a way modeled by the "free" banking system, every national bank's expansion of notes was tied intimately to its ownership of U.S. government bonds. Every bank could only issue notes if it deposited an equivalent of U.S. securities as collateral at the U.S. Treasury,[124] so that national banks could only expand their notes to the extent that they purchased U.S. government bonds. This provision tied the National Banking System intimately to the federal government, and more particularly, to its expansion of public debt. The federal government had an assured, built-in market for its debt, and the more the banks purchased that debt, the more the banking system could inflate. Monetizing the public debt was not only inflationary per se, it provided the basis—when done by the larger city banks—of other banks pyramiding on top of their own monetary expansion.

The tie-in and the pyramiding process were cemented by several other provisions. Every national bank was obliged to redeem the obligations of every other national bank at par. Thus, the severe market limitation on the circulation of inflated notes and deposits—depreciation as the distance from the bank increases—was abolished. And while the federal government could not exactly make the notes of a private bank legal tender, it conferred quasi-legal tender status on every national bank by agreeing to receive all its notes and deposits at par for dues and taxes.[125] It is interesting and even heartening to discover that

[123]See Hepburn, *History of Currency*, pp. 317–318.

[124]Originally, national banks could only issue notes to the value 90 percent of their U.S. government bonds. This limitation was changed to 100 percent in 1900.

[125]Except, of course, as we have seen with the greenbacks, for payment of customs duties, which had to be paid in gold, to build up a fund to pay interest on the government debt in gold.

despite these enormous advantages conferred by the federal government, national bank notes fell below par with greenbacks in the financial crisis of 1867, and a number of national banks failed the next year.[126]

Genuine redeemability, furthermore, was made very difficult under the National Banking System. Laxity was insured by the fact that national banks were required to redeem the notes and deposits of every other national bank at par, and yet it was made difficult for them to actually redeem those liabilities in specie; for one of the problems with the pre-Civil War state banking system is that interstate or even intrastate branches were illegal, thereby hobbling the clearing system for swiftly redeeming another bank's notes and deposits. One might think that a national banking system would at least eliminate this problem, but on the contrary, branch banking continued to be prohibited, and interstate branch banking is illegal to this day. A bank would only have to redeem its notes at its own counter in its home office. Furthermore, the redemption of notes was crippled by the fact that the federal government imposed a maximum limit of $3 million a month by which national bank notes could be contracted.[127]

Reserve requirements are now considered a sound and precise way to limit bank credit expansion, but the precision can work two ways. Just as government safety codes can *decrease* safety by setting a lower limit for safety measures and inducing private firms to reduce safety *downward* to that common level, so reserve requirements can and ordinarily do serve as lowest common denominators for bank reserve ratios. Free competition can and generally will result in banks voluntarily keeping higher reserve ratios. But a uniform legal requirement will tend to push all the banks down to that minimum ratio. And indeed we can see this now in the universal propensity of all banks to be "fully loaned up," that is, to expand as much as is legally possible up to the limits imposed by the legal reserve ratio. Reserve requirements of less than 100 percent are more an inflationary than a restrictive monetary device.

The National Banking System was intended to replace the state banks, but many state banks continued aloof and refused to join, despite the special privileges accorded to the national banks. The reserve and capital requirements were more onerous, and at that period, national banks were prohibited from making loans on real estate. With the state banks refusing to come to heel voluntarily, Congress, in March 1865,

[126]See Smith, *Rationale*, p. 48.

[127]See Smith, *Rationale*, p. 132.

completed the Civil War revolution of the banking system by placing a prohibitive 10 percent tax on all bank notes—which had the desired effect of virtually outlawing all note issues by the state banks. From 1865 on, the national banks had a legal monopoly on the issue of bank notes.

At first, the state banks contracted and disappeared under the shock, and it looked as if the United States would only have national banks. The number of state banks fell from 1,466 in 1863 to 297 in 1866, and total notes and deposits in state banks fell from $733 million in 1863 to only $101 million in 1866. After several years, however, the state banks readily took their place as an expanding element in the banking system, albeit subordinated to the national banks. In order to survive, the state banks had to keep deposit accounts at national banks, from whom they could "buy" national bank notes in order to redeem their deposits. In short, the state banks now became the fourth layer of the national pyramid of money and credit, on top of the country and other banks, for the reserves of the state banks became, in addition to vault cash, demand deposits at national banks, which they could redeem in cash. The multi-layered structure of bank inflation under the National Banking System was intensified.

In this new structure, the state banks began to flourish. By 1873, the total number of state banks had increased to 1,330, and their total deposits were $789 million.[128]

The Cooke-Chase connection with the new National Banking System was simple. As Secretary of the Treasury, Chase wanted an assured market for the government bonds that were being issued so heavily during the Civil War. And as the monopoly underwriter of U.S. government bonds for every year except one from 1862 to 1873, Jay Cooke was even more directly interested in an assured and expanding market for his bonds. What better method of obtaining such a market than creating an entirely new banking system, the expansion of which was directly tied to the banks' purchase of government bonds—from Jay Cooke?

The Cooke brothers played a major role in driving the National Banking Act of 1863 through a reluctant Congress. The Democrats, devoted to hard-money, opposed the legislation almost to a man. Only a majority of Republicans could be induced to agree on the bill. After John Sherman's decisive speech in the Senate for the measure, Henry Cooke—now head of the Washington Office of the House of Cooke—

[128]*Historical Statistics*, pp. 628–629.

wrote jubilantly to his brother: "It will be a great triumph, Jay, and one to which we have contributed more than any other living man. The bank had been repudiated by the House, and was without a sponsor in the Senate, and was thus virtually dead and buried when I induced Sherman to take hold of it, and we went to work with the newspapers."[129]

Going to work with the newspapers meant something more than mere persuasion for the Cooke brothers; as monopoly underwriter of government bonds, Cooke was paying the newspapers large sums for advertising, and so the Cookes thought—as it turned out correctly—that they could induce the newspapers to grant them an enormous amount of free space "in which to set forth the merits of the new national banking system." Such space meant not only publicity and articles, but even more important, the fervent editorial support of most of the nation's press. And so the press, implicitly bought for the occasion, kept up a drumfire of propaganda for the new National Banking System. As Cooke himself related: "For six weeks or more nearly all the newspapers in the country were filled with our editorials [written by the Cooke brothers] condemning the state bank system and explaining the great benefits to be derived from the national banking system now proposed." And every day the indefatigable Cookes put on the desks of every Congressman the relevant editorials from newspapers in their respective districts.[130]

While many state bankers, especially the conservative old-line New York bankers, opposed the National Banking System, Jay Cooke, once the system was in place, plunged in with a will. Not only did he sell the national banks their required bonds, he also set up new national banks which would have to buy his government securities. His agents formed national banks in the smaller towns of the South and West. Furthermore, he set up his own two large national banks, the First National Bank of Philadelphia and the First National Bank of Washington, D.C.

But the National Banking System was in great need of a mighty bank in New York City to serve as the base of the inflationary pyramid for a host of country and reserve city banks. Shortly after the inception of the system, three national banks had been organized in New York, but none of them was large or prestigious enough to serve as the key

[129]Quoted in Robert P. Sharkey, *Money, Class and Party: An Economic Study of Civil War and Reconstruction* (Baltimore: Johns Hopkins Press, 1959), p. 245.

[130]See Hammond, *Sovereignty*, pp. 289–290.

fulcrum of the new banking structure. Jay Cooke, however, was happy to oblige, and he quickly established the Fourth National Bank of New York, capitalized at a huge $5 million. After the war, Jay Cooke favored resumption of specie payments, but only if greenbacks could be replaced one-to-one by new national bank notes. In his unbounded enthusiasm for national bank notes and their dependence on the federal debt, Cooke urged repeal of the $300 million legal limit on national bank note issue. In 1865, he published a pamphlet proclaiming that in less than 20 years national bank note circulation would total $1 billion.[131]

The title of the pamphlet Cooke published is revealing: *How Our National Debt May Be A National Blessing. The Debt is Public Wealth, Political Union, Protection of Industry, Secure Basis for National Currency.*[132]

By 1866, it was clear that the National Banking System had replaced the state as the center of the monetary system of the United States. Only a year earlier, in 1865, state bank notes had totaled $142.9 million; by 1866 they had collapsed to $20 million. On the other hand, national bank notes grew from a mere $31.2 million in 1864, their first year of existence, to $276 million in 1866. And while, as we have seen, the number of state banks in existence was falling drastically from 1,466 to 297, the number of national banks grew from 66 in 1863 to 1,634 three years later.

The Post-Civil War Era: 1865-1879

The United States ended the war with a depreciated inconvertible greenback currency, and a heavy burden of public debt. The first question on the monetary agenda was what to do about the greenbacks. A powerful group of industrialists calling for continuation of greenbacks, opposing resumption and, of course, any contraction of money to prepare for specie resumption, was headed by the Pennsylvania iron and steel manufacturers. The Pennsylvania ironmasters, who had been in the forefront of the organized protective tariff movement since its beginnings in 1820,[133] were led here and instructed by their intellectual mentor—himself a Pennsylvania ironmaster—the elderly economist Henry C. Carey. Carey and his fellow iron manufacturers realized that

[131]Actually, Cooke erred, and national bank notes never reached that total. Instead, it was demand deposits that expanded, and reached the billion-dollar mark by 1879.

[132]See Sharkey, *Money, Class, and Party*, p. 247.

[133]The leader of the protectionists in Congress in 1820 was Rep. Henry Baldwin, a leading iron manufacturer from Pittsburgh. Rothbard, *Panic of 1819*, pp. 164ff.

during an inflation, since the foreign exchange market anticipates further inflation, domestic currency tends to depreciate faster than domestic prices are rising. A falling dollar and rising price of gold, they realized, make domestic prices cheaper and imported prices higher, and hence functions as a surrogate tariff. A cheap money, inflationist policy, then, could not only provide easy credit for manufacturing, it could also function as an extra tariff because of the depreciation of the dollar and the rise in the gold premium.

Imbibers of the Carey gospel of high tariffs and soft money were a host of attendees at the famous "Carey Vespers"—evenings of discussion of economics and politics. Influential Carey disciples included economist and Pennsylvania ironmaster Stephen Colwell; Eber Ward, president of the Iron and Steel Association; John A. Williams, editor of the Association's journal *Iron Age;* Rep. Daniel Morrell, Pennsylvania iron manufacturer; I. Smith Homans, Jr., editor of the *Bankers' Magazine;* and the powerful Rep. William D. Kelley of Pennsylvania, whose lifelong devotion to the interest of the ironmasters earned him the proud sobriquet of "Old Pig Iron." The Carey circle also dominated the American Industrial League and its successor, the Pennsylvania Industrial League, which spread the Carey doctrines of protection and paper money. Influential allies in Congress, if not precisely Carey followers, were the radical leader Rep. Thaddeus Stevens, himself a Pennsylvania ironmaster, and Rep. John A. Griswold, an ironmaster from New York.

Also sympathetic to greenbacks were many manufacturers who desired cheap credit, gold speculators who were betting on higher gold prices, and railroads, who as heavy debtors to their bondholders, realized that inflation benefits debtors by cheapening the dollar whereas it also tends to expropriate creditors by the same token. One of the influential Carey disciples, for example, was the leading railroad promoter, the Pennsylvanian Thomas A. Scott, leading entrepreneur of the Pennsylvania and Texas & Pacific Railroads.[134]

[134]On the Carey circle and its influence, see Irwin Unger, *The Greenback Era: A Social and Political History of American Finance, 1865–1879* (Princeton: Princeton University Press, 1964), pp. 53–59; and Joseph Dorfman, *The Economic Mind in American Civilization, Vol. III, 1864–1918* (New York: Viking Press, 1949), pp. 7–8. Dorfman notes that Kelley dedicated his collected *Speeches, Addresses and Letters* of 1872 to "The Great Master of Economic Science, the Profound Thinker, and the Careful Observer of Social Phenomena, My Venerable Friend and Teacher, Henry C. Carey." Ibid., p. 8. On the link between high tariffs and greenbacks for the Pennsylvania ironmasters, see Sharkey, *Money, Class and Party*, chap. 4.

One of the most flamboyant advocates of greenback inflation in the post-war era was the Wall Street stock speculator Richard Schell. In 1874, Schell became a member of Congress, where he proposed an outrageous pre-Keynesian scheme in the spirit of Keynes' later dictum that so long as money is *spent*, it doesn't matter what the money is spent on, be it pyramid-building or digging holes in the ground.[135] Schell seriously urged the federal government to dig a canal from New York to San Francisco, financed wholly by the issue of greenbacks. Schell's enthusiasm was perhaps matched only by the notorious railroad speculator and economic adventurer George Francis Train, who called repeatedly for immense issues of greenbacks. "Give us greenbacks we say," Train thundered in 1867, "and build cities, plant corn, open coal mines, control railways, launch ships, grow cotton, establish factories, open gold and silver mines, erect rolling mills. . . .Carry my resolution and there is sunshine in the sky."[136]

The Panic of 1873 was a severe blow to many overbuilt railroads, and it was railroad men who led in calling for more greenbacks to stem the tide. Thomas Scott, Collis P. Huntington, leader of the Central Pacific Railroad, Russel Sage, and other railroad men joined in the call for greenbacks. So strong was their influence that the *Louisville Courier-Journal*, in April 1874, declared: "The strongest influence at work in Washington upon the currency proceeded from the railroads. . . .The great inflationists after all, are the great trunk railroads."[137]

The greenback problem after the Civil War was greatly complicated by the massive public debt that lay over the heads of the American people. A federal debt, which had tallied only $64.7 million in 1860, amounted to the huge amount of $2.32 billion in 1866. Many ex-Jacksonian Democrats, led by Sen. George H. Pendleton of Ohio, began to agitate for further issue of greenbacks *solely* for the purpose of redeeming the principal of federal debts contracted in greenbacks during the war.[138] In a sense, then, hard-money hostility to both inflation and the public debt were now at odds. In a sense, the Pendletonians were

[135]Thus, Keynes wrote: " 'To dig holes in the ground,' paid for out of savings will increase, not only employment, but the real national dividend of useful goods and services." John Maynard Keynes, *The General Theory of Employment Interest and Money* (New York: Harcourt, Brace, 1936), p. 220. On pyramid-building, see ibid., pp. 220 and 131.

[136]Unger, *Greenback Era*, pp. 45–48.

[137]Ibid., p. 222.

[138]The federal government had contracted to redeem the *interest* on the wartime public debt in gold, but nothing was contracted about the repayment of the principal.

motivated by a sense of poetic justice, of paying inflated debts in inflated paper, but in doing so they lost sight of the broader hard money goal.[139] This program confused the party struggles of the post-Civil War period, but ultimately it is safe to say that the Democrats had a far greater proportion of congressmen devoted to hard money and to resumption than did the Republicans. Thus, Secretary of the Treasury Hugh McCulloch's "Loan Bill" of March 1866, which provided for contraction of greenbacks in preparation for resumption of specie payments, was passed in the House by a Republican vote of 56-52, and a Democratic vote of 27-1. And in April 1874, the "Inflation Bill," admittedly vetoed later by President Grant, which provided for expansion of greenbacks and of national bank notes, was passed in the House by a Republican vote of 105 to 64, while the Democrats voted against by the narrow margin of 35 to 37.[140]

In the meantime, despite repeated resolutions for resumption of specie payments in 1865 and 1869, the dominant Republican Party continued to do nothing for actual resumption. The Pendleton Plan was adopted by the Democrats in their 1868 platform, and the Republican victory in the presidential race that year was generally taken as a conclusive defeat for that idea. Finally, however, the Democratic sweep in the congressional elections of 1874 forced the Republicans into a semblance of unity on monetary matters, and, in the lame-duck congressional session led by Sen. John Sherman, they came up with the Resumption Act of January 1875.

Despite the fact that the Resumption Act ultimately resulted in specie resumption, it was not considered a hard-money victory by contemporaries. Sherman had forged a compromise between hard and soft money forces. It is true that the U.S. government was supposed to buy gold with government bonds to prepare for resumption on January 1, 1879. But this resumption was four years off, and Congress had expressed intent to resume several times before. And in the meantime, the soft-money men were appeased by the fact that the bill immediately eliminated the $300 million limit on national bank notes, in a provision known as "free banking." The only hard-money compensation was an 80 percent pro-rata contraction of greenbacks to partially offset any new

[139]Similar motivations had impelled many hard-money anti-Federalists during the 1780s to advocate the issue of state paper money for the *sole* purpose of redeeming swollen wartime public debts.

[140]On the McCulloch Loan Bill, see Sharkey, *Money, Class, and Party*, p. 75; on the Inflation Bill, see Unger, *Greenback Era*, p. 410.

national bank notes.[141] The bulk of the opposition to the Resumption Act was by hard-money congressmen, who, in addition to pointing out its biased ambiguities, charged that the contracted greenbacks could be reissued instead of retired. Hard-money forces throughout the country had an equally scornful view of the Resumption Act. In a few years, however, they rallied as resumption drew near.

That the Republicans were generally less than enthusiastic about specie resumption was revealed by the Grant administration's reaction to the Supreme Court's decision in the first legal tender case. After the end of the war, the question of the constitutionality of legal tender came before the courts (we have seen that the California and Oregon courts decided irredeemable paper to be unconstitutional). In the large number of state court decisions on greenbacks before 1870, every Republican judge but one upheld their constitutionality, whereas every Democratic judge but two declared them unconstitutional.[142]

The greenback question reached the U.S. Supreme Court in 1867, and was decided in February 1870, in the case of *Hepburn* v. *Griswold*. The Court held, by a vote of 5 to 3, with all the Democratic judges voting with the majority and the Republicans in the minority. Chief Justice Salmon P. Chase, who delivered the decision denouncing his own action as Secretary of the Treasury as unnecessary and unconstitutional, had swung back to the Democratic Party and had actually been a candidate for the presidential nomination at the 1868 convention.

The Grant administration was upset by *Hepburn* v. *Griswold*, as were the railroads, who had accumulated a heavy long-term debt, which would now be payable in more valuable gold. As luck would have it, however, there were two vacancies on the Court, one of which was created by the retirement of one of the majority judges. Grant appointed not only two Republican judges, but two railroad lawyers whose views on the subject were already known.[143] The new 5-4 majority dutifully

[141]This political and compromise interpretation of the Resumption Act successfully revises the previous hard-money view of this measure. See Unger, *Greenback Era*, pp. 249–263.

[142]See Charles Fairman, "Mr. Justice Bradley's Appointment to the Supreme Court and the Legal Tender Cases," *Harvard Law Review* (May 1941), p. 1131; cited in Unger, *Greenback Era*, p. 174.

[143]The first new justice, William Strong of Pennsylvania, had been a top attorney for the Philadelphia and Reading Railroad, and a director of the Lebanon Valley Railroad. The second jurist, Joseph P. Bradley, was a director of the Camden and Amboy Railroad and of the Morris and Essex Railroad, in New Jersey. On the railroad ties of Strong and Bradley, see Philip H. Burch, Jr., *Elites in American History, Vol. II, The Civil War to the New*

and quickly reconsidered the question, and, in May 1871, reversed the previous Court in the fateful decision of *Knox* v. *Lee*. From then on, paper money would be held consonant with the U.S. Constitution.

The National Banking System was ensconced after the Civil War. The number of banks, national bank notes, and deposits all pyramided upward, and after 1870 state banks began to boom as deposit-creating institutions. With lower requirements and fewer restrictions than the national banks, they could pyramid on top of national banks. The number of national banks increased from 1,294 in 1865 to 1,968 in 1873, while the number of state banks rose from 349 to 1,330 in the same period. Total state and national bank notes and deposits rose from $835 million in 1865 to $1.964 billion in 1873, an increase of 135.2 percent or an increase of 16.9 percent per year. The following year, the supply of bank money leveled off as the Panic of 1873 struck and caused numerous bankruptcies.

As a general overview of the national banking period, we can agree with Klein that "The financial panics of 1873, 1884, 1893, and 1907 were in large part an outgrowth of. . .reserve pyramiding and excessive deposit creation by reserve city and central reserve city banks. These panics were triggered by the currency drains that took place in periods of relative prosperity when banks were loaned up."[144] And yet it must be pointed out that the total money supply, even merely the supply of bank money, did not decrease after the Panic, but merely leveled off.

Orthodox economic historians have long complained about the "Great Depression" that is supposed to have struck the United States in the Panic of 1873 and lasted for an unprecedented six years in 1879. Much of this stagnation is supposed to have been caused by a monetary contraction leading to the resumption of specie payments in 1879. Yet what sort of "depression" is it which saw an extraordinarily large expansion of industry, of railroads, of physical output, of net national product, or real per capita income? As Friedman and Schwartz admit, the decade 1869 to 1879 saw a 3.0 percent per annum increase in money national product, an outstanding real national product growth of 6.8 percent per year in this period, and a phenomenal rise of 4.5 percent per year in real product per capita. Even the alleged "monetary con-

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Deal (New York: Holmes & Meier, 1981), pp. 44–45. On the reaction of the Grant administration, see Unger, *Greenback Era*, pp. 172–178. For a legal analysis of the decisions, see Hepburn, *History of Currency*, pp. 254–264; and Henry Mark Holzer, ed., *Government's Money Monopoly* (New York: Books in Focus, 1981), pp. 99–168.

[144]Klein, *Money and the Economy*, pp. 145–146.

traction" never took place, the money supply increasing by 2.7 percent per year in this period. From 1873–1878, before another spurt of monetary expansion, the total supply of bank money *rose* from $1.964 billion to $2.221 billion—a rise of 13.1 percent or 2.6 percent per year. In short, a modest but definite rise, and scarcely a *contraction*.

It should be clear, then, that the Great Depression of the 1870s is merely a myth—a myth brought about by the misinterpretation of the fact that prices in general fell sharply during the entire period. Indeed they fell from the end of the Civil War until 1879. Friedman and Schwartz estimated that prices in general fell from 1869 to 1879 by 3.8 percent per annum. Unfortunately, most historians and economists are conditioned to believe that steadily and sharply falling prices *must* result in depression: hence their amazement at the obvious prosperity and economic growth during this era. For they have overlooked the fact that in the natural course of events, when government and the banking system do not increase the money supply very rapidly, free-market capitalism will result in an increase of production and economic growth so great as to swamp the increase of money supply. Prices will fall, and the consequences will be not depression or stagnation, but prosperity (since costs are falling, too) economic growth, and the spread of the increased living standard to all the consumers.[145]

Indeed, recent research has discovered that the analogous "Great Depression" in England in this period was also a myth, and due to a confusion between a contraction of prices and its alleged inevitable effect on a depression of prices and its alleged inevitable effect on a depression of business activity.[146]

It might well be that the major effect of the Panic of 1873 was, not to initiate a Great Depression, but to cause bankruptcies in overinflated banks and in railroads riding on the tide of vast government subsidy and bank speculation. In particular, we may note Jay Cooke, one of the creators of the National Banking System and paladin of the public debt. In 1866, he favored contraction of the greenbacks and early resumption because he feared that inflation would destroy the value of government bonds. By the late 1860s, however, the House of Cooke was expanding everywhere, and in particular, had gotten control of

[145]For the bemusement of Friedman and Schwartz, see Milton Friedman and Anna Jacobson Schwartz, *A Monetary History of the United States, 1867–1960* (New York: National Bureau of Economic Research, 1963), pp. 33–44. On totals of bank money, see *Historical Statistics*, pp. 624–625.

[146]S.B. Saul, *The Myth of the Great Depression, 1873–1896* (London: Macmillan, 1969).

the new Northern Pacific Railroad. Northern Pacific had been the recipient of the biggest federal largesse to railroads during the 1860s: a land grant of no less than 47 million acres.

Cooke sold Northern Pacific bonds as he had learned to sell government securities: hiring pamphleteers to write propaganda about the alleged Mediterranean climate of the Northwest. Many leading government officials and politicians were on the Cooke/Northern Pacific payroll, including President Grant's private secretary, Gen. Horace Porter.

In 1869, Cooke expressed his monetary philosophy in keeping with his enlarged sphere of activity: "Why," he asked, "should this Grand and Glorious Country be stunted and dwarfed—its activities chilled and its very life blood curdled by these miserable 'hard coin' theories—the musty theories of a bygone age—These men who are urging on premature resumption know nothing of the great and growing west which would grow twice as fast if it was not cramped for the means necessary to build railroads and improve farms and convey the produce to market." But in 1873, a remarkable example of poetic justice struck Jay Cooke. The overbuilt Northern Pacific was crumbling, and a Cooke government bond operation provided a failure. So the mighty House of Cooke—"stunted and dwarfed" by the market economy—crashed and went bankrupt, touching off the Panic of 1873.[147]

After passing the Resumption Act in 1875, the Republicans finally stumbled their way into resumption in 1879, fully 14 years after the end of the Civil War. The money supply did not contract in the late 1870s because the Republicans did not have the will to contract in order to pave the way for resumption. Resumption was finally achieved after substantial sales of U.S. bonds for gold in Europe by Secretary of the Treasury Sherman.

Return to the gold standard in 1879 was almost blocked, in the last three years before resumption, by the emergence of a tremendous agitation, heavily in the West but also throughout the country, for the free coinage of silver. The United States mint ratios had been undervaluing silver since 1834, and in 1853 de facto gold monometallism was established because silver was so far undervalued as to drive fractional silver coins out of the country. Since 1853, the United States, while de jure on a bimetallic standard at 16:1, with the silver dollar still technically in circulation though nonexistent, was actually on a gold mono-

[147]Unger, *Greenback Era*, pp. 46–47, 221.

metallic standard with lightweight subsidiary silver coins for fractional use.

In 1872, it became apparent to a few knowledgeable men at the U.S. Treasury that silver, which had held at about 15.5 to 1 since the early 1860s, was about to suffer a huge decline in value. The major reason was the realization that European nations were shifting from a silver to a gold standard, thereby decreasing their demand for silver. A subsidiary reason was the discovery of silver mines in Nevada and other states in the West. Working rapidly, these Treasury men, along with Sen. Sherman, slipped through Congress in February 1873 a seemingly innocuous bill which in effect discontinued the minting of any further silver dollars. This was followed by an act of June 1874, which completed the demonetization of silver by ending the legal tender quality of all silver dollars above the sum of $5. The timing was perfect, since it was in 1874 that the market value of silver fell to greater than 16:1 to gold for the first time. From then on, the market price of silver fell steadily, declining to nearly 18:1 in 1876, over 18:1 in 1879, and reaching the phenomenal level of 32:1 in 1894.

In short, after 1874 silver was no longer undervalued but overvalued, and increasingly so, in terms of gold, at 16:1. Except for the acts of 1873 and 1874, labeled by the pro-silver forces as "The Crime of 1873," silver would have flowed into the United States, and the country would have been once again on a de facto monometallic silver standard. The champions of greenbacks, the champions of inflation, saw a "hard-money" way to increase greatly the amount of American currency: the remonetization of a flood of new overvalued silver. The agitation was to remonetize silver by "the free and unlimited coinage of silver at 16 to 1."

It should be recognized that the silverites had a case. The demonetization of silver was a "crime" in the sense that it was done shiftily, deceptively, by men who knew that they wanted to demonetize silver before it was too late and have silver replace gold. The case for gold over silver was a strong one, particularly in an era of rapidly falling value of silver, but it should have been made openly and honestly. The furtive method of demonetizing silver, the "crime against silver," was in part responsible for the vehemence of the silver agitation for the remainder of the century.[148]

[148]For the best discussion of the crime against silver, see Allen Weinstein, *Prelude to Populism: Origins of the Silver Issue, 1867–1878* (New Haven: Yale University Press, 1970), pp. 8–32. Also see Paul M. O'Leary, "The Scene of the Crime of 1873 Revisited: A Note," *Journal of Political Economy* 68 (1960): 388–392.

Ultimately, the administration was able to secure the resumption of payments in gold, but at the expense of submitting to the Bland-Allison Act of 1878, which mandated that the Treasury purchase $2-$4 million of silver per month from then on.

It should be noted that this first silver agitation of the late 1870s, at least, cannot be considered an "agrarian" or a particularly Southern and Western movement. The silver agitation was broadly based throughout the nation, except in New England, and was, moreover, an urban movement. As Weinstein points out:

> Silver began as an urban movement, furthermore, not an agrarian crusade. Its original strongholds were the large towns and cities of the Midwest and middle Atlantic states, not the country's farming communities. The first batch of bimetallist leaders were a loosely knit collection of hard money newspaper editors, businessmen, academic reformers, bankers, and commercial groups.[149]

With the passage of the Silver Purchase Act of 1878, silver agitation died out in America, to spring out again in the 1890s.

The Gold Standard Era with the National Banking System, 1879-1913

The record of 1879-1896 is very similar to the first stage of the alleged Great Depression from 1873 to 1879. Once again, we have a phenomenal expansion of American industry, production, and real output per head. Real reproducible, tangible wealth per capita rose at the decadel peak in American history in the 1880s, at 3.8 percent per annum. Real net national product rose at the rate of 3.7 percent per year from 1879 to 1897, while per capita net national product increased by 1.5 percent per year.

Once again, orthodox economic historians are bewildered, for there should have been a Great Depression, since prices fell at a rate of over 1 percent per year in this period. Just as in the previous period, the money supply grew, but not fast enough to overcome the great increase in productivity and the supply of products. The major difference in the two periods is that money supply rose more rapidly from 1879-1897, by 6 percent per year, compared with the 2.7 percent per year in the earlier era. As a result, prices fell by less, by over 1 percent per annum as contrasted to 3.8 percent. Total bank money, notes and deposits, rose from $2.45 billion to $6.06 billion in this period, a rise of 10.45

[149]Weinstein, *Prelude to Populism*, p. 356.

percent per annum—surely enough to satisfy all but the most ardent inflationists.[150]

For those who persist in associating a gold standard with deflation, it should be pointed out that price deflation in the gold standard 1879-1897 period was considerably less than price deflation from 1873 to 1879, when the United States was still on a fiat greenback standard.

After specie resumption occurred successfully in 1879, the gold premium to greenbacks fell to par and the appreciated greenback promoted confidence in the gold-backed dollar. More foreigners willing to hold dollars meant an inflow of gold into the United States and greater American exports. Some historians have attributed the boom of 1879-1882, culminating in a financial crisis in the latter year, to the inflow of gold coin in the U.S., which rose from $110.5 million in 1879 to $358.3 million in 1882.[151] In a sense this is true, but the boom would never have taken on considerable proportions without the pyramiding of the national banking system, the deposits of which increased from $2.149 billion in 1879 to $2.777 billion in 1882, a rise of 29.2 percent, or 9.7 percent per annum. Wholesale prices were driven up from 90 in 1879 to 108 three years later, a 22.5 percent increase, before resuming their long-run downward path.

A financial panic in 1884, coming during a mild contraction after 1882, lowered the supply of bank money in 1884. Total bank notes and deposits dropped slightly, from $3.19 billion in 1883 to $3.15 billion the following year. The panic was triggered by an overflow of gold abroad, as foreigners began to lose confidence in the willingness of the United States to remain on the gold standard. This understandable loss of confidence resulted from the inflationary sop to the pro-silver forces in the Bland-Allison Silver Purchase Act of 1878. The shift in Treasury balances from gold to silver struck a disquieting note in foreign financial circles.[152]

Before examining the critical decade of the 1890s, it is well to point out in some detail the excellent record of the first decade after the return to gold, 1879-1889.

America went off the gold standard in 1861 and remained off after the war's end. Arguments between hard-money advocates who wanted to eliminate unbacked greenbacks and soft-money men who wanted

[150]Friedman and Schwartz, *Monetary History*, pp. 91–93; *Historical Statistics*, p. 625.

[151]Friedman and Schwartz, *Monetary History*, pp. 98–99.

[152]See Rendigs Fels, *American Business Cycle, 1865–1897* (Chapel Hill, N.C.: University of North Carolina Press, 1959), pp. 130–131.

to increase them raged through the 1870s until the Grant administration decided in 1875 to resume redemption of paper dollars into gold at pre-war value on the first day of 1879. At the time (1875) greenbacks were trading at a discount of roughly 17 percent against the pre-war gold dollar. A combination of outright paper-money deflation and increase in official gold holdings enabled a return to gold four years later, which set the scene for a decade of tremendous economic growth.

Economic recordkeeping a century ago was not nearly as well developed as today, but a clear picture comes through nonetheless. The *Encyclopedia of American Economic History* calls the period under review "one of the most expansive in American history. Capital investment was high;. . .there was little unemployment; and the real costs of production declined rapidly."

Prices, Wages, and Real Wages

This is shown most graphically with a look at wages and prices during the decade before and after convertibility. While prices fell during the 1870s and 1880s, wages fell only during the greenback period, and rose from 1879 to 1889.

Wholesale Price Index		
	(1910-1914 = 100)	
Year	Index	% change
1869	151	——
1879	90	−40.4%
1889	81	−10.0%
Consumer Price Index		
1869	138	——
1879	97	−28.8%
1889	93	− 4.2%

Wages			
	(1900-1914 = 100)		
	Urban Labor	Farm Labor	Combined
1869	77	96	87
1879	61	61	61
1889	72	78	75

These figures tell a remarkable story. Both consumer prices and nominal wages fell about 30 percent during the last decade of green-

backs. But from 1879-1889, while prices kept falling, wages rose 23 percent. So real wages, after taking inflation—or the lack of it—into effect, soared.

No decade before or since produced such a sustainable rise in real wages. Two possible exceptions are the period from 1909-1919 (when the index rose from 99 to 140) and 1929-1939 (134-194). But during the first decade real wages plummeted the next year—to 129 in 1920, and did not reach 1919's level until 1934. And during the 1930s real wages also soared, for those fortunate enough to have jobs.

In any event, the contrast to this past decade is astonishing. And while there are many reasons why real wages increase, three necessary conditions must be present. Foremost, an absence of sustained inflation. This contributes to the second condition, a rise in savings and capital formation.

People will not save if they believe their money will be worth less in the future. Finally, technological advancement is obviously important. But it is not enough. The 1970s saw this third factor present, but the absence of the first two caused real wages to fall.

Interest Rates

Sidney Homer writes in his monumental *History of Interest Rates, 2000 B.C. to the Present* that "during the last two decades of the nineteenth century (1880-1900), long-term bond yields in the United States declined almost steadily. The nation entered its first period of low long-term interest rates" finally experiencing the 3-3½ long-term rates which had characterized Holland in the 17th century and Britain in the 18th and 19th: in short, the economic giants of their day.

To gauge long-term rates of the day, it is best not to use the long-term government bonds we would use today as a measure. The National Banking Acts of 1863-1864 stipulated that these bonds had to be used to secure bank notes. This created such a demand for them that, as Homer says, "by the mid 1870's [it] put government bond prices up to levels where their yields were far below acceptable rates of long-term interest." But the Commerce Department tracks the unadjusted index of yields of American railroad bonds. We list the yields for 1878, the year before gold, 1879, and 1889.

Railroad Bond Yields

1878	6.45%
1879	5.98%
1889	4.43%

We stress that with consumer prices about 7 percent lower in 1889 than they had been the decade before, the *real* rate of return by decade's end was well into double-digit range, a bonanza for savers and lenders.

Short-term rates during the last century were considerably more skittish than long-term rates. But even here the decennial averages of annual averages of both three-to six-month commercial paper rates and (overnight) call money during the 1880s declined from what it had been the previous decades:

	Commercial Paper	Call Money
1870-1879	6.46%	5.73%
1880-1889	5.14%	3.98%

A Burst in Productivity

By some measures the 1880s was the most productive decade in our history. In their *A Monetary History of the United States, 1867-1960,* Professors Friedman and Schwartz quote R.W. Goldsmith on the subject: "'The highest decadal rate [of growth of real reproducible, tangible wealth per head from 1805 to 1950] for periods of about ten years was apparently reached in the eighties with approximately 3.8%.' " The statistics give proof to this outpouring of new wealth.

Gross National Product

(1958 prices)

		Total (billions of dollars)	Per capita (in dollars)
Decade average	1869-78	$23.1	$531
"	1879-88	$42.4	$774
"	1889-98	$49.1	$795

This dollar growth was occuring, remember, in the face of general price declines.

Gross Domestic Product

(1929 prices in billions of dollars)

1869-1878	$11.6 (average per year)
1879-1888	$21.2 (average per year)

Gross domestic product almost doubled from the decade before, a far larger percentage jump decade-on-decade than any time since.

Labor Productivity

Manufacturing Output Per Man-Hour

(1958 = 100)

1869	14.7
1879	16.2
1889	20.5

The 26.5 percent increase here ranks among the best in our history. Labor productivity reflects increased capital investment.

Capital Formation

From 1869 to 1879 the total number of business establishments barely rose, but the next decade saw a 39.4 percent increase. Nor surprisingly, a decade of falling prices, rising real income, and lucrative interest returns made for tremendous capital investment, insuring future gains in productivity.

Purchase of Structures and Equipment

(total, in 1958 prices, in billions of dollars)

1870	$ .4
1880	$ .4
1890	$2.0

This massive 500 percent decade-on-decade increase has never since been even closely rivalled. It stands in particular contrast to the virtual stagnation witnessed by the 1970s.

Private and Public Capital Formation

(total gross, in billions, 1929 prices)

Average	1872-1876	$2.6
"	1877-1881	$3.7
"	1882-1886	$4.5
"	1887-1891	$5.9

These five-year averages are not as "clean" as some other figures, but still show a rough doubling of total capital formation from the '70s to the '80s.

It has repeatedly been alleged that the late 19th century, the "golden age of the gold standard" in the United States, was a period especially

harmful to farmers. The facts, however, tell a different story. While manufacturing in the 1880s grew more rapidly than did agriculture ("The Census of 1890," report Friedman and Schwartz, "was the first in which the net value added by manufacturing exceeded the value of agricultural output"), farmers had an excellent decade.

Number of Farms	
(in thousands)	
1880	4,009
1890	4,565
Farm Land	
(in millions of acres)	
1880	536,182
1890	623,219
Farm Productivity	
(persons supplied by farm worker)	
1880	5.1
1890	5.6
Value of Farm Gross Output and Product	
(1910-1914 dollars, in millions)	
1880	$4,129
1890	$4,990

So farms, farmland, productivity, and production all increased in the 1880s, even while commodities prices were falling. And as we see below, farm wage rates, even in nominal terms, rose during this time.

Farm Wage Rates	
(per month, with board and room, in 1879, 1889 dollars)	
1879 or 1880	$11.50
1889 or 1890	$13.50

This phenomenal economic growth during the decade immediately after the return to gold convertibility cannot be attributed solely to the gold standard. Indeed all during this time there was never a completely free-market monetary system. The National Banking Acts of 1863-1864 had semicartellized the banking system.

Only certain banks could issue money, but all other banks had to have accounts at these. The financial panics throughout the late 19th century were a result of the arbitrary credit-creation powers of the banking system. While not as harmful as today's inflation mechanism, it was still a storm in an otherwise fairly healthy economic climate.

The fateful decade of the 1890s saw the return of the agitation for free silver, which had lain dormant for a decade. The Republican Party intensified its longtime flirtation with inflation, by passing the Sherman Silver Purchase Act of 1890, which roughly doubled the Treasury purchase requirement of silver. The Treasury was not mandated to buy 4.5 million ounces of silver per month. Furthermore, payment was to be made in a new issue of redeemable greenback currency, Treasury Notes of 1890, which were to be a full legal tender, redeemable in either gold or silver at the discretion of the Treasury. Not only was this an increased commitment to silver, it was a significant step on the road to bimetallism which—at the depreciated market rates—would mean inflationary silver monometallism. In the same year, the Republicans passed the high McKinley Tariff Act of 1890, which reaffirmed their commitment to high tariffs and soft money.

Another unsettling inflationary move made in the same year was that the New York Subtreasury altered its longstanding practice of settling its clearing house balances in gold coin. Instead, in August 1890, it began using the old greenbacks and the new Treasury notes of 1890. As a result, these paper currencies largely replaced gold paid in customs receipts in New York.[153]

Uneasiness about the shift from gold to silver and the continuing free-silver agitation caused foreigners to lose further confidence in the U.S. gold standard, and to cause a drop in capital imports and severe gold outflows from the country. This loss of confidence exerted contractionist pressure on the American economy and reduced potential economic growth during the early 1890s.

Fears about the American gold standard were intensified in March 1891, when the Treasury suddenly imposed a stiff fee on the export of gold bars taken from its vaults so that most gold exported from then on was American gold coin rather than bars. A shock went through the financial community, in the U.S. and abroad, when the United States Senate passed a free-silver coinage bill in July 1892; the fact that the bill went no further was not enough to restore confidence in the gold standard. Banks began to insert clauses in loans and mortgages

[153]See Friedman and Schwartz, *Monetary History*, pp. 106, 106n.

requiring payment in gold coin; clearly the dollar was no longer trusted. Gold exports intensified in 1892, the Treasury's gold reserve declined, and a run ensued on the U.S. Treasury. In February 1893, the Treasury persuaded New York banks, which had drawn down $6 million on gold from the Treasury by presenting treasury notes for redemption, to return the gold and re-acquire the paper. This act of desperation was scarcely calculated to restore confidence in the paper dollar. The Treasury was paying the price for specie resumption without bothering to contract the paper notes in circulation. The gold standard was therefore inherently shaky, resting only on public confidence, and that was giving way under the silver agitation and under desperate acts by the Treasury.

Poor Grover Cleveland, a hard-money Democrat, assumed the Presidency in the middle of this monetary crisis. Two months later, the stock market collapsed, and a month afterwards, in June 1893, distrust of the fractional-reserve banks led to massive bank runs and bank failures throughout the country. Once again, however, many banks, national and state, especially in the West and South, were allowed to suspend specie payments. The Panic of 1893 was on. In a few months, Eastern bank suspension occurred, beginning with New York City. The total money supply—gold coin, treasury paper, national bank notes, and national and state bank deposits—fell by 6.3 percent in one year, from June 1892 to June 1893. Suspension of specie payments resulted in deposits—which were no longer immediately redeemable in cash—going to a discount in relation to currency during the month of August. As a result, deposits became less useful, and the public tried its best to intensify its exchange of deposits for currency.

By the end of 1893, the panic was over as foreign confidence rose with the Cleveland administration's successful repeal of the Sherman Silver Purchase Act in November of that year. Further silver agitation of 1895 endangered the Treasury's gold reserve, but heroic acts of the Treasury, including buying gold from a syndicate of bankers headed by J. P. Morgan and August Belmont, restored confidence in the continuance of the gold standard.[154] The victory of the free-silver Bryanite forces at the 1896 Democratic convention caused further problems for gold, but the victory of the pro-gold Republicans put an end to the problem of domestic and foreign confidence in the gold standard.

[154]On silver agitation, the gold reserves, and the Panic of 1893, see Friedman and Schwartz, *Monetary History*, pp. 104–133, 705.

1896: The Transformation of the American Party System

Orthodox economic historians attribute the triumph of William Jennings Bryan in the Democratic Convention of 1896, and his later renominations for President, as a righteous rising up of the "people" demanding inflation over the "interests" holding out for gold. Friedman and Schwartz attribute the rise of Bryanism to the price contraction of the last three decades of the 19th century, and the triumph of gold and disappearance of the "money" issue to the price rise after 1896.[155]

This conventional analysis overlooks several problems. First, if Bryan represented the "people" versus the "interests," why did Bryan lose and lose soundly, not once but three times? Why did gold triumph long before any price inflation became obvious, in fact at the depths of price contraction in 1896?

But the main neglect of the conventional analysis is the disregard of the highly illuminating insights provided in the past 15 years by the "new political history" of 19th-century American politics and its political culture. The new political history began by going beyond national political issues (largely economic) and investigating state and local political contests.[156] It also dug into the actual voting records of individual parishes, wards, and counties, and discovered how people voted and why they voted the way they did. The work of the new political history is truly interdisciplinary, for its methods range from sophisticated techniques for voting analysis to illuminating insights into American ethnic religious history.

In the following pages, we shall present a summary of the findings of the new political history on the American party structure of the late 19th century and after, and on the transformation of 1896 in particular.

First, the history of American political parties is one of successive "party systems." Each "party system" lasts several decades, with each

[155]Friedman and Schwartz, *Monetary History*, pp. 113–119.

[156]The *locus classicus* of the new political history in late 19th-century politics is Paul Kleppner, *The Cross of Culture: A Social Analysis of Midwestern Politics, 1850–1900* (New York: The Free Press, 1970). Also see other writings of the prolific Kleppner, especially his magnum opus, *The Third Electoral System, 1853–1892: Parties, Voters, and Political Cultures* (Chapel Hill, N.C.: University of North Carolina, 1979). On the late 19th century, see also Richard J. Jensen, *The Winning of the Midwest: Social and Political Conflict, 1888–1896* (Chicago: University of Chicago Press, 1971). On the Civil War period and earlier, see the works of Ronald Formisano, Joel Sibley, and William Shade. For Eastern confirmation on the Kleppner and Jensen findings on the Middle West, see Samuel T. McSeveney, *The Politics of Depression: Political Behavior in the Northeast, 1893–1896* (Oxford: Oxford University Press, 1972).

particular party having a certain central character; in many cases, the name of the party can remain the same but its essential character can drastically change—in the so-called "critical elections." In the 19th century the second party system (Whigs v. Democrats), lasting from about 1832 to 1854, was succeeded by the third party system (Republicans v. Democrats), lasting from 1854 to 1896.

Characteristic of both party systems was that each party was committed to a distinctive ideology clashing with the other, and these conflicting worldviews made for fierce and close contests. Elections were particularly hard fought. Interest was high since the parties offered a "choice not an echo," and so the turnout rate was remarkably high, often reaching 80 to 90 percent of eligible voters. More remarkably, candidates did not, as we are used to in the 20th century, fuzz their ideology during campaigns in order to appeal to a floating, ideologically indifferent, "independent voter." There were very few independent voters. The way to win elections, therefore, was to bring out your vote, and the way to do that was to intensify and strengthen your ideology during campaigns. Any fuzzing over would lead the Republican or Democratic constituents to stay home in disgust, and the election would be lost. Very rarely would there be a crossover to the other, hated party.

One problem that strikes anyone interested in 19th-century political history is: How come the average person exhibited such great and intense interest in such arcane economic topics as banking, gold and silver, and tariffs? Thousands of half-literate people wrote embattled tracts on these topics, and voters were intensely interested. Attributing the answer to inflation or depression, to seemingly evident economic interests, as do Marxists and other economic determinists, simply won't do. The far greater depressions and inflations of the 20th century have not educed nearly as much mass interest in economics as did the milder economic crises of the past century.

Only the findings of the new political historians have cleared up this puzzle. It turns out that the mass of the public was not necessarily interested in what the elites, or national politicians, were talking about. The most intense and direct interest of the voters was applied to local and state issues, and on these local levels the two parties waged an intense and furious political struggle that lasted from the 1830s to the 1890s.

The beginning of this century-long struggle began with the profound transformation of American Protestantism in the 1830s. This transformation swept like wildfire across the Northern states, particularly Yankee territory, during the 1830s, leaving the South virtually untouched.

The transformation found particular root among Yankee culture, with its aggressive and domineering spirit.[157]

This new Protestantism—called "pietist"—was born in the fires of Charles Finney and the great revival movement of the 1830s. Its credo was roughly as follows: Each individual is responsible for his own salvation, and it must come in an emotional moment of being "born again." Each person can achieve salvation; each person must do his best to save everyone else. This compulsion to save others was more than simple missionary work; it meant that one would go to hell unless he did his best to save others. But since each person is alone and facing the temptation to sin, this role can only be done by the use of the State. The role of the State is to stamp out sin and create a new Jerusalem on Earth.[158,159]

The pietists defined sin very broadly. In particular, the most important politically was "Demon rum," which clouded men's minds and therefore robbed them of their theological free will. In the 1830s, the evangelical pietists launched a determined and indefatigable prohibitionist crusade on the state and local level which lasted a century. Second was any activity on Sunday except going to church, which led to a drive for Sabbatarian blue laws. Drinking on Sunday was of course a double sin, and hence particularly heinous. Another vital thrust of the new Yankee pietism was to try to extirpate Roman Catholicism, which robs communicants of their theological free will by subjecting them to the dictates of priests who are agents of the Vatican. If Roman Catholics could not be prohibited *per se*, their immigration could be slowed down or stopped. And since their adults were irrevocably steeped in sin, it became vital for crusading pietists to try to establish public schools as compulsory forces for Protestantizing society or, as the pietists liked to put it, to "Christianize the Catholics." If the adults

[157]"Yankees" originated in rural New England and then emigrated westward in the early 19th century, settling in upstate (particularly western) New York, northern Ohio, northern Indiana, and northern Illinois.

[158]These pietists have been called "evangelical pietists" to contrast them with the new Southern pietists, called "salvational pietists," who did not include the compulsion to save everyone else in their doctrine.

[159]These pietists are distinguished from contemporary "fundamentalists" because the former were "post-millenialists" who believe that the world must be shaped up and Christianized for a millenium before Jesus will return. In contrast, contemporary fundamentalists are "pre-millenials" who believe that the Second Coming of Jesus will usher in the millenium. Obviously, if everyone must be shaped up before Jesus can return, there is a much greater incentive to wield State power to stamp out sin.

are hopeless, the children must be saved by the public school and compulsory attendance laws.

Such was the political program of Yankee pietism. Not all immigrants were scorned. British, Norwegian, or other immigrants who belonged to pietist churches (whether nominally Calvinist or Lutheran or not) were welcomed as "true Americans." The Northern pietists found their home, almost to a man, first in the Whig Party, and then in the Republican Party. And they did so, too, among the Greenback and Populist parties, as we shall see further below.

There came to this country during the century an increasing number of Catholic and Lutheran immigrants, especially from Ireland and Germany. The Catholics and High Lutherans, who have been called "ritualists" or "liturgicals," had a very different kind of religious culture. Each person is not responsible for his own salvation directly; if he is to be saved, he joins the church and obeys its liturgy and sacraments. In a profound sense, then, the church is responsible for one's salvation, and there is no need for the State to stamp out temptation. These churches, then, especially the Lutheran, had a laissez-faire attitude toward the State and morality. Furthermore, their definitions of "sin" were not nearly as broad as the pietists. Liquor is fine in moderation; drinking beer with the family in beer parlors on Sunday after church was a cherished German (Catholic and Lutheran) tradition; and parochial schools were vital in transmitting religious values to their children in a country where they were in a minority.

Virtually to a man, Catholics and High Lutherans[160] found their home during the 19th century in the Democratic Party. It is no wonder that the Republicans gloried in calling themselves throughout this period "the party of great moral ideas," while the Democrats declared themselves to be "the party of personal liberty." For nearly a century, the bemused liturgical Democrats fought a defensive struggle against people whom they considered "pietist-fanatics" constantly swooping down trying to outlaw their liquor, their Sunday beer parlors, and their parochial schools.

How did all this relate to the economic issues of the day? Simply that the leaders of each party went to their voting constituents and "raised their consciousness" to get them vitally interested in national economic

[160]Lutherans, then as now, were split into many different synods, some highly liturgical, others highly pietist, and still others in between. Paul Kleppner has shown a one-to-one correlation between the degree of liturgicalness and the percentage of Democratic Party votes among the different synods.

questions. Thus, the Republican leaders would go to their rank-and-file and say: "Just as we need Big Paternalistic Government on the local and state level to stamp out sin and compel morality, so we need Big Government on the national level to increase everyone's purchasing power through inflation, keeping out cheap foreign goods (tariffs), or keeping out cheap foreign labor (immigration restrictions)."

And for their part, the Democratic leaders would go to their constituents and say: "Just as the Republican fanatics are trying to take away your liquor, your beer parlors, and your parochial schools, so the same people are trying to keep out cheap foreign goods (tariffs), and trying to destroy the value of your savings through inflation. Paternalistic government on the federal level is just as evil as it is at home."

So statism and libertarianism were expanded to other issues and other levels. Each side infused its economic issues with a moral fervor and passion stemming from their deeply held religious values. The mystery of the passionate interest of Americans in economic issues in the epoch is solved.

Both in the second party and third party systems, however, the Whigs and then the Republicans had a grave problem. Partly because of demographics—greater immigration and higher birth rates—the Democratic/liturgicals were slowly but surely becoming the majority party in the country. The Democrats were split asunder by the slavery question in the 1840s and '50s. But now, by 1890, the Republicans saw the handwriting on the wall. The Democratic victory in the congressional races in 1890, followed by the unprecedented landslide victory of Grover Cleveland carrying *both* houses of Congress in 1892, indicated to the Republicans that they were becoming doomed to be a permanent minority.

To remedy the problem, the Republicans, in the early 1890s, led by Ohio Republicans William McKinley and Marc Hanna, launched a shrewd campaign of reconstruction. In particular, in state after state, they ditched the prohibitionists, who were becoming an embarrassment and losing the Republicans large numbers of German Lutheran votes. Also, they modified their hostility to immigration. By the mid-1890s, the Republicans had moved rapidly toward the center, toward fuzzing over their political pietism.

In the meanwhile, an upheaval was beginning to occur in the Democratic Party. The South, by now a one-party Democratic region, was having its own pietism transformed by the 1890s. Quiet pietists were now becoming evangelical, and Southern Protestant organizations began to call for prohibition. Then the new, sparsely settled Mountain states,

many of them with silver mines, were also largely pietist. Moreover, a power vacuum, which would ordinarily have been temporary, had been created in the national Democratic Party. Poor Grover Cleveland, a hard-money laissez-faire Democrat, was blamed for the Panic of 1893, and many leading Cleveland Democrats lost their gubernatorial and senatorial posts in the 1894 elections. The Cleveland Democrats were temporarily weak, and the Southern-Mountain coalition was ready to hand. Seizing his opportunity, William Jennings Bryan and his pietist coalition seized control of the Democratic Party at the momentous convention of 1896. The Democratic Party was never to be the same again.[161]

The Catholics, Lutherans, and the laissez-faire Cleveland Democrats were in mortal shock. The "party of our fathers" was lost. The Republicans, who had been moderating their stance anyway, saw the opportunity of a lifetime. At the Republican convention, Rep. Henry Cabot Lodge, representing the Morgans and the pro-gold standard Boston financial interests, told McKinley and Hanna: Pledge yourself to the gold standard—the basic Cleveland economic issue—and drop your silverite and greenback tendencies, and we will all back you. Refuse, and we will support Bryan or a third party. McKinley struck the deal, and from then on, the Republicans, in 19th-century terms, were a centrist party. Their principles were now high tariffs and the gold standard, and prohibition was quietly forgotten.

What would the poor liturgicals do? Many of them stayed home in droves, and indeed the election of 1896 marks the beginning of the great slide downward in voter turnout rates that continues to the present day. Some of them, in anguish at the pietist, inflationist, and prohibitionist Bryanites, actually conquered their anguish and voted Republican for the first time in their lives. The Republicans, after all, had dropped the hated prohibitionists and adopted gold.

The election of 1896 inaugurated the fourth party system in America. From a third party system of closely fought, seesawing races between a pietist/statist Republican vs. a liturgical/libertarian Democratic Party, the fourth party system consisted of a majority centrist Republican party as against a minority pietist Democratic party. After a few years, the Democrats lost their pietist nature, and they too became a centrist, though usually minority party, with a moderately statist ideology scarcely

[161]Grover Cleveland himself, of course, was neither a Roman Catholic nor a Lutheran. But he was a Calvinist Presbyterian who detested the takeover of the Presbyterian Church by the pietists.

distinguishable from the Republicans. So the fourth party system went until 1932.

A charming anecdote, told us by Richard Jensen, sums up much of the 1896 election. The heavily German city of Milwaukee had been mainly Democratic for years. The German Lutherans and Catholics in America were devoted, in particular, to the gold standard and were bitter enemies of inflation. The Democratic nomination for Congress in Milwaukee had been obtained by a Populist-Democrat, Richard Schilling. Sounding for all the world like modern monetarists or Keynesians, Schilling tried to explain to the assembled Germans of Milwaukee in a campaign speech that it didn't really matter what commodity was chosen as money, that "gold, silver, copper, paper, sauerkraut or sausages" would do equally well as money. At that point, the German masses of Milwaukee laughed Schilling off the stage, and the shrewdly opportunistic Republicans adopted as their campaign slogan "Schilling and Sauerkraut" and swept Milwaukee.[162]

The Greenbackers and later the pro-silver, inflationist, Bryanite Populist Party were not "agrarian parties"; they were collections of pietists aiming to stamp out personal and political sin. Thus, as Kleppner points out, "The Greenback Party was less an amalgamation of economic pressure groups than an ad hoc coalition of 'True Believers,' 'ideologues,' who launched their party as a 'quasi-religious' movement that bore the indelible hallmark of 'a transfiguring faith.'" The Greenbackers perceived their movement as the "religion of the Master in motion among men." And the Populists described their 1890 free-silver contest in Kansas not as a "political campaign," but as "a religious revival, a crusade, a pentecost of politics in which a tongue of flame sat upon every man, and each spake as the spirit gave him utterance. . . ." The people had "heard the word and could preach the gospel of Populism." It was no accident, we see now, that the Greenbackers almost invariably endorsed prohibition, compulsory public schooling, and crushing of parochial schools. Or that Populists in many states "declared unequivocally for prohibition" or entered various forms of fusion with the Prohibition Party.[163]

The Transformation of 1896 and the death of the third party system meant the end of America's great laissez-faire, hard-money libertarian

[162]So intense was the German-American devotion to gold and hard money that even German communist-anarchist Johann Most, leader of a movement that sought the abolition of money itself, actually came out for the gold standard during the 1896 campaign! See Jensen, *Winning of the Midwest*, pp. 293–295.

[163]Kleppner, *Third Electoral System*, pp. 291–296.

party. The Democratic Party was no longer the party of Jefferson, Jackson, and Cleveland. With no further political embodiment for laissez-faire in existence, and with both parties offering an echo not a choice, public interest in politics steadily declined. A power vacuum was left in American politics for the new corporate statist ideology of progressivism, which swept both parties (and created a short-lived Progressive Party) in America after 1900. The Progressive Era of 1900–1918 fastened a welfare-warfare state on America which has set the mold for the rest of the 20th century. Statism arrived after 1900 not because of inflation or deflation, but because a unique set of conditions had destroyed the Democrats as a laissez-faire party and left a power vacuum for the triumph of the new ideology of compulsory cartellization through a partnership of big government, business, unions, technocrats, and intellectuals.

III. Money and Banking in the United States in the 20th Century

After 1896 and 1900, then, America entered a progressive and predominantly Republican era. Compulsory cartellization in the name of "progressivism" began to invade every aspect of American economic life. The railroads had begun the parade with the formation of the ICC in the 1880s, but now field after field was being centralized and cartellized in the name of "efficiency," "stability," "progress," and the general welfare. Theodore Roosevelt, Taft, and Wilson were each in his way progressives, and each advanced the cause of cartellization, with the process culminating in the Presidency of Woodrow Wilson. In particular, various big business groups, led by the J. P. Morgan interests often gathered in the National Civic Federation and other think tanks and pressure organizations, saw that the voluntary cartels and the industrial merger movements of the late 1890s had failed to achieve monopoly prices in industry. Therefore, they decided to turn to governments, state and federal, to curb the winds of competition and to establish forms of compulsory cartels, in the name, of course, of "curbing big business monopoly" and advancing the general welfare.[1]

America's bankers had long chafed to cartellize the banking industry still further. The National Banking System was a long step forward, from their point of view, but it was still only quasi-centralized. Bank credit and money pyramided on top of New York (and after 1887, also Chicago and St. Louis) banks. But this system was, to use a universally adopted term, "inelastic"—that is, it could not assure the pumping in of more money during contractions or runs on banks. "Inelastic" was a code word for not enough assured inflation of the money supply.[2] The growing consensus, then, was to redirect the banking system by establishing, at long last, a central bank. The central bank would have

[1]See in particular, Gabriel Kolko, *The Triumph of Conservatism: A Reinterpretation of American History*, 1900–1916 (Glencoe, Ill.: The Free Press, 1963.) While in less harsh a form, variants of this interpretation have now swept the field in Progressive Era historiography. Thus, see the works of Samuel Hays, James Weinstein, Arthur Ekrich, Louis Galambos, William Graebner, Jordan Schwarz, Ellis Hawley, Joan Hoff Wilson, and many others.

[2]National banks also had a particular form of "inelasticity." Their issue of notes was limited by their deposit of government bonds at the Treasury. Yet government bonds were generally 40 percent over par, which imposed a penalty on further issue. See Robert Craig West, *Banking Reform and the Federal Reserve, 1863–1923*. (Ithaca: Cornell University Press, 1977).

an absolute monopoly of the note issue, and reserve requirements would then ensure a multilayered pyramiding on top of these central bank notes, which could bail out banks in trouble, and, moreover, could inflate the currency in a smooth, controlled, and uniform manner throughout the nation.

In addition to this chronic problem, the large banks, particularly on Wall Street, saw financial control slipping away from them. The state banks and other non-national banks began to grow instead and outstrip the nationals. Thus, while in the 1870s and the 1880s, most banks were national, by 1896 non-national banks comprised 61 percent of the total number of banks, and by 1913, 71 percent. By 1896, these non-national banks had 54 percent of the total banking resources of the country, and 57 percent in 1913. The inclusion of Chicago and St. Louis as central reserve city banks after 1887 diluted Wall Street's power. With Wall Street no longer able to cope, it was time to turn to the United States government to do the centralizing, cartellizing, and controlling instead.[3]

It often takes a crisis to focus one's mind, and it takes a financial crisis or notable event to move men to institutional reform. The Civil War was the previous occasion for overhaul of the nation's money and banking system. The Panic of 1907 provided the spark for a return to central banking.

The Republicans fulfilled their promise, and, in March 1900, finally placed the United States officially on a monometallic gold standard. All paper was to be redeemable in gold, and silver continued as a subsidiary metal.

An unusual increase in gold production from discoveries in South Africa and Alaska doubled the world's gold stock from 1890 to 1914, causing a rise of U.S. prices of nearly 50 percent from 1897 to 1914, or two and one-half percent per year. Until after World War II, this was the largest sustained rise in prices in peacetime, but still the rise only returned to approximately 1882 levels. In the United States, the gold supply rose at a rate of seven and one-half percent per year in this period. But despite this impact, the bulk of the increase in the supply of money in the period came from bank deposits pyramiding on top of the increase in gold. Thus, from June 1896 to June 1914, total bank deposits rose from $3.43 billion to $14.32 billion, or an increase of 317.5 percent or an annual rise of 17.6 percent—a substantially greater percentage than the seven and one-half percent per year increase of the gold stock. Once again, fractional reserve banking under the National

[3]See Kolko, *Triumph*, p. 140.

Banking System was far more to blame for price rises than international movements in gold.

There were several mini-panics, averted or stopped by infusions of Treasury money, after 1900; but the Panic of 1907 frightened the banks into calling for a new central banking system. Wall Street and the Morgans could not save the New York banks themselves. There was general speculation of specie payment throughout the country, and premiums of currency over deposits. Again, the Treasury was called upon to intervene. The Wall Street banks now knew that they could not cope, and federal government cartellization and support for fractional reserve banking would be necessary.[4]

All banks, and both parties, now agreed on some form of central banking, and the rest of the story is jockeying for minor advantage. The Wilson administration finally established central banking with the creation of the Federal Reserve System in 1913—the symbolic end of the Jacksonian hard-money heritage in the Democratic Party. From 1913 until 1933, the United States would be formally under a gold standard, but actually governed by a Federal Reserve System designed to inflate uniformly and bail out banks in trouble. The banking systems would now be pyramiding on the U.S. issue of paper money.

By establishing the Federal Reserve System, the federal government changed the base of the banking pyramid to the Federal Reserve Banks. Only the Federal Reserve could now print cash, and all member banks could now multiply their deposits on top of Federal Reserve deposits. All national banks were required to join the Federal Reserve, and their gold and other lawful money reserves had to be transferred to the Federal Reserve. The Federal Reserve, in turn, could pyramid its deposits by three-to-one on top of gold. This centralization created an enormous potential for inflationary expansion of bank deposits. Not only that, reserve requirements for the nation's banks were deliberately cut in half in the course of establishing the Federal Reserve System, thereby inviting the rapid doubling of the money supply. Average reserve requirements for all banks prior to the Federal Reserve Act is estimated to be 21 percent. In the original Act of 1913, these were cut to 11.6 percent and three years later to 9.8 percent. It is clear then that the Federal Reserve was designed from the very beginning to be an instrument for a uniform and coordinated inflation of bank money.[5]

[4]See Kolko, *Triumph*, pp. 153–158; Friedman and Schwartz, *Monetary History*, pp. 156ff.

[5]See the illuminating discussion in C. A. Phillips, T. F. McManus, and R. W. Nelson, *Banking and the Business Cycle* (New York: Macmillan, 1937), pp. 23–29.

Indeed, total bank deposits were $14.0 billion at the beginning of the Federal Reserve System in January 1914; after six years, in January 1920, total bank deposits had reached $29.4 billion, an enormous increase of 110 percent or 18.3 percent per year. The creation of the Federal Reserve had made that expansion possible.

The Gold-Exchange Standard

Faced with a global inflation of unprecedented volume and destruction both during World War I and immediately after it, the world attempted to restore monetary stability. But while most officials wanted gold to re-appear as the monetary anchor, they also wanted to be able to keep inflating. Put another way, they wanted to have their cake and eat it too.

Preeminent victims of this delusion were the British; with a burgeoning welfare state in the early 1920s, and especially with rigid wage rates, it was difficult politically to end inflation. Further, Britain wanted to return to gold, but for reasons of national "prestige" she wanted to go back at the pre-war, pre-inflation rate of $4.86 per pound. In effect, she wanted to pretend that the inflation had never happened. There was only one way Britain could get away with enthroning an artificially overvalued pound: by making other countries play along. Other nations had to be persuaded (or forced) into either likewise returning to gold at an unrealistic rate or inflating their monies so as not to cripple Britain's exports (also priced artificially high).

Britain accomplished this at the Genoa Conference of 1922. Emerging from that first post-war economic meeting was not a gold standard, but a more slippery "gold-exchange" standard. Here's how it worked: Only the United States stayed on the old gold-coin standard, where anyone could present notes totalling $20.67 to the Treasury and receive an ounce of gold in return. But Britain began redeeming pounds not just in gold, but in Federal Reserve notes or dollars. Further, the other nations began predominantly using British pounds as their backing. And importantly, when they did pay gold they only paid in large bullion bars, not coins, so the average citizen was not able to redeem his currency. The Genoa Accord made the pound as well as the dollar as good as gold, even though sterling was not in fact a sound currency. Britain now printed its "gold" with American support—the U.S. agreed to inflate enough to keep Britain's reserves of dollars or gold from flowing to America.

This inflationary charade was played to buttress Britain's fading dreams as an imperialist world power. But also involved was the rise of the new doctrines of John Maynard Keynes, who by the early 1920s had become a foe of the "barbarous relic" gold and extolled instead the alleged virtues of a politically managed paper currency. That these ideas became so influential so fast in London banking circles was due in no small part to the catastrophic loss suffered during World War I of truly the finest minds of a generation. These would have normally become leaders during the 1920s. This left a gap which affected Britain as it did few other countries. For at the risk of broad-brush painting, the British are a people that have always put more stock in practical knowledge than the more philosophical French or Germans. But pragmatism depends less on book knowledge than on skills handed down orally. The annihilation of a generation thus created a gap in the continuity of knowledge those more bookish nations escaped. So as one contemporary observer of London financial circles perceptively explained, by the mid-1920s, there would be few remaining grandfathers who remembered the virtues of sound money. And there would be their grandsons "miseducated by Keynes." Between them was a gap, which created such "a barrier in ideas that it was not easy for tradition and practical knowledge to pass."[6]

American Inflation 1922–28

With the "discovery" of open-market operations around 1922, the Federal Reserve thought it had found a way to smooth out business cycles. In practice, it caused a substantial six-year bank credit inflation by buying securities on the open market and printing the money to pay for them. This money—bank reserves—was pyramided severalfold by means of the fractional reserve banking system. This policy of stabilizing the price level was deliberately engineered by the leader of the Federal Reserve System, Benjamin Strong, to follow the protomonetarist theory of Yale economist Irving Fisher.

The 1920s are not often seen as an inflationary period because prices did not rise. But the money supply can rise even without prices rising in absolute terms. The 1920s saw such a burst of American technological advancement and cheaper ways of producing things that the natural tendency was for prices to *fall* (i.e., more goods chasing the same number of dollars). But the inflation caused prices to rise *relative* to

[6]Benjamin Anderson, *Economics and the Public Welfare* (Indianapolis: Liberty Press, 1979), p. 174.

what they would have done. So a "stable" price level was masking the fact that inflation was going on and creating distortions throughout the economy.

Between mid-1922 and April 1928, bank credit expanded by over twice as much as it did to help finance World War I. As with all inflations, this caused speculative excess; in this case, new money poured into the stock market and real estate. The cooling of this speculative fever in 1928 by officials who tightened the money supply because they were finally afraid of the overheated economy led to the Depression, which in turn led to the world's abandonment of the gold standard. We would do well to examine this period closer.

Bailing Out Britain

Britain during this time used her power to treat the pound like gold, as one might expect, keeping interest rates artificially low and inflating recklessly, thus piling up billions of pounds at the Bank of France, which finally began asking for gold. Panicked, the Bank of England in mid-1927 induced the New York Federal Reserve Bank to lower its interest rates and step up open-market purchases of securities, thus fueling inflation further. (This move to make unnecessary the payment of British gold obligations to France and to keep England inflating by causing America to inflate was disguised as "helping the farmer." It was the Kansas City Federal Reserve Bank which first lowered its discount rate, the others following.)

A major reason for the inflationary pro-British policies of the 1920s was the close personal connection formed between Benjamin Strong, the dominant leader of the Federal Reserve System, and Montagu Norman, head of the Bank of England. In several secret conferences with Norman, unknown to the rest of the Federal Reserve or the American government, Strong agreed to inflate money and credit in order to bail out England. The ties between Norman and Strong were not only personal; both were intimately allied with the House of Morgan. Before he became the first leader of the Federal Reserve, Strong was head of the Morgan-created Bankers Trust Company in New York. He was urged to accept the post by his two closest personal friends, Henry P. Davison and Dwight Morrow, both partners at the Morgan Bank. The Morgan connection with Britain was very close; J. P. Morgan and Company was the fiscal agent for the Bank of England and underwrote the massive sale of British bonds in the United States during World War I. Montagu Norman himself had close personal connections

with the United States investment banks and had worked in the offices of Brown Brothers in New York. Only the death of Strong in 1928 ended the inflationary Federal Reserve policy designed to help Britain.

By April of 1928, the new Governors of both the Federal Reserve Board and the New York Federal Reserve Bank, made an effort to hold down bank credit expansion. But those efforts were stymied by following two conflicting goals. Federal Reserve officials wanted both to reduce credit going into stock market speculation yet at the same time not to tighten money either at home or abroad (this latter for fear of pulling gold out of Britain).

And while the anti-inflationist policy predominated, it is not easy to reduce inflation in an economy grown accustomed to it, which by 1928 America had. Further, 1928 was a presidential election year, with great pressure to inflate. It therefore took about a year before the money supply was under control. But as the tables below show, the long money-supply inflation was over by the end of 1928. At mid-1929 money-supply growth was creeping at an annual rate of only 0.7 percent, a marked deceleration from previous years. The depression caused by years of inflation was about to begin, and with it would come the end of the American gold standard.

Total Money Supply of the United States, 1921–29

(in billions of dollars)

Date	Total Money Supply	Percent Annual Change From Previous
1921—June 30	45.30	. . . .
1922—June 30	47.16	4.1
1923—June 30	51.79	9.8
1923—Dec. 31	53.06	4.9
1924—June 30	54.67	6.1
1924—Dec. 31	57.85	11.6
1925—June 30	59.86	7.1
1925—Dec. 31	62.59	9.2
1926—June 30	63.62	3.3
1926—Dec. 31	64.96	4.2
1927—June 30	66.91	6.0
1927—Dec. 31	69.61	8.1
1928—June 30	71.12	4.4
1928—Dec. 31	73.00	5.2
1929—June 30	73.26	0.7

Federal Reserve Bank Credit, 1914–1934
($ millions)

End of Year	Reserve bank credit outstanding: Total loans and securities	Reserve bank credit outstanding: Through purchase of bills and securities
1914	11	0
1915	84	40
1916	222	184
1917	1060	395
1918	2291	526
1919	3090	874
1920	3235	547
1921	1524	379
1922	1326	708
1923	1211	489
1924	1249	927
1925	1395	749
1926	1335	696
1927	1591	1009
1928	1783	717
1929	1548	903
1930	1352	1093
1931	1825	1156
1932	2128	1888
1933	2670	2570
1934	2457	2436

Source: U.S. Department of Commerce, *Historical Statistics of the United States, Colonial Times to 1957*, series X 245–254 (1961), p. 642.

The International Crisis: 1931

The stock market collapse in late 1929 was only a harbinger of things to come. It was not until 1931 that international bank collapses caused abandonment of gold. The first to go was Austria.

Kredit-Anstalt, Austria's largest bank, supported by the Austrian government, had for years been making bad loans on a meager reserve base. Austria had been part of the "sterling bloc," buttressed by Britain—a development resented by France, heavy with gold claims on

Britain. The formation of an Austrian customs union with Germany in late March 1931 was feared by France, who saw it as a step to political union. The French central bank now insisted upon immediate repayment of her short-term debts from Austria and Germany. Austrian banks clearly could not meet their liabilities, and in late May, Kredit-Anstalt went bankrupt, taking Austria off the gold standard. A run on German banks now started. That country had been quickly affected by the tightened American credit conditions in mid-1928 and was quite vulnerable. Runs continued, and even though President Hoover declared on June 20 a moratorium on German debt, France was not immediately inclined to go along. She delayed too long; and on July 15 Germany declared national bankruptcy by going off the gold standard.

It must be said that both these nations fought desperately to maintain gold redemption, and when the end came, each regarded the act with shame. Not so with Britain. The country that had caused the others to inflate for her and did more than any other to bring on the crisis went off the gold standard without a fight.

As runs on British gold increased through the summer, Britain refused to defend the pound by raising interest rates. Instead, as gold flowed out of the banks, the Bank of England created new money to replenish the banks' reserves. The Bank of France cooperated loyally and didn't present many claims. The French bank held sterling claims worth fully seven times its capital, and thus feared for a Britain off the gold standard. Indeed, France joined America in offering massive loans to Britain. But the Bank of England didn't even take full advantage of these credit lines, and two days after assuring the Netherlands Bank (with all its capital in sterling) that England would not go off the gold standard, that is exactly what happened. The announcement was made on September 20, 1931, thus capping 17 years of gradual monetary disintegration.

Britain had for centuries been the world's premier financial power, so that announcement left the world stunned. Moreover, other governments had been deliberately deceived. The capital of the central banks of France and Holland had been made worthless in one day. Governments could no longer trust each other's financial promises, and the stage was set for perhaps the most treacherous decade in international economic relations, a decade from which we have not yet recovered. As Chase economist and contemporary eyewitness Benjamin Anderson recalled, "An immense world asset was destroyed when the Bank of England and the British government broke faith with the world. Years later after we in the United States had also broken faith

with the world, the head of the national bank of one of the Scandinavian countries said, 'I have lost money in sterling. I have lost money in dollars. I have never lost money by holding gold.'"[7]

America Breaks Faith

If sterling was not good, the world asked itself, what was? It looked nervously at America, and had presented claims for $728 million of our gold by the end of October 1931. But Americans thought any such fears were silly. After all, we had continued to pay gold to foreigners even in the crisis of 1895, with a low point of only $41 million of gold in the Treasury. Alone among belligerents, we had not gone off gold in World War I, although we had stopped the export of gold. Certainly few Americans cashed in notes for gold in late 1931. They may have doubted the solvency of some banks, but few if any doubted the good faith of the American government's promise to redeem notes for gold. The platforms of both parties in 1932 contained vows that the gold standard would be maintained. The Democratic platform was largely written by Sen. Carter Glass of Virginia and Cordell Hull, later secretary of state. As events proved, both these men were sincere.

The first sign of shakiness in the American position was a foolish and false statement by President Hoover one month before the November election. He charged that the Federal Reserve had been within two weeks of going off the gold standard earlier that year. The statement was soon proved untrue, but it aroused doubts for the first time in people's minds.

These grew into rumors beginning in late December that President-elect Roosevelt was going to take the country off the gold standard. Roosevelt would not deny them, and American hoarding of gold started for the first time on a grand scale.

The feelings of disquietude were made worse by a paralyzed government. The new President was not to take office until March 4 (the old Inauguration date) and a lame-duck Congress had many members due to retire. In the cabinet departments, anyone whose job was not protected by civil-service rules was preparing to find a new job in the midst of a terrible depression.

Runs on banks by depositors anxious to get cash, and runs on the Federal Reserve Banks by cash holders eager to turn their paper into gold, accelerated. It should not have come as a surprise when on February 14 Michigan became the first state to declare a bank "holiday,"

[7]Anderson, *Economics and the Public Welfare*, p. 254.

i.e., to close the banks to depositors. Michigan had been the home of some of the more reckless lending by banks during the boom. Nine days later Indiana followed, and then a score of states in a cluster. Late on the night of March 3, the big New York banks reluctantly agreed to close; though they were not in trouble, smaller upstate banks were. Roosevelt became President the next day with almost every bank in America closed. He kept them all closed until March 13, when the Federal Reserve banks opened, with others a day or two later. The public, assuaged by FDR's promise that the reopened banks would be good, poured both gold and cash back into the banks. But on March 9 Congress passed, at Roosevelt's request, a bill "to provide relief in the existing national emergency in banking, and other purposes." It gave him the power to do all he pleased regarding money and banking, including authority to seize the American people's gold coins, bullion, and gold certificates.

America Off the Gold Standard

Within a month this power was used. On April 5, it became illegal to own or hold any form of monetary gold, either coins, bullion, or certificates. (Industrial users of gold were not affected.) The banking crisis had been brought on by past inflation. But that crisis, ironically, was made the excuse to abandon the gold standard.

At first, it was stressed that these measures were temporary, only to be used as long as the crisis lasted. But on May 12 a law was passed (the Thomas Amendment to the Agriculture Adjustment Act) which gave the President the ability to increase vastly the money supply and to reduce by up to half the weight of gold dollar. Democratic Senator Glass called it "dishonor. . . . This great government, strong in gold, is breaking its promises to pay gold to widows and orphans to whom it has sold government bonds with a pledge to pay gold coin of the present standard value. It is breaking its promise to redeem its paper money in gold coin of the present standard of value. It's dishonor, sir."[8] Another Democratic Senator, Thomas Gore of Oklahoma, was asked by the President for his opinion about another law (signed on June 5) abolishing the gold clause in all past debt obligations: "Why, that's just plain stealing, isn't it, Mr. President?" Later in Senate debate, Gore also added that "Henry VIII approached total depravity but the vilest thing he ever did was to debase the coin of the realm."[9]

[8]Ibid., p. 315.

[9]Ibid., p. 317.

One final step remained. Using the Gold Reserve Act of January 30, 1934, President Roosevelt arbitrarily reduced the weight of gold that would define each dollar. The "old" dollar had been defined as 25.8 grains of gold, nine-tenths fine. The new devalued dollar would only be worth 15$\frac{5}{21}$ grains, nine-tenths fine. So even the act of abandoning gold was done with the implicit admission that the dollar was still defined in terms of it.

The London Conference

Just as he had taken America off gold, Roosevelt took steps to ensure that there would be no international return to gold. The Gold Bloc of remaining gold standard nations, France, Belgium, Switzerland, Holland, and Italy, had called the London Conference for June 1933 to persuade Great Britain and the United States that "gold should be reestablished as the international measure of exchange value"—and that non-gold countries should agree that their ultimate objective was to restore the gold standard. Even the official American delegation, which included Secretary of State Cordell Hull, approved this declaration, and all were shocked when Roosevelt's reply rejected the proposals. Said he, "The sound internal economic system of a nation is a greater factor in its prosperity than the price of its currency in changing terms of other nations." He thus missed the point of a gold standard, which defines all currencies as an unchanging weight of gold. Incredibly, the President stated that the new order would mean currency stability: "Let me be frank in saying that the United States seeks the kind of dollar which a generation hence will have the same purchasing and debt-paying power as the dollar value we hope to maintain in the near future." Seven months later, the dollar was devalued by 40.9 percent. And we of "a generation hence" know what has happened to the purchase power of the dollar.

Gold Remains the World's Money

Finding no support, all the remaining Gold Block countries stopped redeeming their paper for gold, Holland and Switzerland being the last in 1936. But gold was far from banished. The deteriorating European political situation after 1936 caused everyone from homeless Jews to central bankers to trust gold over any paper currency and to transfer gold to the United States, the safest haven. Further, the stabilization funds set up by governments to stabilize now floating currencies settled their differences in gold. Remembering British and American actions

to change arbitrarily the value of their currencies, no one would trust anything else.

Nor was there reason to. Beggar-thy-neighbor policies were the order of the day. International economic peace was shattered during the 1930s by economic nationalism, competitive devaluation, high tariffs, and exchange controls. Moreover, this poisoned atmosphere played its part in causing World War II.

The Coming of Bretton Woods

Try as they might, countries just before World War II were unable to carry on unsound currency and fiscal policies without seeing their currencies depreciate in terms of gold, their capital flee, or their credit markets crippled. The only pre-war exception was Nazi Germany, which achieved those goals at the cost of a complete and unprecedented economic regimentation. With the coming of war, other nations as well achieved far-reaching control over internal and foreign exchange. The end of war found government officials wishing they could retain those controls, which allowed them to inflate and run budget deficits as they pleased while still having access to easy credit, stable foreign exchange rates, and an absence of international "flight capital."

This was the root idea behind the international monetary conference in mid-1944 at Bretton Woods, New Hampshire, which set up the monetary order that would break down 25 years later. For while the new Bretton Woods system was supposed to restore the currency stability of the gold standard, it was designed to do so without gold. The system placed its trust, not in the workings of the marketplace, but in the judicious restraint of the American government. It therefore contained within itself the seeds of its own destruction.

The Rules of the Game

While the dollar would be convertible into gold at $35 an ounce, it would be so only to foreigners, and after 1962 only to foreign governments. All other currencies were defined in terms of the dollar, which itself was defined as 1/35 of an ounce of gold. But the upshot of the arrangement gave America the power to have the dollar treated as gold. The Bretton Woods rules called for stable currency values: No currency was allowed to either rise or fall more than one percent. The Swiss franc, for example, was, at the time of the agreement (1944), fixed at 22.9 cents; it could go no lower than 22.7 cents and no higher than 23.1 cents. If the franc threatened to break these limits, the Swiss

central bank was obliged to enter the exchange market and either buy or sell francs to hold its currency within the narrow margin. As the franc was usually bumping against the upper limits of this margin, Swiss authorities were usually selling francs and buying dollars. Most other governments were doing the same, especially those whose currencies were not inflating as much as the dollar was. But all of these nations were soothed with the promise that the dollar was indeed "as good as gold," and that any foreign holder of dollars, individual or government, could present American currency to the U.S. Treasury at any time to collect one ounce of gold for 35 of their paper dollars. Many, of course, took advantage of this opportunity. The U.S. government continued inflating the dollar, and our gold supply plummeted from a peak of 701 million ounces in 1949 to 296 million ounces in March 1968.

No government in history had held the kind of power handed to the United States in 1944: having its paper money treated like gold. But this action overlooked the stark reality that paper is not gold, that gold cannot be printed wildly, as paper can. Another effect of the Bretton Woods regime was to subsidize American consumers at the expense of foreigners. For a long time, America prospered at the expense of her trading partners. For years, the dollar's value was artificially high, and therefor actually bought more than it should have been able to buy. This meant that foreign products were available to Americans at bargain prices. This left foreign consumers less to enjoy. Moreover, the foreigners had to pay more for their own goods, thanks to American "exporting" of inflation by, in effect, forcing foreign central banks to print more of their own currency to absorb the unwanted, overvalued dollars they accepted.

Predictably, those nations who had managed their own monetary affairs most conservatively were the ones hardest hit by the American action. Switzerland, that paragon of monetary restraint, now madly printed francs to pay for all dollars shunned by Swiss commercial banks. Switzerland's money supply soared 22 percent in 1971 alone. (Ironically, Switzerland had never signed the Bretton Woods agreement, but chose nevertheless to continue to adhere to the strictures—to its own great detriment—long after the system's founder and chief beneficiary, the United States, had broken its commitment.) Switzerland could not be expected to continue this suicidal policy forever; as we will see later, it was Swiss action which finally brought the injustice of the post-war system to an abrupt end.

The London Gold Pool

Dollars flooded the world through the 1950s, and few worried about the gold reserves leaving the U.S. Treasury. But sometime in the early 1960s the market price of gold threatened to rise above the official $35 per ounce figure. For many years, the $35 figure was above the market price, making holding dollars attractive. In response to this rise in gold's price, the West's major central banks in 1961 established the London Gold Pool. With the U.S. in the lead, the banks agreed to sell gold whenever the price threatened to rise above $35. But this was successful only as long as world inflation fears abated. However, by the late 1960s the world had paused to assess the effects of a massive dollar inflation to pay for both the Great Society programs and the Vietnam War. The U.S. dollar had now clearly become overvalued, gold's price undervalued.

Britain was the first major nation to violate the fixed-exchange regime by devaluing in November of 1967. This caused a massive flight into gold, the first of the post-war era. Billions of dollars were spent by central banks in the next four months trying to force the market gold price down. Finally in March, governments threw in the towel and gave up suppressing the market's wishes.

The Approaching Crisis

From March 1968 to August 1971, during the period of the "two-tier" gold market, the political world pretended that the dollar was still convertible, and for most of that time, the monetary scene was placid. This was due in part to the moderate lessening of American inflation during the recession of 1969–1970. But after that brief respite, the printing presses again went into high gear. The results were predictable. By early 1971, astute financial observers began to sense the imminent collapse of the dollar. One of the signs they saw was the lowering of American interest rates compared with European ones. When any nation inflates, money usually becomes cheaper, if only in the beginning, and therefore easier to borrow. The interest rate charged by banks to borrowers of money declines, and the interest rate paid by banks to depositors of money also declines. Money then flows out of those low-interest rate countries into countries where it can enjoy higher returns. During the beginning months of 1971, the outflow of funds from New York to European money markets accelerated. This forced most European currencies hard against their upper ceiling. Because Germany in particular had maintained a very tight credit stance—a low inflation

rate—the mark was besieged with an unprecedented flood of buyers. Events now began to move swiftly.

In early May, on the heels of a joint report by major German economic institutes that the mark should be inflated or revalued upward, massive speculation hit that currency. Dollars poured into Germany and the Bundesbank was forced to buy them in mounting volume—more than $1 billion on May 3–4 and a further $1 billion during the first 40 minutes of trading on May 5. At that point, the German central bank gave up the struggle, withdrew from the market, and let the mark float. Neighboring countries, afraid of seeing now-homeless dollars careen across their own borders, were quick to join Germany.

The following weekend the central banks of the Netherlands, Switzerland, Belgium, and Austria likewise ceased support operations and set their currencies afloat. In the cases of Austria and Switzerland, revaluations of 5 to 7 percent were also realized. Not surprisingly, the newly-floated currencies continued appreciating, most of them rather sharply. There were rumblings inside the Nixon administration—especially in the Treasury Department—that the gold "window" ought to be slammed unequivocally shut.

It is important to realize that while other governments theoretically could redeem their dollars for gold, most handled the U.S. Treasury with kid gloves: Only a golden trickle left Washington. Some nations, such as Germany, did this because they were obliquely threatened with U.S. troop pullbacks, but there were others who sincerely believed that their sacrifices were going toward the maintenance of the world monetary order.

As in any unnatural economic imbalance, speculators had jumped into the fray and began betting against the dollar. The reasons for their position were justified by every piece of economic news emerging from the United States by mid-1971. Each monthly figure was worse than its predecessor; the nation had slipped into severe trade and payments deficits. But the allies were patient; only a relatively paltry $300 million in gold left the U.S. from January to early August 1971. Rumors spread among foreign central banks that the gold window was about to be shut. Rumblings from the Bank of England suggested that they were preparing to turn in dollars for gold in huge amounts. As Treasury Secretary Connally said (privately) at the time, "We're completely exposed. Anybody can topple us anytime they want to."

On August 6, a congressional subcommittee report concluded that the dollar had become overvalued and called outright for an exchange rate realignment. That same day more than $1 billion in gold or other

reserve assets were drained from the Treasury, and over that next week almost $4 billion fled the country.

During the week ending Friday, August 13, the U.S. Treasury borrowed almost $3 billion in foreign currency to try to halt the dollar's decline (by buying dollars with that currency). But it soon became obvious that the anti-dollar forces had too much strength.

President Nixon responded by declaring international bankruptcy. In a televised address on Sunday, August 15, 1971, he announced that no more gold would be given in exchange for dollars. There were now absolutely no checks on the ability of the United States to inflate.

Nixon's speech to the world that night was a cunning attempt to lay the burden of guilt for this assault upon the shoulders of America's trading partners, who had maintained, Nixon astonishingly asserted, "unfair exchange rates." The cause of the problem had indeed been inequitable exchange rates, but not in the way that Nixon meant. The injustice of this statement is unsettling even 10 years after it was made.

"Unfair" Japan

It is interesting to trace the immediate reactions of one of those "unfair" partners, Japan. Unlike Western Europe, whose exchanges were closed when news of the announcement came, it was Monday morning in the Far East. Trading was already underway when Nixon stepped before the cameras. Paralyzed by the news, the Japanese nevertheless kept their foreign exchange market open—not only for the rest of the day, but for two weeks afterward. As the European markets had sensibly remained closed, Tokyo became the dumping ground for anyone who wanted to get rid of dollars. During those two weeks the Bank of Japan absorbed $4.5 billion. Finally, on August 28, they threw in the towel and joined the other currencies in floating.

The European markets had remained closed, stunned and confused by the president's action. But they could not remain shut forever, and after efforts to decide upon a common course of action failed, they opened on August 23 on an uncoordinated basis. Even though they all continued to adhere officially to their pre-August 15 parities with the dollar, virtually all of them stopped defending the upper limits of their exchange rates.

In the months that followed, the spotlight turned on the United States as other nations waited for an American move. Their view was the understandable one that since the United States had thrown the monetary system out of kilter, it was up to America to make the first move.

American officials finally revealed a plan whereby most other currencies would be revalued upward against the dollar; no mention at all was made of the United States devaluing its dollar by raising the official price of gold. This overture naturally struck America's trading partners as still one more affront. When the director of the IMF, Pierre-Paul Scheitzer, suggested that the United States might share in this realignment by a minor increase in the gold price, he was immediately moved onto the "most wanted" column of the Nixon administration's enemy list. But the Europeans were intransigent; the American plan made no headway.

The "Greatest Agreement"

Massive runs continued on the dollar, belying Nixon's August 15 claim that a dollar cut from gold would "never again be subject to international speculation." By mid-December—four months later—the dollar had declined by 12.5 percent against the mark, 12.3 percent against the yen, and had even lost ground to the lire and the pound, falling by 5.4 percent and 4.1 percent respectively. The world monetary situation not only continued in disarray, it seemed to be getting worse.

On December 18, 1971, the Smithsonian agreement was announced. For the first time in the post-war era, the dollar was devalued by raising the official gold price from $35 to $38 an ounce (8.6 percent). But gold convertibility was not restored, so the devaluation meant little.

Nixon's aim was to recreate an international order with fixed exchange rates—but without gold. He referred to this as "the greatest monetary agreement in the history of the world," but it was clear that no system would break down faster than a system of fixed rates fixed to nothing, neither to gold nor to anything else.

Nixon's "greatest monetary agreement" was smashed on the shoals of economic reality barely 14 months later, because the dollar and pound sterling continued to be drastically overvalued in terms of the other industrialized nations' currencies and, most importantly, in terms of gold. The lack of confidence in the dollar sent gold prices soaring to $90 an ounce, almost tripling the formerly sacred $35 figure. There continued to be periodic flights from the dollar.

Finally, on January 24, 1973, the Swiss government stopped supporting the dollar. Other governments quickly followed: They had all had enough. One month later, the entire fixed-rate order collapsed. The actual story of how it happened would be a dreary repetition of the tales recounted about billions of unwanted dollars reluctantly bought; another frantic but fundamentally ineffective dollar devaluation in an

unsuccessful attempt to restore tranquility and, ultimately, a closure of the world exchange markets. When those markets reopened, they did so without fixed rates. And the absence of fixed rates meant, logically, de facto floating rates. Floating rates had not really been adopted; rather, fixed rates had been abandoned.

Floating and Sinking

Since 1973 we haven't had the former condition of "public crises" where inflationist governments would be forced to spend millions in the foreign exchange markets defending their currencies until finally giving up and devaluing their currencies. For all its messiness, that system at least called people's attention to the fact that offending governments were in effect publicly confessing their sins. What we have had since is rather a quiet but constant withering away of values of those currencies, which are inflated more than others, and a large drop in the value of all currencies in terms of gold. While the dollar—and even the Swiss franc—is not today what it was in 1973, an ounce of gold remains an ounce of gold.

Even under the flawed Bretton Woods fixed rates, there were limits to how far governments could inflate. Granted, it took a quarter-century, but the United States eventually inflated to such a degree it lost too much gold.

The floating rate system has given, however, complete control of the value of each currency to the respective governments. They need not worry about gold flowing into other central banks. There are thus no institutional limits to inflate, and it should come as no surprise that the past decade has seen a marked jumped in average annual world inflation.

The only effect of internal inflation now is a drop in the currency exchange rate, a currency falling in value. But in each country there are special interests who desire just that. These include domestic businessmen who can't compete with the better-made or lower-cost products of other lands. If these inefficient firms' goods are priced in a currency becoming cheaper, consumers of stronger-currency countries can more easily buy those goods. But the reverse of this is that goods from those stronger currency countries, priced as they are in currencies rising in value, become more expensive for the consumers of the nation whose currency is falling. Their living standards thus fall as they are in effect forced to subsidize inefficient domestic producers. Also, gainers in a depreciating currency country are *all* export firms, inefficient

or otherwise. They can exert powerful pressure in favor of international inflation.

But as one can guess, this system does not exactly promote international harmony. Temptations are great for the "competitive" devaluations which so upset world economic peace in the 1930s. As we enter the 1980s, unpleasant rumblings in favor of protectionism and high tariff barriers are being heard on a grand scale for the first time in half a century. The world economy is being pulled apart. It is no coincidence that world trade wars are threatened more now than at any time since the *last* regime of floating exchange rates, during the depression-ridden 1930s.

Islands of Calm in a Churning Sea

There have been attempts to operate localized fixed rate systems amidst the generalized floating. Foremost among these attempts have been the two efforts of that most cohesive and interdependent group of countries, the European Common Market.

Being linked by culture, geography, and the need for trade, they realize more than America does what havoc floating rates have wreaked, and it is a hopeful sign that these nations are more and more including gold in their dealings.

The first of these stabilizing attempts was the Common Market "snake," so-called because all the currencies moving up or down within predetermined limits called to mind the undulations of a moving snake. Begun in 1972, it was over by 1976 simply because several different governments, each with its own inflation rate, from the start moved away from each other, flinging accusations of bad faith at each other while they did.

Having more flexible limits, Western Europe tried again and in March 1979 inaugurated the European Monetary System (EMS). While the EMS enables countries to revalue more easily, each time a member does, it strains the very cohesion the system was meant to foster. It was nonetheless successful during its first two and a half years of operation. Traditionally strong currencies like the German mark weakened while perpetually weak ones like the French franc and Italian lira were strong.

There was therefore only one major realignment until October 1981. Since then, though, there have been two (the most recent on February 21, 1982) and signs point to European currencies falling back into their usual patterns. But while EMS is likely in for a hard time, in the

background of this latest attempt at monetary union has been a gradual but clear remonetization of gold, the only stable unifying force among currencies.

Even before EMS's 1979 birth, both Italy and Portugal borrowed billions of dollars from other European nations and used as collateral part of their gold holdings. But in those cases in the mid-'70s, the gold was valued at around 20 percent below the prevailing free-market price.

With EMS's founding, things took a turn. In exchange for member gold deposits, nations received a new currency called the European Currency Unit (ECU). The hope is that one day ECU will be the European currency. This currency not only represents deposits in gold, but the gold is valued at the free-market rate. Further, under EMS rules, gold can act as a means of settlement between members. So gold now fulfills in the EMS two of three functions of money: It is both a reserve instrument and an instrument of payment. Gold only lacks the final prerequisite for money, a standard of value. This is so because current IMF rules (effective April 1, 1978) forbid all reference to gold in defining currency values. This has led to the absurd situation where currency A is defined in terms of B, C, and D; B in terms of A, C, and D, and so on. Each currency is thus defined in terms of others which themselves depend for definition upon it.

The market has not been fooled by any of this. It knows how to value currencies—in terms of gold. And that valuation has been since 1971 embarrassing for every currency. One-tenth of an ounce of gold will today buy as many dollars as one ounce did 10 years ago.

The market has delivered its verdict on the battle between gold and the dollar waged throughout the 1970s by the American government; first the 1971 suspension of any remaining convertibility, and then two devaluations in rapid succession. At the Jamaica Conference of 1976, the IMF approved the U.S. wish to demonetize gold by abolishing the official price and selling over 600 tons, one-sixth of all IMF holdings (returning another one-sixth to member nations). The U.S. Treasury itself announced in January 1978 that it would sell gold beginning that May. But all during the time of the sales (which totalled about 500 tons) gold's price rose. Finally realizing it was throwing away a precious resource, Treasury ceased its gold sales after November 1979. The Treasury thus implicitly backed up the enhanced roles which Europeans had given gold earlier that year.

Indeed, as pointed out by Yves Laulan, chief economist of Société Génerale (one of France's largest banks), the U.S. Treasury, in an attempt to demonetize gold, authorized its sale to end circulation among

individual Americans. Paradoxically, that act caused people to value it even more.

This subjective revaluation of gold has since spread to the Treasury, which now realizes that it holds far more gold reserves than any other country. Those who wish to reestablish American dominance in the world are not blind to the fact that gold is a powerful weapon. It is thus unlikely that Washington will wage last decade's war on gold again.

Conclusion

Our historical experience illustrates the overwhelmingly superior case for the gold standard as against any form of paper standard. There has never, in peacetime American history, been any sustained rate of inflation to match the inflation since 1941. The same, in fact, is true of wartime, which at least has never lasted more than a few years. And it is not an accident that the highest, most accelerated rate of inflation has taken place since 1971, when the United States went off the international aspects of the gold standard and went over completely to fiat paper.

The same conclusion is true if we consider price stability. Even deflation has been more acute under the fiat standard than under gold, as happened in the fiat standard war of 1873–79 as contrasted to the gold standard period from 1879–1896.

Bimetallism doesn't work either, as America learned painfully from a century's experience. Gresham's Law, driving out undervalued moneys, works there as it does whenever the government overvalues one money and undervalues another. The dollar must be defined once again as a fixed weight of gold, with coinage and paper dollars always redeemable one into another at that weight. Ideally, full-bodied silver would fluctuate freely alongside the gold dollar; short of that, fractional, subsidiary silver, as well as other metals such as copper, would circulate in minor capacity along with gold.

The dollar must be redefined as a unit of weight of gold again, and gold coins should be encouraged to actually circulate among the public, to be used not simply as long-range investment but as a medium of exchange functioning as money. As Mises' "regression theorem" showed in 1912, new currency units cannot be imposed *de novo* from above, by politicians or economists.[10] They must emerge out of the experience and the valuations of the public on the market. The public is now long

[10]See Ludwig Mises, *The Theory of Money and Credit* (Irvington-on-Hudson, New York: The Foundation for Economic Education, 1971).

used to the "dollar" as the money unit, and therefore the "gold gram" or "gold ounce" cannot be simply adopted by the public as a money out of the clear blue sky. The eventual adoption of a gold gram or gold ounce is basically a two-phase process: First, the "dollar," now of course the common currency unit, must be firmly and permanently tied to gold at a fixed weight; the public must become accustomed to this concept; and then finally, the currency unit can *become* that fixed weight directly.

What weight we choose to define the dollar is a matter of convenience, since any *initial* definition is arbitrary, and we can pick the most useful one. This is no more "fixing the price of gold" and violating the free market than defining that two nickels as equal to one dime "fixes the prices" of these two entities, or any more than defining that one pound as equal to 16 ounces "fixes the price" of ounces and pounds. *What* the definition should be depends on the preferred use and what the remainder of the monetary and banking system will look like.

Eventually, too, we must abolish the central government's monopoly of the minting business. Surely the idea that the sovereignty of the king must be expressed through stamping his face on a coin can now be discarded as a relic of a bygone age. There is no reason why private firms cannot mint coins as well, or better, than the national mint. Free competition should come, at long last, to the minting business. The cost would be far cheaper and the quality of the coins much improved.

From our historical analysis, it becomes clear that the problems of money and the business cycle under the gold standard, of inflation and contraction in the 1818–36 era, of World War I inflation, of the boom of the 1920s and the disasters of the Great Depression of 1929–33, stemmed not from the gold standard but from the inflationary fractional-reserve banking system within it. This inflationary banking system was made possible by the government's imposition of a central bank: the Federal Reserve, the Bank of the United States, or by the quasi-centralized system of the national banking era after the Civil War. These booms and busts would not have occurred under "free banking," i.e., the system in which banks are decentralized, able to issue either notes or deposits, cannot be bailed out by a leader of last resort, and are forced to close their doors permanently if they fail to redeem their liabilities in specie. The quasi-free banking period from the 1830s to the Civil War was far sounder and more stable than any period before or since in American history—as historians are now coming to recognize. It would have been far better but for the periodic suspensions of specie payment that governments continued to permit. The legalization of

branch banking would have made it far easier to call upon banks for redemption.

Once again, it was the intervention of government that caused the difficulty, not the market. Laissez faire has not been consistently applied to banking. The historical evidence shows that monetary freedom does not fail, intervention by the government does.

Testimony of Rep. Kevin Brady, Vice Chairman of the Joint Economic Committee
Before the Domestic Monetary Policy and Technology Subcommittee
of the Committee on Financial Services
10 a.m. Tuesday, May 8, 2012

Thank you, Chairman Paul, Ranking Member Clay, and Members of the Subcommittee.

Before discussing the *Sound Dollar Act*, I would like to acknowledge the work that Dr. Paul has done on this subcommittee and as a long-serving former Member of the Joint Economie Committee to bring sound money to the forefront of the public debate. Inflation has been called many things—a hidden tax, a government-sponsored reduction in workers' paychecks, or "theft" as Dr. Paul often says. The American people understand the absurdity of a monetary policy that is designed to debase our currency.

We agree on three key points:

- Preserving the value of the dollar is essential to economic growth and prosperity;
- The federal government must not be allowed to monetize its debts; and
- Our financial system should serve the interests of all Americans, not just the interests of Washington and Wall Street.

Again, I would like to thank you, Mr. Chairman, for your steadfast commitment to bringing these issues to the forefront of the public debate. Your voice will be missed.

I am pleased to testify on behalf of the *Sound Dollar Act*, H.R.4180, and want to thank the Members of this Subcommittee who have already cosponsored this important legislation: Mr. Jones, Mr. Lucas, Mr. Luetkemeyer, and Mr. Huizenga.

When it comes to the global economy, some have characterized the 1800's as the British century, the 1900's as the American century and the current one as China's century. I reject that prediction.

It is clear though, that to ensure the 21st century is another American century we must renew our commitment to what works well—our free market system—and reform what does not—our inefficient federal government.

Looking to our economic future, our goal should be clear: ensuring that America has the world's strongest economy throughout the 21st century. To do that, we have to get our monetary policy right and our fiscal policy right so that our free market system can flourish.

A sound dollar is the sure and strong foundation for long-term economic growth. A sound dollar creates certainty and facilitates new business investment and long-term job creation. I believe the focused role of the Federal Reserve should be to protect the purchasing power of the dollar by maintaining long-term price stability.

Are there many other actions that Congress and the President must take to retain America's economic preeminence for the next 100 years? Of course—we must:

- Make our tax system simpler and more internationally competitive by lowering marginal tax rates and eliminating distortions that pick winners and losers;
- Reform important entitlement programs—including Social Security, Medicare, and Medicaid—to make them sustainably solvent so that they can continue to serve those Americans dependent upon them;
- Transform our regulatory system so that we can achieve our common goals—including a clean environment and safe workplaces—in more efficient, balanced, and less destructive ways; and
- Aggressively pursue trade agreements to open foreign markets to sell more American goods and services to the 95 percent of the world's population that lives outside of our borders.

However, these reforms by themselves will be insufficient if the Federal Reserve fails to maintain the purchasing power of the dollar over time. You only need look to the Great Depression of the 1930's and the Great Inflation of the 1970's to see that price deflation and price inflation are twin evils that reduce real output and employment.

Learning from the past and looking to the future, Congress must select the right monetary policy mandate, maintain a Fed independent of political pressure, and hold the Fed accountable for the results.

So let us examine what monetary policy should be going forward.

In 1977, Congress mandated that the Federal Reserve pursue monetary policy "so as to promote effectively the goals of maximum employment, stable priees, and moderate long-term interest rates."[1] Since inflationary expectations affect long-term interest rates, the goals of stable prices and moderate long-term interest rates are interrelated. This is why the Federal Reserve is described as having a dual mandate for both price stability and full employment.

The employment half of the dual mandate reflects the *Employment Act of 1946*, which required the federal government to pursue economic policies that "promote maximum employment, production, and purchasing power."[2] The price stability half of the dual mandate reflects the rising public concerns about price inflation in the 1970's.

Given the experiences of the past forty years and the unprecedented Fed actions of the past four, it is time for Congress and policy-makers to have a thoughtful, constructive debate about the dual mandate and the role of the Fed in our economic future.

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[1] *The Federal Reserve Reform Act of 1977*, Pub.L. 95-188, 91 Stat. 1387, enacted November 16, 1977 as modified by the *Full Employment and Balanced Growth Act of 1978*, Pub.L. 95-523, 92 Stat. 1887, enacted October 27, 1978.
[2] Pub.L. 79-304, ch. 33, Sec. 2, 60 Stat. 23, enacted February 20, 1946.

Nobel Laureate economist Robert Mundell observed: "To achieve a policy outcome, you must use the right policy lever."

In the Federal Open Market Committee (FOMC) statement of January 25th of this year, Chairman Ben Bernanke and the other members recognized that monetary policy is the right lever to maintain the purchasing power of the dollar by declaring, "The inflation rate over the longer run is primarily determined by monetary policy."

In contrast, the FOMC acknowledged that monetary policy is the wrong lever to promote job creation by declaring "The maximum level of employment is largely determined by nonmonetary factors." The FOMC is right on both counts: inflation is influenced by monetary policy and long-term employment is not.

While the dual mandate may be politically appealing, it makes no sense for Congress to charge the Federal Reserve with controlling what it cannot. Except in the very short term, monetary policy cannot boost real output and job creation.

Instead, using monetary policy as a short-term tool to speed growth may actually harm the economy in the long run. As Richard Fisher, President of the Federal Reserve Bank of Dallas, recently warned, the U.S. economy does not need any more "monetary morphine" that temporarily eases pain but does nothing to cure the underlying disease.

His point – and I agree – is that the President and Congress, not the Federal Reserve, can and should control the budget, tax, regulatory, and trade policies that create the business climate which drives sustainable economic growth and job creation.

Our global competitors already recognize this. Since Congress gave a dual mandate to the Fed, governments in many other countries have revised the charters of their central banks to focus either on a single mandate for price stability or a primary mandate for price stability with other goals clearly subordinated. Among the 47 central banks and monetary authorities in major countries surveyed by the Bank for International Settlements, only the Bank of Canada and the Federal Reserve have organizational laws that give other goals equal weight to price stability.[3]

Getting the mandate right is only half the job. How the Federal Reserve pursues its mandate is equally important.

According to Stanford University economist John Taylor, the key choice is between a discretionary regime and a rules-based regime. A discretionary regime generates uncertainty because it relies upon the subjective assessments of central bank policymakers. By contrast, a rules-based regime reduces uncertainty because it follows well-established rules, based on observable economic data, with a clear focus on a long-term goal.

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[3]Ortiz, Guillermo and Yam, Joseph (Chairs of the Central Bank Governance Group), *Issues in the Governance of Central Banks*, Bank of International Settlements (May 2009).

Inflation-targeting is a rules-based regime under which a central bank establishes a target inflation rate expressed in terms of a broad-based price index of goods and services. A central bank tightens monetary policy when the actual inflation rate rises above its target and loosens monetary policy when the actual inflation rate falls below its target.

The last four decades of U.S. monetary policy demonstrate the advantages of a rules-based regime over a discretionary one. During the 1970's, the Federal Reserve had "go-stop" policies, in which monetary policy quickly swung from ease to tightness and back again. This incoherence produced a highly volatile real economy and a rising inflation rate.

A sea change occurred with the appointment of Paul Volcker as Fed Chairman in 1979. Under Volcker the FOMC aggressively tackled price inflation by controlling the growth of the money supply. This successful strategy was a significant step forward toward a rules-based monetary policy. While the economy did suffer back-to-back recessions,[4] inflation dropped from 13.3 percent in 1979, the year Volcker became Chairman, to 3.8 percent in 1982.[5]

Between 1983 and 2000—the period known as the Great Moderation—the Federal Reserve continued to pursue price stability through an increasingly rules-based monetary policy, effectively ignoring the second half of its dual mandate. Two long economic booms resulted, with very low inflation. The booms were only interrupted by a short, shallow recession related to the first Persian Gulf War.

Unfortunately, between 2002 and 2005, the FOMC deviated from this successful rules-based regime, moving to a discretionary regime by keeping interest rates too low for too long. This loose monetary policy contributed to the inflation of an unsustainable housing bubble that eventually triggered a global financial crisis.

Since the height of the financial crisis in the fall of 2008, Washington has increasingly become dependent on the Federal Reserve to take unusual, interventionist actions—such as tripling the size of its balance sheet under QE1 and QE2 by purchasing the debt and residential mortgage-backed securities (RMBS) issued by Fannie Mae and Freddie Mac as well as Treasuries. Indeed, the FOMC justified these extraordinary actions by invoking—for the first time ever in late 2008—the employment half of the Federal Reserve's dual mandate.

Ultimately the FOMC took these actions, in part, to compensate for President Obama's failure to establish a strong, sustainable recovery. And just as low borrowing costs continue to mask the true pain of our nation's historically high federal budget deficits, the Federal Reserve's monetary experimentation has allowed the White House and Congress to shirk their responsibility to enact fiscal policies that create a competitive business climate which unleashes investment and spurs job creation.

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[4] The back-to-back recessions were January 1980 to June 1980 and July 1981 to November 1982.
[5] The annual inflation rate as measured by the consumer price index.

The Federal Reserve's monetary experimentation of the last decade must end. Congress should give the Federal Reserve a single mandate for price stability, and the Federal Reserve should return to a rules-based system of inflation targeting to achieve that mandate.

To provide a foundation for long-term economic growth, I recently introduced the *Sound Dollar Act,* H.R.4180, in the House of Representatives. Senator Mike Lee of Utah, an articulate and studious member of the Joint Economic Committee, has introduced a companion bill, S.2247, in the Senate. The measure was introduced after many months of vetting with interested economists, current and former Fed staff as well as current and former members of the Federal Reserve Board of Governors – including discussions with Chairman Bernanke.

The *Sound Dollar Act* seeks to reform the Federal Reserve in several important ways. Specifically, the *Sound Dollar Act* replaces the dual mandate with a single mandate for long-term price stability; increases the Federal Reserve's accountability and openness; diversifies the FOMC; ensures credit neutrality for future FOMC purchases; and institutes congressional oversight of the Consumer Financial Protection Bureau.

As expected, critics have quickly charged that focusing on a sound dollar implies the Federal Reserve will ignore the employment needs of Americans. They are wrong. America can only maximize its real output with long-term price stability. Protecting the purchasing power of the dollar over time provides the strongest foundation for lasting economic growth and job creation.

Others have reacted as if a single mandate is a shocking proposal—an affront to all that is right and good. But as we know, the United States won World War II, enjoyed three decades of prosperity, and put a man on the moon without a dual mandate. It is not a fundamental part of our constitutional fabric or carved in granite—it is a 1977 policy directive based on the discredited "Phillips Curve" that Congress can and should change to ensure the future prosperity of our nation.

A mandate for price stability gives the Federal Reserve the right goal. Moving away from a discretionary regime and back toward a rules-based regime will help ensure the Fed achieves price stability.

In January 2012, the FOMC announced an inflation target of 2 percent defined in terms of the price index for personal consumption expenditures. I strongly applaud Chairman Bernanke and the other members of the FOMC for this step toward a rules-based, inflation-targeting regime.

However, this is merely a policy statement that could be reversed. Therefore, the *Sound Dollar Act* mandates that the FOMC continue inflation targeting over the long term.

Accurately measuring inflation is not easy. In the last decade, we clearly saw that price indices of goods and services do not always record all of the price movements in our economy, allowing asset bubbles to inflate undetected. The FOMC's current inflation target relies only upon the price index for personal consumption expenditures.

This index is the primary indicator that the Federal Reserve uses for measuring inflation. However, to identify incipient asset bubbles before they inflate to dangerous levels, the *Sound Dollar Act* also requires that the FOMC monitor and report to Congress on: (1) the prices of, and returns on, broad classes of assets including equities, corporate bonds, state and local government bonds and agricultural, commercial, industrial and residential real estate; (2) the price of gold; and (3) the foreign exchange value of the U.S. dollar.

To be clear, the *Sound Dollar Act* does not prescribe any specific action that the Federal Reserve must take if it detects an asset bubble. The appropriate responses are highly dependent upon circumstances. They might include a tightening of monetary policy, supervisory suasion, or regulatory actions to reduce the flow of credit to fund purchases of the bubbling asset.

Discretion with respect to the best response should be left to the FOMC. However, identifying potential asset price bubbles earlier may help to avoid the overinvestment and the malinvestment that must eventually be liquidated at a heavy cost in terms of lower real output and lost jobs.

Some supporters of the *Sound Dollar Act* concept express a concern that the FOMC could misinterpret monitoring asset prices as a mandate to control asset prices. To address that concern, we have made the legislative language clear and will make it clearer if need be. To quote the bill's language, the FOMC will merely observe asset prices to determine whether such price indices "are comprehensively reflecting price movements in the economy; and whether any price movements not captured by the price indices of goods and services are causing a significant misallocation of capital in the United States economy."

Simply put, monitoring asset prices is intended as a check against inflation slipping through the cracks.

Another reform broadens input and geographic diversity in FOMC decision-making. The *Sound Dollar Act* grants a permanent vote on the FOMC to the presidents of each regional Federal Reserve Bank. As important as New York and Washington are, there is much more to America's economy and the FOMC should better reflect that.

Today—as a result of a decision seventy years ago—only the Federal Reserve Governors and the President of the Federal Reserve Bank of New York have permanent votes. While all of the regional Federal Reserve Banks participate in the discussions, just four of the remaining eleven presidents vote at any one meeting—rotating on and off the FOMC.

There may be other ways to achieve this diversity—and I am open to them—but I am seeking change that will provide Main Street with a greater voice in determining monetary policy.

I am firmly committed to the independence of the Federal Reserve in conducting monetary policy. Expanding the voting membership of the FOMC is one method the *Sound Dollar Act* uses to insulate the Fed from political forces. But, I am particularly troubled by the FOMC decision in September 2011 to reinvest the proceeds from maturing federal agency debt and RMBS into new federal agency RMBS—instead of allowing these holdings to decline as originally intended. This policy reversal occurred amid intense pressure from special interest groups for federal actions to support the ailing housing market.

When the FOMC deals in securities other than Treasuries, repurchase agreements, and reverse repurchase agreements for the System Open Market Account, the Federal Reserve is allocating credit among different sectors of our economy. Credit allocation exposes the Federal Reserve to political interference. And in Washington, D.C. subsidies die hard.

To maintain the independence of the Federal Reserve, the *Sound Dollar Act* requires the FOMC to deal only in Treasuries, repos, and reverse repos for the System Open Market Account unless the FOMC finds by a 2/3 vote that "unusual and exigent circumstances" exist. The FOMC could then purchase other securities for the account so long as they are liquidated within five years after the end of the emergency.

Next, the *Sound Dollar Act* requires the Federal Reserve to publish its lender-of-last-resort policy. In nearly a century of existence, the Federal Reserve has never articulated this critical policy.

Dr. Allan Meltzer, author of *A History of the Federal Reserve*, describes the problems this void creates:

> *The absence of a [lender-of-last-resort] policy has three unfortunate consequences. First, uncertainty increases. No one can know what will be done. Second, troubled firms have a stronger incentive to seek a political solution. They ask Congress or the administration for support or to pressure the Federal Reserve or other agencies to save them from failure. Third, repeated rescues encourage banks to take greater risk and increase leverage. This is the well-known moral hazard problem.*[6]

Each of these problems became manifest in 2008. And while some believe the *Dodd-Frank* legislation provided the solution to the next crisis, I do not believe that is the case.

To be reasonable, the bill does not call for a precise tactical plan. As President Dwight D. Eisenhower observed regarding the complicated engagements of war: "Plans are worthless, but planning is everything."[7] Similarly, while the Federal Reserve cannot anticipate every nuance of the next financial crisis, publishing a lender-of-last-resort policy has merit and could help reduce market uncertainty.

Next, I applaud Chairman Bernanke for his steps to increase transparency in monetary policy decision-making, but there is an additional step that the Federal Reserve should take. The *Sound Dollar Act* speeds the release of transcripts of FOMC meetings from five years to three years. Currently, if a President nominates a Fed Chairman for a second four-year term, Senators cannot review any of the FOMC transcripts during his or her tenure.

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[6] Ciorciari, John D. and Taylor, John B. (Eds.), *The Road Ahead for the Fed*, Hoover Institution (November 2009).
[7] Dwight David Eisenhower, *Remarks at the National Defense Executive Reserve Conference*, November 14, 1957. For complete context, see the full text of the speech, third paragraph, in Public Papers of the Presidents http://www.presidency.ucsb.edu/ws/index.php?pid=10951&st=&st1=#axzz1nuPphFqo.

Some have expressed concerns that this would inhibit free discussion at FOMC meetings. But in a time when information flows globally in the blink of an eye, three years is an eternity.

Given the quality of the individuals serving on the FOMC, I am not concerned about legacy building in FOMC meetings. What I am concerned about is a future Senate being asked to confirm a second term for the Fed Chairman with no real insight into the critical decision-making of that Chairman in FOMC deliberations. Results matter, and so does the thought process behind them.

The *Sound Dollar Act* also eliminates a slush fund that has been misused by Secretaries of the Treasury in both Democratic and Republican administrations. In 1934, Congress placed the profits from the nationalization of privately owned gold and the subsequent devaluation of the U.S. dollar in the Exchange Stabilization Fund and authorized its use to intervene in foreign exchange markets.[8] In 1968, Congress placed the special drawing rights (SDRs) issued by the International Monetary Fund into the Exchange Stabilization Fund.[9] After the Bretton Woods system of pegged exchange rates collapsed in 1971, the Treasury has used the non-SDR assets in the Exchange Stabilization Fund for purposes that Congress never intended, such as bailing out Mexico in 1995 and guaranteeing money market mutual funds in 2008. To prevent misuse in the future, the *Sound Dollar Act* transforms the Exchange Stabilization Fund into a Special Drawing Rights Fund; liquidates all of the $50 billion of non-SDR assets over three years; and uses the proceeds to reduce federal debt.

Finally, the *Dodd-Frank Act* funded the Consumer Financial Protection Bureau (CFPB) by diverting Federal Reserve profits, which would otherwise be paid to the Treasury, to the CFPB. This is a dangerous precedent, leaving the CFPB unaccountable to Congress and ultimately hardworking American taxpayers. Nothing other than the operating costs of the Federal Reserve should be paid out of its revenue. Thus, the *Sound Dollar Act* ends this diversion and requires that the CFPB seek annual appropriations from Congress—just as other federal agencies do.

In summary, the *Sound Dollar Act* helps the United States retain its economic preeminence by preserving the purchasing power of the U.S. dollar, charging the Federal Reserve to pursue a single mandate for price stability and strengthening the Federal Reserve's independence even as the *Act* increases the Federal Reserve's accountability.

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[8] *Gold Reserve Act of 1935*, Pub.L. 73-87, 48 Stat. 337, enacted January 30, 1934.
[9] *Special Drawing Rights Act of 1968,* Pub.L. 90-349, 82 Stat. 188, enacted June 19, 1968.

Joint Economic Committee
Republicans Representative Kevin Brady
Vice Chairman

REPUBLICAN STAFF COMMENTARY

UNITED STATES MONETARY HISTORY IN BRIEF

PART 1: THE FIRST & SECOND BANKS OF THE UNITED STATES—RISE AND FALL

February 28, 2012

Monetary policy and the Federal Reserve are often perceived to be shrouded in mystery or incomprehensible to all but central bankers. This three-part monetary history series attempts to remove that veil of mystery by offering an historical vantage point that sheds light upon and makes monetary policy more comprehensible.

CENTRAL BANKS: DEFINITION & CONSTITUTIONAL FOUNDATION

Central banks are chartered by national governments to have a legal monopoly over a nation's currency and bank reserves. To manage a nation's money supply, they use monetary policy tools, such as open market operations (e.g., buying/selling gold, silver, government debt securities, etc.); setting reserve requirements (i.e., deposits of currency, gold or silver that must be held at the central bank) for commercial banks and financial institutions; and acting as lender of last resort for solvent but illiquid commercial banks and financial institutions during a financial crisis. Central banks also supervise commercial banks and financial institutions.

The United States Constitution provides the legal foundation for a central bank in Article I, Section 8, Clauses 5 and 6, which give Congress the power "to coin money [and] regulate the value thereof," and Clause 18 to make laws "necessary and proper for carrying [out] the foregoing powers." America's first central bank was established in 1791 by the 1st Congress.

The United States Constitution provides the foundation for a central bank in Article I, Section 8, Clauses 5 and 6, which give Congress the power "to coin money [and] regulate the value thereof," and Clause 18 to make laws "necessary and proper for carrying [out] the foregoing powers."

FIRST BANK OF THE UNITED STATES

Secretary of the Treasury Alexander Hamilton issued his "Report on a National Bank" on December 14, 1790, and in 1791—based on his report—Congress chartered the **First Bank of the United States** (1791-1811).

Congressional debate over the First Bank foreshadowed the cataclysmic event to envelope the nation 70 years later with a general north-south divide and fierce exchanges over the role of federal and state governments. Echoes of the early opposition to the First Bank have run throughout our nation's history, even down to some of the populist arguments of the present day. Nevertheless, America's need for a central bank was acute, as the country had to manage the significant Revolutionary War debt incurred by the states; and the country needed a stable currency to facilitate commerce and trade within the fledgling United States and with countries abroad.

America's first central bank was established in 1791 by the 1st Congress. Echoes of the early opposition to the First Bank have run throughout our nation's history, even down to some of the populist arguments of the present day.

Yet, as economist Richard Timberlake argues, the First Bank was not meant to be a modern central bank. Rather, the bank Hamilton envisioned would be a public bank to help the federal government secure loans, "aid in the sales of public lands ... and eventually provide a uniform paper currency."[1]

(Continued on the next page ...)

After supporters of the First Bank won the debate, the next major development in U.S. monetary policy was Congress's adoption of the **Coinage Act of 1792**, which placed the United States on a "**bimetallic standard**" of gold and silver (see Appendix for a discussion of the gold standard, the silver standard, and bimetallic standard and how they operated). Confusing as such a bimetallic standard may be in the 21st century, it made sense in the late 18th century when the United Kingdom—the world's dominant economic power—operated on a gold standard, while France—America's Revolutionary War ally—operated on a silver standard.

Congress's adoption of the Coinage Act of 1792 placed the United States on a "bimetallic standard" of gold and silver.

The Coinage Act fixed the mint prices of gold and silver at a ratio of 15:1 (i.e., $19.39 per troy ounce for gold, $1.29 for silver) so that, relative to their prevailing market values, gold was slightly overvalued and silver was slightly undervalued. These mint prices encouraged the importation of gold for coinage and accumulation of gold reserves at the First Bank. Beyond the political considerations of Hamilton (favoring relations with Britain) and Thomas Jefferson (favoring relations with France), the accumulation of gold was important since foreign creditors required payment of interest and principal of U.S. government debt in gold.

Hamilton's economic policies had the effect of transforming the U.S. government debt from a liability into a highly valued asset in domestic and foreign financial markets. Thus, Hamilton created a powerful financial tool for the U.S. government to finance its national defense and meet other needs.

Alexander Hamilton's economic policies had the effect of transforming the U.S. government debt from a liability into a highly valued asset and a powerful financial tool for the U.S. government to finance its national defense and meet other needs.

During its 20 years of operation, the First Bank was a hybrid central-commercial bank, modeled on the Bank of England. It was a public-private partnership, in which private investors owned 80% of its stock while the federal government owned the rest, with the Treasury conducting regular examinations of the Bank for safety and soundness. In addition to issuing a uniform currency in the form of First Bank notes (bank notes are paper currency), the First Bank served as the depository and fiscal agent of the federal government; supported the credit of the federal government; and regulated state-chartered banks through the First Bank's acceptance of state bank notes or demanding their redemption in specie (i.e., gold or silver coins and bullion). Consequently, as noted by Timberlake, the First Bank began to exercise modern central-banking functions:

> *through its currency transactions with other banks. If it felt that credit restraint was called for, it presented the notes of other banks for redemption in specie. If it felt that credit ease was in order, it expanded its own credit availability to businesses and to other banks and generally treated the notes of other bonks with 'forbearance.'*[2]

Although the First Bank was careful not to exert too heavy a hand and generally received favorable reviews for fulfilling its purpose, congressional critics in Jefferson's party continued to question the Bank's constitutionality. They would have their hour when the Bank came up for renewal at the end of its 20-year charter.

STORM CLOUDS GATHER OVER THE FIRST BANK

When the First Bank's charter came up for renewal in 1811, one of the Bank's harshest 1791 congressional critics and opponents, James Madison,

had become president. Yet, the dynamics had changed in the intervening 20 years as Madison's concerns had been allayed through witnessing the value and necessity of the Bank.

However, politics being what they were, Madison was afraid of being seen as ideologically inconsistent (i.e., "flip-flopping" on the Bank question), and he wanted to show deference to his mentor, President Jefferson, who opposed the First Bank. So, Madison did not publicly declare support for renewing the First Bank's charter, though he directed Secretary of the Treasury Albert Gallatin to seek renewal of the First Bank's charter from Congress.

The Senate failed to renew the First Bank's charter in 1811 due to a combination of constitutional questions and fears and allegations that British stockholders were dominating the Bank. Absent a central bank, President Madison had an especially difficult time financing the War of 1812.

The House of Representatives renewed the charter, but the Senate failed to pass it due to a combination of constitutional questions and fears and allegations that British stockholders were dominating the Bank. How the Bank was defeated in the Senate was especially ironic as Madison's Vice President, George Clinton—who had been elected after the 12th Amendment to the Constitution, which aimed to ensure the President and Vice President would not be ideological opponents—cast the tie-breaking vote against his own administration's bill to renew the Bank. So, with the bill's defeat, the United States was left without a central bank, while on the brink of war.

WAR OF 1812 & LIFE WITHOUT A CENTRAL BANK

The Madison administration's failure to renew the First Bank's charter proved consequential in the **interregnum period** (1811-1816) when the United States did not have a central bank. Notably, Madison had an especially difficult time financing the War of 1812; Secretary of the Treasury Gallatin could raise only $38 million out of an authorization for $61 million in bonds. Furthermore, in this period, the number of state banks grew from 86 to 246, and total bank notes grew from $28 million to $68 million, resulting in a cumulative 34% increase in prices. Had the First Bank continued to operate, many of these difficulties could have been avoided.

SECOND BANK OF THE UNITED STATES

Out of the interregnum experience arose the **Second Bank of the United States** (1816-1836). Speaker of the House Henry Clay worked with the Madison administration to charter the Second Bank on the same basis as the First Bank. However, Madison pressed the Board of Directors of the Second Bank to name as its president his Secretary of the Navy, William Jones. This decision proved disastrous. Through both corruption and incompetence, the Second Bank came close to failing as Jones augmented, rather than restrained, a speculative bubble in western lands. In 1819, Jones was forced to resign, and the board chose former House Speaker Langdon Cheves to replace him as the Second Bank's President.

In 1816, Speaker of the House Henry Clay worked with the Madison administration to charter the Second Bank on the same basis as the First Bank.

Meanwhile, the Treasury—now under the leadership of Secretary William Crawford—acted like a central bank, while the Second Bank "proved to be nothing more than a convenient buffer for the unpalatable but 'necessary' policies of the Treasury Department" to contract the money supply and bring inflation under control. Under Cheves, total bank notes were reduced to $45 million by 1819. This saved the Second Bank but at the price of much economic pain including: the financial **Panic of 1819** and resulting recession (the first presidential-induced recession); a 27% decline in prices

through 1824; and a growing populist sentiment against the Second Bank. Notably, the Second Bank—rather than President James Monroe's administration, which was really the guilty party in the fiasco—drew the ire of presidential aspirant, General Andrew Jackson.

In 1822, Nicholas Biddle succeeded Cheves as president of the Second Bank. Biddle, who proved especially competent, returned the Second Bank to the First Bank's central banking function of regulating the state banks through its acceptance of state bank notes or its demand for their redemption in species. Under Biddle's leadership, this central banking function was used to stabilize the U.S. economy and prevent financial panics.

America's economy has prospered with an independent central bank, managed by competent individuals; America's economy has not fared as well absent a central bank or when a central bank endures interference from politicians.

Again though, the storm clouds gathered over the Bank with the 1828 election of President Andrew Jackson. In 1832, Jackson vetoed Sen. Henry Clay's bill to renew the Second Bank's charter. Nonetheless, there was dissent even within Jackson's cabinet over the issue of the Second Bank. Jackson fired two Secretaries of the Treasury, who refused to remove government deposits from Second Bank (the Bank's charter, which ran to 1836, had not yet expired) and place them in Jackson-favored state banks. Finally, in 1833 Jackson's acting Secretary of the Treasury Roger B. Taney complied with the demand, and there is speculation that Taney's reward for this action was a subsequent appointment as Chief Justice of the United States.[3]

BAD MONETARY POLICY & ECONOMIC COLLAPSE

Through the **Coinage Act of 1834**, Jackson devalued the U.S. dollar by 6.6% to $20.67 per troy ounce in terms of gold, but not in terms of silver, thus increasing the gold-to-silver mint price ratio from 15:1 to 16:1, which by slightly overvaluing gold and undervaluing silver relative to prevailing market prices again caused an inflow of gold. This led to a 42% increase of bank deposits and a 36% increase in prices from 1834 to 1836.

The capricious monetary policies of President Andrew Jackson were a major cause of the Panic of 1837.

Distribution of the Surplus and **Specie Circular** were disastrous policies. The populist reaction against the Second Bank and the ensuing policies caused a 36% drop in the money supply in 1836-37. One such policy came from Jackson signing an 1836 bill that distributed the federal surplus of $28 million to the states. To pay the states, the Treasury withdrew $28 million in federal deposits from Jackson-favored state banks in species. This triggered an immediate contraction in loans and bank notes from the banks that lost their deposits. Of these funds, states deposited $23 million into other state banks and retained $5 million in species. This conversion into species reduced the aggregate reserves available to support loans and bank notes nationwide. Moreover, banks that eventually received deposits from the states took time to expand their loans and bank notes. (In the 1800's, there were no wire transfers. Rather, specie and notes had to be transferred by wagons, often over uncertain roads.) Finally, Jackson's 1836 Specie Circular, which required payment in gold or silver for the purchase of federal lands, increased the demand for gold and silver coins, compounding the contractionary effects of the distribution of the surplus.

Thus, Jackson left office as the U.S. began to suffer from the **Panic of 1837** and the ensuing depression. This policy-induced depression was the second longest and second deepest depression in U.S. history, only superseded by

the Great Depression of the 1930's, and as Milton Friedman noted, the great depression stemming from the Panic of 1837, "is the only depression on record comparable in severity and scope to the Great Depression of the 1930's."[4]

As Milton Friedman noted, the great depression stemming from the Panic of 1837, "is the only depression on record comparable in severity and scope to the Great Depression of the 1930's."

Bad policies continued to prevail, including the "Independent Treasury," under which President Martin Van Buren consolidated federal deposits from state banks at the Treasury. Ultimately, the U.S. economy did not recover from the Jackson-induced depression until 1843—two years after the defeat of Jackson successor and one-term President Van Buren.

CENTRAL BANKING FROM THE TREASURY

Though the Whig party won the control of both Congress and the presidency in 1840 on a platform that included a pledge to create a Third Bank of the United States, President John Tyler, who succeeded William Henry Harrison after his brief tenure, vetoed a bill to charter a Third Bank in 1841. Consequently, the Treasury assumed a limited central-banking role in the years preceding the Civil War. Tariff revenues were highly elastic, while federal outlays were relatively constant. This allowed the Treasury to act as an 'automatic stabilizer'—issuing U.S. government debt securities (i.e., Treasuries) when tariff revenue was low and redeeming them when revenue was high.

Even when the U.S. has been absent a central bank, the Treasury has conducted central banking activities—with mixed results.

CURRENCY PROBLEMS & TECHNOLOGY PRECEDING THE CIVIL WAR

Generally, from 1836—when the Second Bank ceased its interstate operations—until the Civil War, the United States did not have a national currency. Historians have called this the **free banking era** (even though the United States never actually had free banking as defined by economists). With many states liberalizing their laws about chartering banks, the quality of supervision and regulation varied widely, creating many problems. Some states, especially in the south and west, suffered from numerous wildcat banks that opened with insufficient capital. The wildcat banks would make loans and issue bank notes, only to fail in a matter of months. As a result, bank notes did not trade at par (face) value with each other. Instead, the value of notes from different banks fluctuated daily (much as national currencies do today in foreign exchange markets).

In this environment, economic development suffered from the bad monetary policy of the period. The fluctuating value of state bank notes and losses on notes from failed wildcat banks were costly, taking a toll on the growth of interstate commerce. Yet, technological advances like the steamboat, railroad, and telegraph were forging a single national economy out of the previously separate local economies, highlighting the need for a single national currency—even absent a central bank.

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With this as background, one of the sub-issues of the 1860 campaign was the question of a national currency. The newly formed Republican Party, in the tradition of the Federalist and Whig Parties, favored the creation of a single national currency to replace state bank notes, while the Democrat Party supported the status quo. Regardless, changes would be afoot as the nation was driven into its most devastating war, again, absent a central bank.

APPENDIX: DISCUSSION OF STANDARDS

Gold Standard

Classical gold standard: There are two versions of a classical gold standard—**gold coin standard** and **gold bullion standard**. Under a gold coin standard, a country defines its unit of account in terms of a fixed weight of gold (i.e., mint price). The mint will freely coin gold at the mint price, gold coins are in circulation, and the central bank (or commercial banks in the absence of a central bank) will freely convert bank notes into gold coins at the mint price. Under a gold bullion standard, a country defines its unit of account in terms of a fixed weight of gold (i.e., par value). However, the mint will not freely coin gold and gold coins are not in wide circulation. Instead, the central bank will freely buy or sell gold in large quantities, known as bullion, at par value. Exchange rates among the currencies of all countries operating under a classical gold standard are effectively fixed. A classical gold standard is largely self-regulating through domestic and international gold flows.

A classical gold standard may not provide long-term price stability.

The profitability of the gold mining industry—which is affected by the size and frequency of new gold finds, mining and processing costs, and technological progress—effectively determines the monetary base and the price level in all countries operating under a classical gold standard. Therefore, a classical gold standard may not provide long-term price stability. Indeed, decade-long periods of both price inflation and price deflation occurred under the classical gold standard.

Gold exchange standard: Under a gold exchange standard, a country defines its unit of account in terms of another country's currency (i.e. anchor currency) that is freely convertible into gold at par value. The central bank will freely exchange its bank notes for the anchor currency at the fixed exchange rate.

Like a classical gold standard, the exchange rates among countries operating under a gold exchange standard are fixed to the anchor currency and to each other. Unlike a classical gold standard, however, a gold exchange standard is not self-regulating. It is dependent on the behavior of the central bank in the anchor country.

Silver Standard

A silver standard is similar to a gold standard except silver is the metal used.

Bimetallic Gold and Silver Standard

Under a bimetallic gold and silver coin standard, a country defines its unit of account in terms of a fixed weight of gold and a fixed weight of silver, known as mint prices. The mint will freely coin both gold and silver at their respective mint prices. In theory, both gold and silver coin should be in circulation, and the central bank (or commercial banks in the absence of a central bank) will freely convert bank notes into either gold or silver coins at their respective mint prices. In practice, however, a bimetallic standard is actually an **alternative metallic standard**. When one monetary metal becomes "dearer" (i.e., its market price rises relative to its mint price), coins in the "dearer" monetary metal will go out of circulation, and individuals and firms will drain tbe dearer monetary metal out of the central bank by exchanging bank notes for coins or bullion in the "dearer" monetary metal. The "cheaper" monetary metal, whose market price falls relative to its mint price, will effectively become the sole monetary metal. This process will reverse as market prices of gold and silver fluctuate relative to their respective mint prices.

A bimetallic standard is actually an alternative metallic standard.

[1] Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993, p.5.
[2] Ibid., p.10
[3] For background on Taney's appointments, see Abraham, Henry J., *Justices, Presidents, and Senators: A History of the U.S. Supreme Court Appointments from Washington to Clinton*, Rowman & Littlefield Publishers, Inc., New York, 1999, pp. 74-76.
[4] Friedman, Milton, *A Program for Monetary Stability*, Fordham University Press, New York, 1959, p.10.

For reference and further reading, see, Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993.

Joint Economic Committee
Republicans Representative Kevin Brady
Vice Chairman

REPUBLICAN STAFF COMMENTARY

UNITED STATES MONETARY HISTORY IN BRIEF

PART 2: EXPERIENCE WITHOUT A CENTRAL BANK—CIVIL WAR TO CREATION OF THE FED

February 29, 2012

Monetary policy and the Federal Reserve are often perceived to be shrouded in mystery or incomprehensible to all but central bankers. This three-part monetary history series attempts to remove that veil of mystery by offering an historical vantage point that sheds light upon and makes monetary policy more comprehensible.

SETTING THE STAGE

Part 1 of this series covered the founding of a central bank in the United States by the 1st Congress in 1791; the rise and fall of the First and Second Banks of the United States; and life in America with and without a central bank from 1791-1860. Generally, America's economy prospered with an independent central bank, managed by competent individuals, and America's economy did not fare as well absent a central bank or when a central bank endured interference from politicians. The period closed without a central bank—except for the Treasury taking on some central banking functions. Meanwhile, advances in technology were forging a single national economy as the nation headed into the Civil War.

CIVIL WAR: FROM A GOLD & SILVER STANDARD TO A FIAT CURRENCY

In 1860, the U.S. money snpply consisted of $500 million in both currency and bank deposits. With the opening of Civil War, the public began to hoard gold in anticipation of inflation, and by the war's end four years later, prices—including that of gold—had doubled.

With the opening of the Civil War, the public began to hoard gold in anticipation of inflation, and by the war's end four years later, prices—including that of gold—had doubled.

To combat the hoarding and help finance the Civil War, in December 1861, President Abraham Lincoln suspended the redemption of bank notes for gold or silver at their mint prices, $20.67 and $1.29 per troy ounce, respectively. Thus, Americans could no longer demand gold or silver from banks in excbange for dollars, and the effect was to move the U.S. from a bimetallic gold and silver standard to a **fiat currency**. *Fiat money derives its value from government declaration rather than from the value of a metal such as gold.*

In December 1861, President Abraham Lincoln suspended the redemption of bank notes for specie, effectively taking the U.S. off the bimetallic gold and silver standard and establishing a fiat currency.

The supply of money was then increased in February 1862 hy the 37th Congress through the **Legal Tender Act.** This law authorized the issuance of $150 million in U.S. notes—known as "greenbacks"—and the circulation of tbese greenbacks was increased to $400 million by war's end. Also, Congress authorized the issuance of 3% Treasury notes, which were like savings bonds hut could be used as either currency or bank reserves.

Next, the Congress passed the **National Bank Act of 1863** (with significant amendments in 1864 and 1865), which established the Office of the

(Continued on the next page ...)

Comptroller of the Currency to charter, supervise, and regulate national banks. National banks could issue up to $300 million of national bank notes, but unlike pre-war state bank notes, national bank notes traded at par with each other and U.S. notes, thus restoring a national currency.

The National Bank Act recreated a national currency in 1863, the first national currency since 1836.

National bank notes were fully collateralized by U.S. government debt securities (i.e., Treasuries). In other words the notes were fully backed, which increased their demand because the public was protected from losses on notes when a national bank failed. Further, the National Bank Act instituted a punitive 10% tax on state bank notes, which was intended to drive state banks out of business. Nevertheless, state banks survived because of the rapid growth of checkable deposits after the Civil War.

RESUMPTION OF THE GOLD STANDARD

The U.S. faced difficult challenges following the Civil War, including whether and how to resume the gold standard so that Americans could freely convert dollars to gold. As European countries that had been on either a silver standard or a bimetallic standard were switching to a gold standard during this period, U.S. policymakers did not consider returning to the pre-war bimetallic standard. Four monetary policy options were considered: (1) Contract the money stock, causing a rapid price deflation, reducing the market price of gold to the pre-war mint price of $20.67 per troy ounce; (2) Freeze the money stock, which (combined with real GDP growth) would cause a gradual price deflation, reducing the market price of gold to the pre-war mint price; (3) Devalue the U.S. dollar by raising the mint price of gold to its market price with convertibility at the new parity; and (4) Abandon the gold standard and have a fiat currency.

During Reconstruction, a combination of the first and second monetary policy options were implemented. From 1865 to 1868, Secretary of the Treasury Hugh McCulloch used federal budget surpluses to retire about $250 million in greenbacks and 3% T-notes, causing prices to decline by 20%. Then, Congress froze the supply of greenbacks at $356 million in 1868, though the Civil War era legislation had authorized up to $400 million, creating a reserve of $44 million at the Treasury.

The Coinage Act of 1873 demonetized silver and replaced the bimetallic standard with a de facto gold standard. However, slower gold production from the 1870's to 1890's, combined with booming real GDP growth in the U.S. and many other countries, led to global price deflation and inflamed political disputes about U.S. monetary policy.

President Ulysses S. Grant signed an act into law on July 12, 1870, which increased national bank notes by $54 million and decreased 3% T-notes by $45 million with most of the new national bank notes allocated to banks in southern and western states. Yet prices did not fall much and movement toward resumption of the gold standard was minimal during Grant's first term. So, early in his second term, Grant signed the **Coinage Act of 1873**, which demonetized silver and replaced the bimetallic standard with a de facto gold standard.

To those who wanted silver in circulation, this Coinage Act was referred to as the "Crime of 73"—especially following new silver finds in Colorado, which greatly increased the supply of silver and depressed its price. Moreover, gold production slowed beginning in mid-1870's and did not increase until mid-1890's, while real GDP growth boomed in the U.S. and many other countries. Over the next two decades, this combination produced persistent global price deflation and inflamed political disputes about U.S. monetary policy.

PANIC OF 1873 & THE FORM-SEASONAL ELASTICITY PROBLEM

During the second half of 19th century, a troubling new policy-induced phenomenon became commonplace—seasonal financial panics. Such was the case with the **Panic of 1873**.

Though technological advances before and during the Civil War helped to forge a single national economy, how individuals operated within the economy varied greatly. For instance, most businesses and urban households used checks to make payments, whereas most farmers and rural households still used cash. As these preferences collided in the national banking system, completely avoidable crises would beset the U.S. economy. The **form-seasonal elasticity problem** would begin late in the summer as cash would flow out of banks to pay farmers for crops, and then the cash would flow back into banks as farmers paid their bills. Ideally, a monetary system should be sufficiently flexible to allow for seasonal conversions from deposits to cash and back without affecting money supply, prices, or interest rates. However, two principal rigidities in the national banking system of this period limited the form-seasonal elasticity of the U.S. money supply:

Economic panics, such as the Panic of 1873, were unnecessary and policy-induced through the inelasticity of the U.S. money supply relative to the seasonal fluctuations in the demand for currency and bank deposits.

(1) There were federally-established limits on the issuance of U.S. and national bank notes, even though there was rapid population and real GDP growth; and
(2) Treasuries, which were used as collateral for issuing national bank notes, were in short supply because of the federal budget surpluses of this period, forcing national banks to pay large premiums to secure Treasuries in the fall.

When cash flowed out the banking system each fall, uational banks could not easily expand the supply of national bank notes. To meet the demand for cash, national banks had to build large reserves in the winter and spring. If these reserves proved insufficient, national banks would demand immediate repayment on many of their outstanding loans to generate cash. The ensuing impact on the economy could be devastating. Frequently during the fall, short-term interest rates spiked from less than 2% to more than 30% annualized rates; and asset fire-sales to generate cash resulted in depressed asset prices. Consequently, the U.S. economy was extremely vulnerable to shocks during the months of September and October. This is why panics during this era, such as the Panic of 1873, usually occurred in the fall.

FALLOUT FROM THE PANIC OF 1873

The form-seasonal elasticity induced panic of 1873 had national consequences. Treasury receipts dipped below federal outlays in November and December and the Secretary of the Treasury—taking on the role of a central banker—was forced to reissue $26 million of the $44 million greenbacks in reserve. The political uproar and populist accusations stemming from this action—the Treasury serving as lender of last resort—flowed freely and in some ways are still echoed in the early 21st century (i.e., Washington favors New York). The resulting political and economic climate for the 1874 election swung control of Congress to the Democrats for the first time since the Civil War.

Populist outcry over the Panic of 1873 remained acute, but it was more targeted at the panic's effects rather than its cause: the form-seasonal elasticity problem.

Populist outcry over the Panic of 1873 remained acute, but it was more targeted at the panic's effects rather than its cause. As a result of the 1874 elections, the outgoing Republican-controlled Congress passed the **Specie Payment Resumption Act** in January 1875 that required the Treasury to resume the convertibility of dollars to gold at the pre-war mint price of $20.67 per troy ounce by January 1, 1879.

FREE SILVER CONTROVERSY

Between 1873 and 1896, the United States and major European countries experienced rapid GDP growth while there were no new major find of gold. As a result, long-term price deflation occurred. Consequently, in the U.S., farmers—particularly in the south and west—suffered as the real debt burden of the mortgages on their farmland grew.

Resumption of the conversion of dollars to gold, at the pre-war mint price, occurred without incident on January 1, 1879.

So, in opposition to resumption of the gold standard, the free-silver/cheap-money movement emerged. Rep. Richard "Silver Dick" Bland (D-MO) and Democratic presidential nominee William Jennings Bryan became champions of "free silver." In response, a divided Congress (a Republican-controlled Senate and a Democratic-controlled House) enacted the **Bland-Allison Act** in 1878 after overriding the veto of President Rutherford B. Hayes. This Act was a compromise that required the Treasury to purchase between $2 million to $4 million per month of silver and mint it into silver dollars. However, Treasury had discretion about circulating these silver dollars since the federal government was running surpluses. Secretary of the Treasury John Sherman did not circulate the silver dollars, and gradual price deflation continued. Furthermore, through the Bland-Allison Act, Congress froze U.S. notes (greenbacks) at $346.7 million, which though it prevented a legally mandated reduction of the cap, still maintained a cap, which was again one of the causes of the form-seasonal elasticity problem. Under Sherman, Treasury accumulated gold reserves of $135 million to back the greenbacks, and resumption at the pre-war mint price of $20.67 per troy ounce occurred without incident on January 1, 1879.

The Sherman Silver Purchase Act backfired as people turned in the new notes—which could be redeemed for either silver or gold—for gold, thus depleting the Treasury's gold reserves and contributing to the Panic of 1893.

Nonetheless, free silver advocates were dissatisfied with the implementation of the Bland-Allison Act. In the Republican-controlled 51st Congress, Rep. William McKinley (R-OH) and Sen. John Sherman (R-OH) engineered a legislative compromise between different factions of Republicans. In exchange for the support of pro-silver Republicans from western states for the **McKinley Tariff Act**, Republicans from the northeastern and midwestern states agreed to support the **Sherman Silver Purchase Act.** President Benjamin Harrison signed the Sherman Silver Purchase Act into law on July 14, 1890. This act required the Treasury to purchase an additional 4.5 million ounces of silver bullion every month with a special issue of U.S. notes that could be redeemed for either silver or gold. However, the plan backfired as people turned in the new notes for gold, thus depleting the Treasury's gold reserves. Simultaneously the McKinley tariff increased the average tariff rate to 48%, reducing gold payments to the Treasury.

PANIC OF 1893

In his second non-consecutive term, President Grover Cleveland presided over the **Panic of 1893** and the subsequent depression—the third worst in

U.S. history—which lasted until 1897. The gold drain from the Treasury following the Sherman Sliver Purchase Act and the form-seasonal elasticity problem were the primary causes of this panic, though there were other non-monetary dynamics at work. Among the other things, Cleveland blamed the depression on high tariffs and the Sherman Silver Purchase Act. The Democratic-controlled 53rd Congress repealed the Sherman Silver Purchase Act in 1893 and then enacted the **Gorman-Wilson Tariff Act** in 1894, which reduced tariff rates and imposed a 2% federal income tax on income over $4,000. However, this income tax was ruled unconstitutional in the 1895 Supreme Court Case **Pollock v. Farmers' Loan & Trust Company**.

THE GOLD STANDARD

During the second half of the 1890's, global gold production doubled after major finds of gold ore in South Africa and Alaska, and the invention of new processing technology that increased the yield of pure gold from gold ore. The rapid increase in global gold supply relative to global GDP growth led to mild global price inflation through 1913. In 1900, President William McKinley signed the **Currency Act**—the Gold Standard Act—that made the gold standard, which had been the de facto standard, the official standard for the United States, marking the high water mark for the classical gold standard.

In 1900, President McKinley signed the Currency Act, officially putting the U.S. on the classical gold standard.

COMBATTING THE SEASONAL PANICS

At the dawn of the 20th century, despite three decades of policy-induced economic panics, the root cause of the form-seasonal elasticity problem had still not been addressed. Not until President Theodore Roosevelt appointed Leslie Shaw to serve as Secretary of the Treasury were the first real strides made toward addressing the problem. Shaw was a skilled banker who, as Secretary, engaged in central banking to counter the form-seasonal elasticity problem through: (1) seasonal transfers of federal deposits between the Treasury and national banks; (2) acceptance of other bonds for collateral for federal deposits, freeing Treasuries to collateralize national bank notes; (3) abolishing reserve requirements for federal deposits; and (4) allowing gold importers to use gold interest-free from its purchase abroad until it was delivered to the Treasury. While Shaw served as Secretary from the spring of 1902 to the spring of 1907, the United States was spared from the seasonal panics.

President Theodore Roosevelt's Secretary of the Treasury Leslie Shaw engaged in central banking from the Treasury to counter the form-seasonal elasticity problem. However, Shaw's successor lacked his skills to prevent the Panic of 1907. This panic—and the need for a more permanent solution to avoid panics—provided the final impetus for the foundation of a new central bank.

PANIC OF 1907

Still, something more permanent was necessary than mere reliance on the skills of a talented Secretary of the Treasury like Shaw. This again became apparent in the fall of 1907 when Shaw's successor at the Treasury, George Cortelyou—despite trying to follow Shaw's policies—was unable to finesse the situation like Shaw, resulting in yet another panic.

During the **Panic of 1907**, Roosevelt worked with banker J.P. Morgan to secure lines of credit from foreign banks and organize national banks to make loans to other solvent, but illiquid banks. Roosevelt sent Cortelyou to Wall Street, depositing $68 million in national banks in New York City and issuing $50 million of Panama bonds and $100 million of Treasuries to provide additional collateral for national bank notes. In essence, Roosevelt

The framework of the modern Federal Reserve central bank, which came from the National Monetary Commission, grew out of the American experience of panics and economic hardships springing from the form-seasonal elasticity problem.

asked Morgan to perform the lender-of-last-resort function of a central bank on an ad hoc basis, while Cortelyou supplied additional liquidity.

In response to the Panic of 1907, the following year, the Republican-controlled 60th Congress passed the **Aldrich-Vreeland Act**, which established a **National Monetary Commission**. In 1910, the Commission recommended: (1) Creating the **National Reserve Association** (NRA)—a central bank that would hold the reserves of all commercial banks; (2) Using the NRA's discount rate to regulate the money supply in the context of the gold standard (the discount rate is the interest rate that a central bank charges for fully collateralized loans to commercial banks); (3) Making the NRA the monopoly issuer of bank notes; and (4) Adhering to 'Bagehot principles' related to being a lender of last resort.

In a financial crisis, Bagehot's lender-of-last-resort principles hold that a central bank should lend freely to solvent, but illiquid commercial banks and other financial institutions based on collateral that would be good in normal times at a penalty rate of interest.

Walter Bagehot was an English businessman and editor-in-chief of *The Economist.* In 1873, he published *Lombard Street*, which outlined the principles for lender-of-last-resort operations during financial crises. Central bankers and economists still hold Bagehot's principles in high regard today. In a financial crisis, Bagehot advised, the Bank of England should lend freely to solvent, but illiquid commercial banks and other financial institutions based on collateral that would be good in normal times at a penalty rate of interest.[1]

CREATION OF THE FEDERAL RESERVE

President Woodrow Wilson, elected in 1912, generally agreed with the recommendations of the National Monetary Commission to create a central bank, though with changes to increase federal oversight.

However, Wilson's support for a central bank faced strong opposition, even from within his own cabinet. In particnlar, Wilson was presented with a challenging dilemma when his Secretary of State, William Jennings Bryan, threatened to walk out on him and lead congressional opposition to the central bank. By acquiescing to Bryan, Wilson would have lost support for reform from bankers and business leaders; by pushing forward in opposition to Bryan, Wilson would have risked a divide within the Democratic Party and a loss of his entire domestic agenda.

The 1913 Federal Reserve Act created the 12 regional Federal Reserve Banks; created the Federal Reserve Board of Directors in Washington, DC; required all national banks to join the Federal Reserve System; and authorized Federal Reserve notes to replace U.S. and national bank notes.

Wilson's solution was to work with Rep. Carter Glass (D-VA) and Sen. Robert Owen (D-OK) to find a middle way—the **Federal Reserve Act**—which was enacted in 1913. This act created a Federal Reserve System with:

- A monetary policy mandate to provide an "elastic currency" within the context of a gold standard to combat the form-seasonal elasticity problem;
- 12 regional Federal Reserve Banks, each headed by a Governor;
- A Federal Reserve Board of Directors based in Washington, DC and composed of the Secretary of the Treasury, the Comptroller of the Currency and five other members to supervise the Reserve Banks;
- A requirement that all national banks join the Federal Reserve System by purchasing stock in their respective regional Reserve Bank and an option for state-chartered banks to join; and
- Federal Reserve notes—to replace U.S. and national bank notes—which would be U.S. government obligations.[2]

The Federal Reserve Act was thus crafted with multiple contradictory provisions, which allowed both advocates and opponents of the central bank to claim victory. On one hand, Bryan Democrats correctly claimed that Board would assure the federal government, not private bankers, would determine monetary policy. However, Bryan Democrats incorrectly assured their constituents that the Federal Reserve was not a central bank because each regional Reserve Bank would conduct an independent monetary policy. On the other hand, northeastern Democrats and Republicans correctly asserted that the Federal Reserve Act had created a central bank. Yet, because of nominal private ownership of the stock in the regional Reserve Banks, northeastern Democrats and Republicans incorrectly assured their constituents that private bankers, not the federal government, would determine monetary policy.

The Federal Reserve Act was crafted with multiple contradictory provisions, which allowed both advocates and opponents of the central bank to claim victory. These contradictory provisions would later ignite a destructive power struggle within the Federal Reserve in 1928, at the front end of the Great Depression.

These contradictory provisions would later ignite a destructive power struggle within the Federal Reserve in 1928, at the front-end of the Great Depression. Further complicating the birth of the Federal Reserve, World War I began before the central bank became operational in 1915, thus requiring Treasury Secretary William McAdoo to once again intervene to prevent a panic in the fall of 1914 by issuing $363 million in currency under the provisions of the Aldrich-Vreeland Act.

Life in America without a central bank was at an end. The age of seasonal panics—and the recessions and depressions stemming from them—was past. In the coming decades, the country would experience the best and the worst of central banking with the Federal Reserve gradually growing from these experiences into the modern central hank of the 21st century.

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[1] For further discussion of Bagehot principles, see Joint Economic Committee Report, *An International Lender of Last Resort, the IMF and the Federal Reserve*, 1999.
Available at http://www.house.gov/jec/imf/lolr.pdf

[2] In 1913, the Federal Reserve was required to hold gold equal to 40% of the outstanding currency, and 35% of commercial bank reserves.

For reference and further reading, see, Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993.

Joint Economic Committee
Republicans Representative Kevin Brady
Vice Chairman

REPUBLICAN STAFF COMMENTARY

UNITED STATES MONETARY HISTORY IN BRIEF

PART 3: THE FEDERAL RESERVE—A CENTRAL BANK'S GROWTH THROUGH TRIAL & ERROR

March 1, 2012

Monetary policy and the Federal Reserve are often perceived to be shrouded in mystery or incomprehensible to all but central bankers. This three-part monetary history series attempts to remove that veil of mystery by offering an historical vantage point that sheds light upon and makes monetary policy more comprehensible.

SETTING THE STAGE

Part 1 (1791-1860) and Part 2 (1861-1914) of this 3-part series explored the monetary and economic history of the United States. The U.S. did not have a central bank from 1836 to the creation of the Federal Reserve in 1913, and in the absence of a bank, the nation suffered from frequent seasonal financial panics, recessions and depressions. The Panic of 1907, in which New York banker JP Morgan acted as a lender of last resort and the Treasury provided additional liquidity, finally spurred the Congress toward enactment of the Federal Reserve Act of 1913, which reinstituted a central bank in the United States.

THE FEDERAL RESERVE OPENS ITS DOORS

With the creation of the Federal Reserve, the seasonal panics that had dominated the American economy since the 1870's ceased as the Fed effectively used the tools of monetary policy to provide greater elasticity to the U.S. money supply. Meanwhile, the Great War—World War I—raged as the Federal Reserve officially opened its doors for operations.

With the creation of the Fed, the seasonal panics that had dominated the American economy since the 1870's ceased as the Fed effectively used the tools of monetary policy to provide greater elasticity to the U.S. money supply.

The now debunked **real bills doctrine**, which originated with Adam Smith, guided the Federal Reserve during World War I. The essence of the real bills doctrine held that short-term bank loans extended to businesses, based upon anticipated profitability of sales of goods produced, were not inflationary, while other loans were. So, as might be expected, the real bills doctrine tended to be pro-cyclical monetary policy: When the economy was doing well and sales of goods were expected to be strong, the central bank would loosen monetary policy—though lending restraint was in order; conversely, when the economy was doing poorly and sales were expected to lag, the central bank tightened monetary policy—though more liquidity was in order.

As the early Fed was guided by the real bills doctrine, loans were expanded to member banks during the war-related boom, and prices soared by 119% between 1913 and 1919.

As the early Fed was guided by the real bills doctrine, loans were expanded to member banks during the war-related boom, and prices soared by 119% between 1913 and 1919. Learning from this experience the Fed's Board of Directors began to move away from the real bills doctrine, though the doctrine still held sway with the regional Federal Reserve Banks, other than the district of New York.

(Continued on the next page ...)

THE U.S. AND INTERNATIONAL AFFAIRS AFTER THE GREAT WAR

World War I transformed the world, but the U.S. failed to accept its new economic responsibilities as the world's emerging economic superpower.

World War I transformed the world, but perhaps because of the same isolationist tendencies that delayed U.S. entrance into the war, the United States failed to accept its new economic responsibilities as the world's emerging economic superpower.

Examples of the change in America's status abound. The nation's international position had gone from being a net debtor of $2.2 billion (6.4% of GDP) with the rest of the world in 1914 to being a net creditor of $6.4 billion (8.4% of GDP). The publicly held federal debt rose from $1.118 billion (3.3% of GDP) in June 1914 to $24.485 billion (34.9% of GDP) in June 1919. New York had effectively displaced London as the center of international finance, and the Federal Reserve had replaced the Bank of England as the global guardian of the gold standard.

Meanwhile, as the international economic system deteriorated, the U.S. government refused to forgive its allies their war debts, stemming from $10.4 billion in U.S. loans during the war.[1] America's refusal to forgive these debts contributed to the allies' refusal to forgive $16 billion of German war reparations, which were being relied upon to repay the U.S. To make these reparations payments, Germany had to run large trade surpluses. However, this could only happen if the U.S. and its allies reduced their tariffs and removed trade barriers against German imports.

Regrettably, neither the U.S. nor its allies would allow German imports to displace import-competing domestic industries and their workers. This made Germany dependent on loans from U.S. commercial banks to pay reparations. When Belgium and France invaded the Rubr in January 1923, because Germany was behind on its reparations payments, U.S. commercial banks stopped making loans to Germany, and German workers launched a general strike with the resulting loss of tax revenue exasperating inflationary pressures leading to hyperinflation. The following year, the allies agreed to the **Dawes plan** in an attempt to stabilize the situation. This plan reduced German reparations payments to $250 million in year one with gradual increases to $650 million in year five. In exchange, U.S. commercial banks resumed lending to Germany.[2]

Winston Churchill resumed convertibility of the British pound into gold at its pre-war parity (instead of at the market price), and this lit the long fuse leading to the Great Depression.

In 1925, Chancellor of the Exchequer Winston Churchill resumed convertibility of the British pound into gold at its pre-war parity, but this was a mistake. World War I had destroyed much of Britain's wealth and potential future workforce and output (through lives lost at the front); hence the U.K. was much poorer after the war. Assigning a value to the British pound in terms of gold greater than the amount of gold a pound could buy on the market after the war overvalued the currency, causing prices to be too low for British imports and too high for British exports, leading to a chronic current account deficit. Ultimately, Britain's return to the gold standard at pre-war parity lit the long fuse leading to the Great Depression.

THE STRONG FED: THE FEDERAL RESERVE IN THE 1920's

The Fed initially began **open market operations**[3] in the 1920's to provide income to the regional Federal Reserve Banks. By the end of the decade, open market operations became the Fed's primary monetary policy tool.

Also, in the early part of the decade, the Federal Reserve raised interest rates and contracted the money supply to reverse the inflation that had occurred during the war. This action caused a brief, but deep, recession from January 1920 through July 1921. Afterward, Benjamin Strong, who was the first Governor of the Federal Reserve Bank of New York, emerged as the de facto CEO of the Federal Reserve—largely through the force of his personality.

Strong had a close friendship with the Governor of the Bank of England Montagu Norman, and to help the Bank of England maintain convertibility without devaluing the British pound, the Federal Reserve lowered interest rates in 1927 and 1928—even though an accommodative monetary policy was inappropriate for the booming U.S. economy. This action helped to inflate the U.S. stock market bubble of the late 1920's.

The Federal Reserve lowered interest rates in 1927 and 1928—even though an accommodative monetary policy was inappropriate for the booming U.S. economy. This action helped to inflate the U.S. stock market bubble of the late 1920's.

THE FED'S GREATEST FAILURE: THE GREAT CONTRACTION

Strong's death in 1928, at the beginning of the Great Depression, triggered a three-way power struggle within the Fed—involving the Governor of the Federal Reserve Bank of New York (George Harrison), the Federal Reserve Board in Washington, and the Governors of the other Federal Reserve Banks. The Board and the other regional Federal Reserve Banks—either because they believed that prices were too high and wanted to reduce prices back to pre-war levels, or because they resented Strong's support for Britain—pushed for a contractionary monetary policy in 1929, repeatedly blocking Harrison from taking the actions needed to counteract the contraction of the money supply. Thus, the **Great Contraction** began in August 1929 and continued until March 1933.

During the Great Contraction, the Fed failed to perform its lender-of-last-resort function of providing loans to otherwise solvent, but temporarily illiquid, commercial banks.[4] This meant that many solvent banks that could have survived ended up failing. Also, the Fed reduced its holdings of Treasuries through open market operations; and despite massive gold inflows in 1930 and 1931—the Federal Reserve effectively went to sleep on the world's gold reserves by allowing its reserve ratio to increase to a peak of 83.4%. Had the Fed not existed, commercial banks would have had $1.05 billion of reserves to expand deposits and loans at this critical moment.[5]

The adverse economic consequences of the Fed's contractionary monetary policy were both global and monumental. These included: massive price deflation (25%); unemployment (1 in 4 Americans); intensifying waves of bank failures; and fire sales of assets, which undermined net worth.

The adverse economic consequences of the Fed's contractionary monetary policy were both global and monumental. These included: massive price deflation (25%); unemployment (1 in 4 Americans); intensifying waves of bank failures; and fire sales of assets, which undermined net worth.

FRANKLIN D. ROOSEVELT: MONETARY CONFUSION

President Franklin D. Roosevelt took office on March 4, 1933, and his confused and contradictory views on monetary policy prolonged the **Great Depression** in the United States. While some urged "reflation,"[6] which would have been the correct policy, other forces conspired against them.

FDR's confused and contradictory views on monetary policy prolonged the Great Depression in the United States.

On April 5, 1933, private households and firms were mandated by an Executive Order to sell gold to the Fed at a price of $20.67 per ounce; on April 17, 1933, gold exports were forbidden; on June 5, 1933, "gold clauses" (contracts providing the creditor with the option of demanding payment in

gold) were abrogated; on June 12, 1933, the London Conference was convened to discuss restoring the gold standard after devaluation; and on July 3, 1933, the London Conference collapsed after FDR sent conflicting instructions to U.S. delegates. In late December, FDR required the Federal Reserve to sell its gold to the Treasury at $20.67 per ounce. Then on January 31, 1934, FDR signed the **Gold Reserve Act**, which devalued the U.S. dollar by 59% by increasing the gold price from $20.67 to $35.00 per ounce.

THE ECCLES FED: THE 1937 RECESSION AND A RECORD OF FAILURE

Necessary price reflation began to occur, but FDR short-circuited it by appointing Marriner Eccles as Chairman of the Federal Reserve Board.

Necessary price reflation began to occur, but FDR short-circuited it by appointing Marriner Eccles (November 15, 1934 – February 3, 1948) as Chairman of the Federal Reserve Board. Eccles was a proto-Keynesian, and he opposed devaluation and reflation; blamed the Great Depression on over-investment by firms and under-consumption by households; favored income redistribution; and thought monetary policy was ineffective, and consequently the Federal Reserve did not expand the money supply.

The Federal Reserve was reorganized into its present structure under the **Banking Act of 1935**. The Act was meant to end confusion at the Fed and to centralize decision-making powers in Washington. The Board of Governors of the Federal Reserve System replaced the Board of Directors; the Secretary of the Treasury and Comptroller of the Currency were removed from the Board; the terms of Board members were increased from 10 to 14 years; Governors of regional Federal Reserve Banks were renamed as Presidents; the Board of Governors was placed in charge of the Federal Reserve System; the Chairman of the Board of Governors was given an executive role; and the Federal Open Market Committee (FOMC) was created. The FOMC was designed to be a balanced body, composed of regional Federal Reserve Bank presidents and members of the Federal Reserve Board, though the FOMC quickly came to be dominated by the Chairman.[7]

The Federal Reserve finally began to increase the money supply in 1939 to finance war-related spending, and by 1943 prices finally exceeded their 1929 level—showing that reflation worked, when it was tried.

Meanwhile, cautious bankers who survived the Great Contraction wanted to keep large excess reserves in case of future bank runs, but Eccles thought such reserves would cause inflation. So, from August 1936 to May 1937, the Federal Reserve doubled the required level of reserves that commercial banks were required to keep at the Fed. Banks responded by contracting their loans and deposits to build new excess reserves above the now higher level of required reserves. This caused another severe recession from May 1937 to June 1938, showing Eccles's experiment to be an economic failure.

Finally, the Federal Reserve began to increase the money supply in 1939 to finance war-related spending, and by 1943 prices finally exceeded their 1929 level—showing that reflation worked, when it was tried.

WORLD WAR II, KOREAN CONFLICT, AND "THE ACCORD"

Through World War II, the Federal Reserve assumed a role subservient to the Treasury. To help the Treasury finance the war, the Fed targeted the long-term Treasury bond rate, keeping it at 2.5%. However, this built inflationary pressure during wartime, though price controls and rationing disguised it. Nonetheless, inflation exploded after the war when the price controls were lifted.

The **Bretton Woods system** was instituted after the war. This system created the **International Monetary Fund (IMF)** and the **World Bank** (and eventually the World Trade Organization (WTO)).[8] The Bretton Woods system required the United States to exchange gold for U.S. dollars at a fixed price of $35.00 per ounce, but only with foreign governments or their central banks—not U.S. households or firms. Simultaneously, Bretton Woods required other countries to maintain a pegged exchange rate with the U.S. dollar.[9] This arrangement is sometimes referred to as the **gold exchange standard**.

The Bretton Woods system created the IMF, World Bank (and eventually the WTO). It put the U.S. on a gold exchange standard, whereby the United States was required to exchange gold for U.S. dollars, but only with foreign governments or their central banks.

Because of Eccles's opposition to monetizing the federal debt, President Harry S Truman replaced Eccles with Thomas B. McCabe (April 1948 to April 1951) as Chairman. As the Korean conflict began, inflation soared, and the Federal Open Market Committee (FOMC) challenged the Treasury's interest rate policy. This led to **the Accord** between Chairman McCabe and Secretary of the Treasury John W. Synder, which was brokered by Assistant Secretary of the Treasury William McChesney Martin, Jr. on March 4, 1951. This Accord provided for the Federal Reserve to conduct open market operations in Treasury "bills only," allowing the market to determine long-term Treasury bond rates; and it began the Fed's operational independence.

In 1950, the FOMC challenged the Treasury's interest rate policy, resulting in the Accord, which began the Fed's operational independence.

Truman then appointed Martin to succeed McCabe as Chairman, believing Martin would allow the Treasury to recapture the Federal Reserve. Instead, Martin supported the Federal Reserve's newly won independence.

THE MARTIN FED: UNNECESSARY VOLATILITY

During the Martin era (April 2, 1951 – February 1, 1970), monetary policy decisions were largely based on Martin's "feel of the market." In practice, Martin targeted interest rates and acted in a pro-cyclical fashion, whereby the Federal Reserve would add reserves to hold down interest rates when output rose and subtract reserves to maintain interest rates when output fell. This contributed to the short business cycles in the 1950's.

The Federal Reserve's "bills only" approach was dropped during the Kennedy Administration and replaced with Operation Twist. In **Operation Twist**, the FOMC bought Treasury bonds to lower long-term interest rates and spur domestic investment, while simultaneously selling Treasury bills to increase short-term interest rates. The goal was to attract foreign portfolio investment, support the U.S. dollar, and reduce gold outflows. However, Operation Twist is now regarded as a failure. Eventually, economists Milton Friedman, Karl Brunner, and Allan Meltzer became leading critics of Martin.

THE BURNS FED: THE GREAT INFLATOR; GUNNING THE MONEY SUPPLY

Succeeding Martin as Chairman of the Fed was Arthur Burns (February 1, 1970 – March 8, 1978), who became known as the Great Inflator.

In the early 1970's, attempts were made to save the Bretton Woods system of fixed exchange rates tied to the dollar. On August 15, 1971, President Richard Nixon announced his **New Economic Plan**. This plan imposed a 90-day price freeze followed by comprehensive price controls; a 10% tariff on imports, and effectively ended the gold exchange standard, thus removing the last vestiges of a link from the U.S. dollar to gold.

On August 15, 1971, President Richard Nixon effectively ended the gold exchange standard, thus removing the last vestiges of a link from the U.S. dollar to gold.

In reaction to the New Economic Plan, Treasury Secretary John Connolly negotiated the Smithsonian Agreement with other G-10 countries. This agreement provided for a devaluation of the U.S. dollar from $35.00 per ounce of gold to $42.22 in exchange for the resumption of the Bretton Woods system. However, this agreement quickly fell apart. By March 1973, the era of freely floating exchange rates, not tied to gold, began.

Chairman Burns followed a go-stop approach with unpredictable swings from loose to tight monetary policy. Stagflation resulted.

Chairman Burns succumbed to Nixon's pressure to "gun the money supply" while price controls were in place to make the economy appear better than it was when Nixon ran for reelection in 1972. Under Burns, the Fed followed a go-stop approach with unpredictable swings from loose to tight monetary policy, and stagflation resulted.

Briefly succeeding Burns as Chairman in 1978 was G. William Miller, who was appointed by President Jimmy Carter. Miller was a Keynesian who opposed higher interest rates to check inflation and blamed inflation on "real" factors such as oil shortages and labor contracts with cost-of-living wage adjustments. Miller continued Burns's misguided policies. Price inflation soared; and the foreign exchange value of the U.S. dollar collapsed. Carter appointed Miller as Treasury Secretary to remove him from the Fed.

THE VOLCKER FED: BREAKING THE BACK OF INFLATION

Until 1982, Volcker followed a pseudo-monetarism, allowing high nominal and real interest rates to arrest price inflation.

President Carter next appointed Paul A. Volcker (August 6, 1979 – August 11, 1987) as Chairman. Until 1982, Volcker followed a **pseudo-monetarism**, under which the Federal Reserve stopped targeting the federal funds rate and claimed that it was targeting monetary aggregates. This allowed high nominal and real interest rates to arrest price inflation; but it was mainly a ruse, designed to shield the Federal Reserve from the blame for the resulting recessions. (Under true monetarism, a central bank would focus on the growth rate of money aggregates to achieve price stability. Monetarism assumes that the velocity of money is stable.)

Volcker overreacted to President Reagan's tax cuts as being inflationary—an error that contributed to the severity of the August 1981 to November 1982 recession. Afterward, Volcker adopted a variety rules-based approaches at different times, and the FOMC abandoned targeting monetary aggregates.

In 1985, Volcker concurred with the **Plaza Accord**, which committed the United States to a depreciation of the foreign exchange value of the U.S. dollar. Then, just two years later in 1987, Volcker concurred with the **Louvre Accord**, which committed the United States to stop the depreciation of the foreign exchange value of the U.S. dollar. The monetary flip-flop from accelerating money supply growth in 1985 to decelerating money supply growth in 1987 to meet U.S. commitments in these accords contributed to the "Black Monday" stock market crash on October 19, 1987.

THE EARLY GREENSPAN FED: RULES-BASED POLICY WORKS

President Reagan appointed Alan Greenspan (August 11, 1987 – January 31, 2006) to follow Volcker as Federal Reserve Chairman. Greenspan had established strong credibility early in his tenure on "Black Monday" as he issued a statement that affirmed the Fed's "readiness to serve as a source of liquidity to support the economic and financial system," and he exerted

behind-the-scenes pressure on commercial banks to provide credit to independent investment banks. These actions prevented a wider financial crisis, and Greenspan's credibility grew even stronger as he helped to nip inflation during the July 1990 to March 1991 recession.

Greenspan also received high marks for increasing the Fed's transparency. In 1994, he began announcing federal funds rate targets publicly after FOMC meetings; and in 1998, he began releasing even more details. During the great boom of the 1990's, Greenspan tightened monetary policy, increasing U.S. interest rates and the foreign exchange value of dollar.

The era under Volcker and Greenspan is generally referred to as the Great Moderation (1982-2000), during which the Fed pursued price stability through rules-based monetary policy. The results of this approach were two long economic booms, low inflation, and lower unemployment rates.

The era under Volcker and Greenspan is generally referred to as the **Great Moderation** (1983-2000), during which the Fed pursued price stability through rules-based monetary policy, much along the lines of the Taylor rule, devised by Stanford economist John Taylor. Generally, the Taylor rule holds that the Fed should increase the federal funds rate as inflationary forces increase and lower it as they decrease. This approach resulted in two long economic booms, low inflation, and lower unemployment rates.

CONCLUSION

Covering more recent events at the Fed and U.S. monetary policy prescriptions for the future is beyond the reach of this history series. Those subjects will be covered in future JEC Republican papers.

In sum, the monetary history experience in America has been:

- Economic freedom and prosperity with an independent central bank, managed by competent individuals (e.g. the First Bank, the Second Bank from 1822-1828, and the Federal Reserve during the Great Moderation);
- Challenges absent a central bank (e.g. 1811-1816, 1836-1915); and
- Recessions, depressions and stagflation when the central bank endures interference from politicians (e.g. the Second Bank from 1816-1822 and 1828-1836, the Eccles Fed, and the Burns Fed.)

The American experience is that economic freedom and prosperity are best served by monetary policy that is rules-based and non-interventionist.

The American experience is that economic freedom and prosperity are best served by monetary policy that is rules-based and non-interventionist.

[1] The $10.4 billion in U.S. World War I loans included $4.8 billion to the U.K. and $3.4 billion to France.
[2] Felzenberg, Alvin Stephen, *The Leaders We Deserved (And a Few We Didn't)*, Basic Books, New York, 2008, p.207.
[3] As noted in Part 1 of this series, open market operations include buying and selling of gold, silver, and government debt securities.
[4] During the Great Contraction, the Fed actually reduced its loans to banks from $1.29 billion in 1928 to $0.12 billion in 1933.
[5] Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993, p.266.
[6] Notably George Warren, Irving Fisher, and John R. Commons urged reflation.
[7] Currently, the FOMC is composed of 12 members: seven members from the Board of Governors; the President of the Federal Reserve Bank of New York; and four of the remaining 11 regional Federal Reserve Bank presidents. (The seven other regional bank presidents currently do not vote.)
[8] The World Trade Organization was finally created in 1995.
[9] The U.S. dollar was fixed at $35.00 per ounce of gold, but only foreign central banks could demand gold for U.S. dollars. This was not a gold standard, but a gold exchange standard.

For reference and further reading, see, Timberlake, Richard H., *Monetary Policy in the United States: An Intellectual and Institutional History*, The University of Chicago Press, Chicago, 1993.

Joint Economic Committee
Republicans Representative Kevin Brady
Vice Chairman

EXECUTIVE SUMMARY

UNITED STATES MONETARY POLICY GOING FOWARD

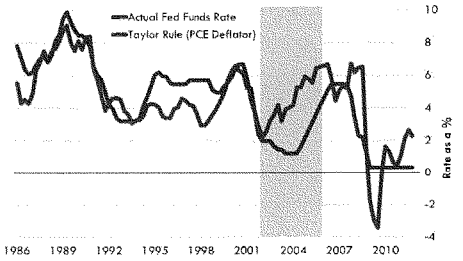
A Single Mandate for Price Stability Will Help Maximize Job Creation and Economic Growth

March 2, 2012

EXECUTIVE SUMMARY

In recent years, the Federal Reserve has shifted away from well-established norms for monetary policy. These policy deviations—which include holding interest rates too low for too long from 2002 to 2005 (Figure 1) and intervening into the market during and after the financial crisis of 2008 (Figure 2 on reverse) —have harmed the U.S. economy. The Federal Reserve's actions contributed to the inflation of an unsustainable housing bubble; a global financial crisis; and increased market uncertainty, which has inhibited a robust recovery. Avoiding these policy deviations may well have mitigated the economic harm and caused fewer Americans to lose their jobs.

Figure 1. Actual Federal Funds Rate vs. the Rate Prescribed by Taylor Rule, using PCE Deflator since 1986



*Shaded region represents the 2002 to 2005 policy deviations

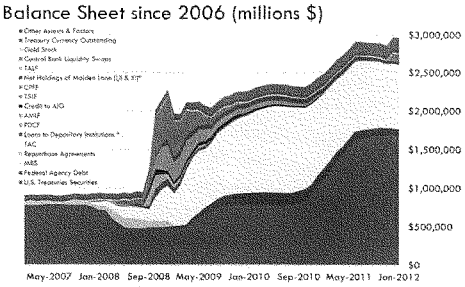
Source: Federal Reserve Board

In the period from 2002 to 2005, the Federal Reserve held interest rates too low for too long. This policy deviation contributed to the housing bubble.

This era of monetary policy experimentation should end; history has demonstrated what works and what doesn't. During the 1970's, the Federal Reserve produced destructive stagflation—the combination of high unemployment and high inflation—by pursuing a "go-stop" monetary policy oscillating between a focus on inflation and a focus on employment.

The Federal Reserve's balance sheet has over tripled since the financial crisis. Its policy stance risks harmful price inflation going forward.

Figure 2. Massive Expansion of the Federal Reserve Balance Sheet since 2006 (millions $)



*Net Holdings (Assets Minus Liabilities) (LN, LB6, LB7ma, LB and LB7Ma, '08).
*Includes Primary, Secondary and Seasonal Loans to Depository Institutions

Source: Federal Reserve Board

Conversely, during the period from 1983 to 2000—known by economists as the "Great Moderation"—the Federal Reserve implemented a rules-based monetary policy that focused on containing inflation. The predictability of monetary policy in that era allowed businesses to confidently engage in long-term planning and investment. As a result, our economy flourished. Two robust economic expansions occurred—the November 1982 to July 1990 economic expansion, which lasted 31 quarters, and the March 1991 to March 2001 expansion, which lasted 40 quarters. Not surprisingly, the unemployment rate trended down over the same period.

In order to ensure a prosperous America in the 21st century, the Federal Reserve should implement a rules-based, inflation-targeting monetary policy going forward in order to promote long-term price stability, economic growth and job creation.

In order to ensure a prosperous America in the 21st century, the Federal Reserve should refocus its efforts on what works. It should implement a rules-based monetary policy going forward in order to promote long-term price stability, economic growth and job creation. This study provides four policy recommendations to achieve rules-based policies going forward:

1. Create a single mandate for the Federal Reserve to maintain long-term price stability;

2. Require the Federal Reserve to monitor asset prices for signs of incipient asset price bubbles;

3. Restrict open market operations to U.S. Treasuries, repurchase agreements, and reverse repurchase agreements during normal times; and

4. Require the Federal Reserve to clearly articulate a lender-of-last-resort policy.

Joint Economic Committee
Republicans Representative Kevin Brady
Vice Chairman

UNITED STATES MONETARY POLICY GOING FORWARD

A Single Mandate for Price Stability Will Help Maximize Job Creation and Economic Growth

March 2, 2012

INTRODUCTION

In recent years, the Federal Reserve has shifted away from well-established norms for monetary policy. These policy deviations contributed to the inflation of an unsustainable housing bubble, a global financial crisis, and increased market uncertainty, which has inhibited a robust recovery. Avoiding these policy deviations may well have mitigated the ensuing negative fallout. Therefore, the Federal Reserve should implement a rules-based monetary policy going forward in order to promote long-term price stability, economic growth and job creation.

In recent years, the Federal Reserve has deviated from well-establish norms for monetary policy.

The Federal Reserve deviated from norms for monetary policy in the period from 2002 to 2005 by holding its target rate for federal funds too low for too long. This deviation contributed to the inflation of an unsustainable housing bubble and, once the Federal Reserve raised interest rates, a dramatic decline in home prices after they peaked in the summer of 2006. When the housing bubble burst, the severe correction in home prices lead to an unprecedented increase in residential foreclosure rates.

These policy deviations contributed to the unsustainable housing bubble, the bursting of which cascaded through the financial system and created a global financial crisis.

During the past decade, the proliferation of mispriced derivative financial instruments in the financial services sector resulted in a systemic vulnerability to defaults in home loans. The unexpectedly high default rates occurred because many widely-held derivatives had as reference assets either (1) residential mortgage loans, (2) securities containing residential mortgage loans, or (3) securities of companies engaged in residential mortgage securitization. As a result, disruptions in the housing market cascaded throughout the financial system, and a global financial crisis ensued. Had monetary policy followed its previous policy route, the severity of the crisis and the subsequent recession likely would have been mitigated.

During and after the financial crisis, the Federal Reserve engaged in several additional unconventional policy actions. Some of these

actions—such as providing emergency liquidity to the market during the height of the financial crisis—were in keeping with the Federal Reserve's role as the lender of last resort and its emergency authority. Other actions—such as the Federal Reserve's controversial intervention into the housing market —are more questionable because they occurred after the acute effects of the crisis had passed. Significantly, these post-crisis actions have sustained the Federal Reserve's balance sheet at unprecedented levels—triple its pre-crisis size—thereby risking the possibility of harmful future price inflation.

So far, policymakers have paid insufficient attention the macroeconomic causes of the crisis, especially the Federal Reserve's monetary policy in the lead-up to, during, and after the crisis.

In light of the housing bubble, the global financial crisis, and the subsequent anemic economic recovery, federal policymakers are reconsidering the oversight and regulation of U.S. financial institutions and markets. So far, federal policymakers have focused on perceived microeconomic causes of the crisis, including: (1) federal housing policies that sought to increase the rate of home ownership; (2) possible market failures; (3) shortcomings in federal oversight and regulatory regimes for financial institutions and markets; and (4) wrongdoing by certain firms and individuals.[1] However, the financial crisis had both macroeconomic and microeconomic causes. Federal policymakers have paid insufficient attention to the macroeconomic causes of the crisis—especially the Federal Reserve's monetary policy in the lead-up to, during, and after the crisis.

After discussing some historical context, this study provides four policy recommendations:

- ***(1) Create a single mandate for long-term price stability;***
- ***(2) Requiring the Fed to monitor asset prices;***
- ***(3) Restrict open market operations to U.S. Treasuries, repos, and reverse repos during normal times; and***
- ***(4) Require the Fed to articulate its lender-of-last-resort policy.***

This study begins witb a brief discussion of the advantages of rules-based monetary policy over discretionary monetary policies. It then reviews the Federal Reserve's implementation of monetary policy in light of the rules-versus-discretion dichotomy and finds that discretionary actions by the Federal Reserve have contributed to past economic disruptions and pose a threat to the economy going forward. It concludes by commenting on the Federal Reserve's recent adoption of an explicit inflation target guiding its monetary policy decisions and by providing four policy recommendations for implementing a rules-based monetary policy going forward: (1) creating a single mandate for the Federal Reserve to maintain long-term price stability; (2) requiring the Federal Reserve to monitor asset prices for signs of incipient asset price bubbles; (3) restricting open market operations to U.S. Treasuries, repurchase agreements, and reverse repurchase agreements during normal times; and (4) requiring the Federal Reserve to clearly articulate a lender-of-last-resort policy.

DESIGNING MONETARY POLICY

Well-reasoned, stable and predictable monetary policy reduces economic volatility and promotes long-term economic growth and job creation. Generally, "rules-based" policies reduce uncertainties and facilitate long-term planning and investment. Rules-based policies are most successful when they are designed "with a clear focus on the longer term, and with allowance for future contingencies."[2] Policymakers should set the rules of the game and make a credible commitment to abide by them; but, inflexible or overly prescriptive policies can prevent essential emergency actions during times of crisis.

Well-reasoned, stable and predictable monetary policy reduces economic volatility and promotes long-term economic growth and job creation.

Conversely, activist, interventionist, and discretionary monetary policies have been historically associated with increased economic volatility and subpar economic performance. Reasons for this are numerous and, in large part, practical. First, it is difficult for policymakers to identify in real time the economic inflection points that mark the beginning of financial crises and recessions; this is due to the extraordinary complexities and dynamism of the economy. Forecasts based on economic models are generally unreliable in identifying such inflection points. Hence, it is very difficult for policymakers to establish a proper baseline from which monetary policy adjustments should be made.

Activist, interventionist, and discretionary monetary policies have been historically associated with increased economic volatility and subpar economic performance.

Second, even when economic circumstances are both known and well understood, implementing the appropriate monetary policy response is rife with difficulties. One well-known implementation problem, identified by Nobel laureate Milton Friedman, is the long and variable lag between a monetary policy action and its effects on the economy. Another problem is the "time inconsistency problem," a theory for which Finn Kydland and Edward Prescott won the 2004 Nobel Prize in Economic Sciences.[3] The time inconsistency problem refers to the difficulties created by the time lapse between the announcement of a policy and its implementation. During this time lapse, the optimal policy response may change, and such changes induce policymakers to shift course over time. Taken together, these shortcomings mean discretionary policies are a drag on the economy because they are unpredictable, may be ill-timed, and inappropriate.

These two conclusions about the rules-versus-discretion dichotomy are quite logical, given that private businesses and households make plans based on expectations of future economic conditions. Unpredictable monetary policy creates uncertainty in markets and increases risk premia, thus boosting the cost of capital for business. An investment must yield a higher expected return to induce a

business to invest in it. Consequently, unpredictable monetary policy lowers aggregate investment. This relationship between discretionary policy and reduced investment is particularly acute in illiquid assets, such as buildings, equipment, and software, which are key drivers of long-term job creation.[4] Similarly, households are less likely to make large purchases, including homes and automobiles as economic uncertainty increases.

RECENT MONETARY POLICY OF THE FEDERAL RESERVE

THE TURBULENT 1970'S AND THE GREAT MODERATION OF THE 1980'S AND 1990'S

During the 1970's, the Federal Reserve implemented "a pattern of 'go-stop' policies, in which swings in policy from ease to tightness contributed to a highly volatile real economy as well as a highly variable inflation rate."

The distinct impact of discretionary and rules-based policy is readily apparent when viewed within the context of U.S. monetary policy over the past 40 years. During the 1970's, the Federal Reserve implemented "a pattern of 'go-stop' policies, in which swings in policy from ease to tightness contributed to a highly volatile real economy as well as a highly variable inflation rate."[5] These unpredictable and disruptive policies were guided, in part, by a misplaced belief in a simple version of the "Phillips Curve," a widely discredited economic theory that found an inverse relationship between the unemployment rate and the inflation rate. Under the Phillips Curve, the destructive phenomenon of stagflation, which is the combination of stagnant growth, persistent high unemployment, and high inflation, could not occur. However, the Federal Reserve, using the Phillips Curve to guide its monetary policy actions during the 1970's, produced stagflation through its unpredictable policy actions.

Rules based monetary policy, which was implemented under Chairman Volcker and Greenspan, focused on price stability led to the Great Moderation of the 1980's and 1990's.

A sea change in monetary policy occurred with the appointment of Paul Volcker as Chairman of the Board of Governors of the Federal Reserve System in 1979. His mandate was to break the back of inflation. In order to accomplish this goal, he raised the federal funds target rate from 11% in August of 1979 to a range of 18 to 20% by mid-1981 before lowering it incrementally to 8% in mid-1985. The economy suffered back-to-back recessions (January 1980 to June 1980 and July 1981 to November 1982). However, inflation (measured by the consumer price index) dropped from 13.3% in 1979, the year Volcker joined the Federal Reserve, to 3.8% in 1982, and thereafter averaged 3.0% over the next 20 years as Chairman Volcker and, later, Chairman Alan Greenspan implemented, with some exceptions, a transition toward a more rules-based monetary policy.

Comparing other economic indicators under the "go-stop" monetary policy of the 1970's and the relatively predictable monetary policy climate associated with the 1980's to 1990's (i.e., the "Great

Moderation") highlights the performance advantages of rules-based monetary policy. Most notably, macroeconomic volatility decreased during the 20 years after the 1970's, with quarterly output volatility (measured by standard deviation) falling in half and quarterly inflation volatility falling by two thirds. Moreover, two robust economic expansions occurred during the same period—the November 1982 to July 1990 economic expansion, which lasted 31 quarters, and the March 1991 to March 2001 expansion, which lasted 40 quarters. Unsurprisingly, the unemployment rate trended down over the same period. By contrast, the longest economic expansion of the 1970's was only 10 quarters long.[6]

After a nearly 20 year period of relative predictability, the Federal Reserve deviated from so-called "rules-based" monetary policy during the period from 2002 to 2005 by holding the target federal funds rate too low for too long.

THE TAYLOR RULE AND A MAJOR POLICY DEVIATION IN THE 2000'S

Many economic researchers and commentators have suggested that, after a nearly 20 year period of relative predictability, the Federal Reserve deviated from a rules-based monetary policy during the 2002-2005 period by holding the target federal funds rate too low for too long. However, this critique requires a framework for analysis, and it begs the question: from what did the target rate deviate? One particularly useful method for assessing policy deviations is to compare the historical target federal funds rate to the rate prescribed by the "Taylor rule."[7] The Taylor rule, devised by Stanford economist John Taylor, is a monetary policy rule that derives a recommended federal funds rate based on the level of inflation relative to the Federal Reserve's target inflation rate and the level of real output relative to potential output.[8] Generally speaking, implementing the Taylor rule would result in the Federal Reserve increasing the federal funds rate as inflationary forces increase and lowering the federal funds rate as inflationary forces decrease. The Taylor rule is both descriptive and prescriptive:

> *One such rule, the original Taylor rule, fit the data particularly well during the late 1980's and early 1990's, a period of generally favorable economic performance. Because this rule also performed well in a variety of macroeconomic models, keeping the volatility of inflation and output relatively low, the rule over time became viewed as a normative prescription for how policy should be set, conditional on a few economic indicators.*[9]

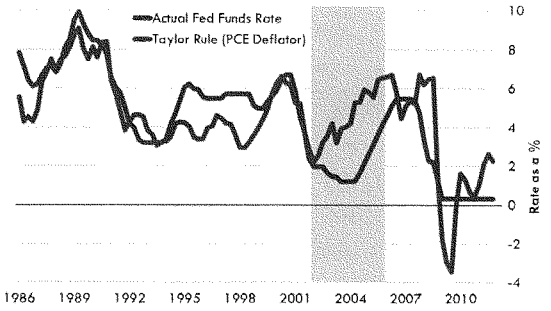
The Taylor rule is also robust with respect to specification, meaning a variety of formulations of the rule itself result in similar prescriptions. These theoretical and practical advantages led to a de-facto institutionalization of Taylor rule guidance in the Federal Open Market Committee's (FOMC's) decision-making process after its initial

Stanford economist John Taylor has argued that the cumulative effect of this monetary ease from 2002 to 2005 contributed to the housing bubble and thereby increased the magnitude of the decline in residential real estate prices on the back end.

release in 1993. The FOMC is composed of 12 voting members and directs the Federal Reserve's open market operations, which effectuate the purchase and sale of Treasuries and other securities to influence the federal funds interest rate.[10] Members of the Committee often referenced various Taylor rule specifications during the Committee's regular meetings, and utilized it as a baseline for conducting monetary policy actions. The past effectiveness of the Taylor rule establishes it as a reliable tool for assessing Federal Reserve policy discretion.

During much of the period from 1986-2002 following the initial taming of inflationary forces, the target federal funds rate tracked closely the rate prescribed by the Taylor rule, with the exception that the actual federal funds rate was above the Taylor rule prescription for a period during the mid-to-late 1990's when the economy was experiencing explosive productivity growth (Figure 1).

Figure 1. Actual Federal Funds Rate vs. the Rate Prescribed by Taylor Rule, using PCE Deflator since 1986



*Shaded region represents the 2002 to 2005 policy deviations

Source: Federal Reserve Board

The bursting tech stock bubble in early 2000, the economic shock of the terrorist attacks on September 11, 2001, and the 2001 recession precipitated possible deflation concerns among some members of the FOMC. However, subsequent analysis of the economic indicators suggests that such concerns did not have a strong foundation. For example, headline consumer prices never experienced a year-over-year decline during the period from 2001-2005. In fact, the CPI averaged 2.5% year-over-year growth during that period, and experienced a low average of 1.6% year-over-year growth in 2002. Contemporaneous analysis of inflationary data is difficult; however,

this analysis certainly refutes the contention that the economy needed aggressive monetary stimulus.

Nevertheless, the FOMC voted to reduce target rates from 6.5% in December of 2000 to 1.82% by December of 2001. It then held the target rate below that level for nearly three years before incrementally raising it back to 5.25% by June of 2006. During that period, the target federal funds rate averaged 2.17 percentage points below the level prescribed by the Taylor rule (using quarterly data).

Professor Taylor has argued that the cumulative effect of this monetary ease contributed to the housing bubble and thereby increased the magnitude of the decline in residential real estate prices on the back end of the bursting bubble.[11] There is growing, but not universal, agreement among economists about Taylor's findings.[12] For example, a study by Federal Reserve Bank of Kansas City vice president George Kahn found that "[w]hen the Taylor rule deviations are excluded from [my] forecasting equation, the bubble in housing prices looks more like a bump."[13]

"[W]hen the Taylor rule deviations are excluded from [my] forecasting equation, the bubble in housing prices looks more like a bump."

Of course, Federal Reserve monetary policy from 2002 to 2005 was not the sole cause of the housing bubble. Microeconomic factors, including the housing policies of President Bill Clinton and George W. Bush to expand homeownership among historically disadvantaged and low-income households; pressure from federal regulators to lower credit standards for extending residential mortgage loans; the panoply of federal tax preferences for housing; market-distorting housing finance government-sponsored enterprises (Fannie Mae and Freddie Mac); inaccurate ratings reports; and opaque derivatives markets, among others, contributed to the financial imbalances in the U.S. housing market. Other macroeconomic factors, including, most notably, massive capital inflows to the United States from abroad also contributed to the housing bubble.[14] However, the Federal Reserve's monetary policy in the 2002 to 2005 period were undeniably a contributing factor—one that was wholly avoidable had the FOMC simply followed well-established and stable monetary policy norms rather than engage in discretionary policies.

FINANCIAL CRISIS MONETARY POLICY

The Federal Reserve responded to the bursting housing bubble and the financial crisis of 2008 by taking a series of unconventional actions.

The Federal Reserve responded to the bursting housing bubble and the financial crisis of 2008 by taking a series of unconventional actions (see Appendix A). Some of these actions clearly were in keeping with the Federal Reserve's role as "lender of last resort," and were initiated pursuant to the Federal Reserve's emergency authority under section 13(3) of the **Federal Reserve Act**. In times of crisis,

depositors and other creditors cannot distinguish between healthy and unhealthy banks and other financial institutions. As a result, the flow of credit freezes, and all borrowers are penalized. A lender of last resort "ensure[s] that healthy financial institutions have access to sufficient short-term credit, particularly during [such] times of financial stress."[15] By addressing the liquidity problems of solvent, but temporarily illiquid banks and other financial institutions during a financial crisis, a lender of last resort can prevent unnecessary failures that could cause a financial crisis to spread to non-financial sectors of the economy and escalate into a depression.

Other Federal Reserve actions—including those preceding and during the crisis, both as general policy and directed to specific individual firms—addressed solvency problems, or selectively allocated credit to markets pre- and post-crisis. Insolvency reflects a fundamental weakness in the balance sheet of a firm because its liabilities are greater than its assets. However, addressing solvency problems in this way can induce firms to take undue risk under the assumption that they will later be "bailed out" if the risks don't pan out. Selectively allocating credit to favored markets can also distort financial decision making and lead to future asset bubbles. Thus, it is unclear whether this second category of actions was necessary, proper, or even helpful. The sum total of the Federal Reserve's actions over the past four years has been an unprecedented expansion of the Federal Reserve's balance sheet, which remains a risk to the sustainability of the economic recovery because it increases the danger of accelerating price inflation as the economy strengthens.

The impact of the bursting housing bubble spread throughout the financial system and credit markets deteriorated well before the market crash in the fall of 2008. Within the bounds of traditional monetary policy, the Federal Reserve began lowering the target federal funds rate from 5.25% in August of 2007 to a range of 0 - 0.125% by January 2009. However, it also simultaneously implemented several discretionary policies in the year leading up to the crisis, including creating specialized lending facilities aimed at supporting financial firms with deteriorating balance sheets. Among these lending facilities were the Term Auction Facility (TAF), the Term Securities Lending Facility (TSLF), and the Primary Dealer Credit Facility (PDCF). The TAF was essentially a repackaging of existing Federal Reserve lending capabilities aimed at alleviating the stigma associated with borrowing from the traditional discount window, while the TSLF and the PDCF represented new lending to unconventional non-commercial bank borrowers. During this same period, the Federal Reserve engaged in the first iteration of an on-

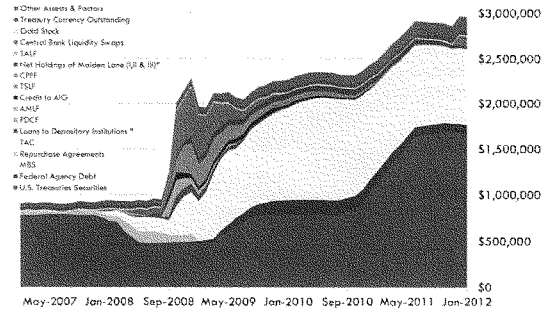
again, off-again bailout policy by facilitating the sale of the investment bank Bear Stearns to JP Morgan-Chase with a loan of almost $30 billion.[16] It also extended currency swaps to foreign central banks to enable them to stabilize dollar-based markets under their jurisdiction.

Initially, these pre-crisis actions did not increase the size of the Federal Reserve's balance sheet because the Federal Reserve "sterilized" (or offset) their effects by selling over $300 billion of its U.S. Treasury holdings during the first several months of 2008. Then, when credit market deterioration accelerated in September 2008, the Federal Reserve expanded its existing crisis lending facilities and introduced new ones. Between September and November 2008, the Federal Reserve introduced the Asset-backed Commercial Paper Money Market Fund Liquidity Facility (AMLF), the Commercial Paper Funding Facility (CPFF), and the Term Asset-backed Loan Facility (TALF). Each facility sought to stabilize the financial system by providing liquidity to key credit markets outside of the traditional banking system. The Federal Reserve also bailed out American International Group (AIG), a large global insurer after allowing the investment bank Lehman Brothers to file for bankruptcy.

Leading into the fall [of 2008], the Federal Reserve halted its sterilization efforts . . . [and] the Federal Reserve's balance sheet expanded massively—doubling to $2.2 trillion in just six weeks.

Leading into the fall, the Federal Reserve halted its sterilization efforts because it was concerned about disrupting the Treasury market by flooding it with additional supply. Therefore, as firms began drawing heavily upon the myriad lending facilities, the Federal Reserve's balance sheet expanded massively—doubling to $2.2 trillion in just six weeks (see Figure 2 on the following page). The Fed's balance sheet remained at this elevated level through the end of 2008.

Figure 2. Massive Expansion of the Federal Reserve Balance Sheet since 2006 (millions $)



*Net Holdings include Maiden Lane I (Jul. '08), II (Dec. '08 and III (Nov. '08);
**Include Primary, Secondary and Seasonal Loans to Depository Institutions

Source: Federal Reserve Board

The most acute effects of the financial crisis had begun to recede by January 2009, but the Federal Reserve took additional discretionary actions to maintain and even expand the size of its balance sheet.

The most acute effects of the financial crisis had begun to recede by January 2009. Consequently, borrowing through the Federal Reserve's crisis lending facilities declined sharply, as the Federal Reserve's balance sheet fell by $300 billion in the first four weeks of the year. The size of the crisis lending facilities continued to taper off into the summer months, and, by the end of 2009, the great bulk of the related borrowing had ceased.

If all else remained equal, the size of the Federal Reserve's balance sheet would have tapered down to pre-crisis levels as well. However, the Federal Reserve instead took additional discretionary actions to maintain and even expand the size of its balance sheet.

In early 2009, the Federal Reserve announced a program of large-scale asset purchases, dubbed "quantitative easing 1" (QE1). The mechanical effect of the program was simply to sustain the size of the central bank's balance sheet as the emergency liquidity facilities tapered off; however, the policy implications of the program were significant. Most importantly, the Federal Reserve began to actively support the housing market by purchasing over $1.25 trillion of residential mortgage-backed securities (RMBS) and $172 billion of debt securities issued by Fannie Mae, Freddie Mac, and Ginnie Mae.[17] In essence, the Federal Reserve was attempting to manipulate the economy by subsidizing the housing market. It hoped lower home mortgage interest rates would encourage refinancing activity, thereby increasing consumers' disposable income.

Despite the Federal Reserve's extraordinary efforts in 2009, the summer of 2010 brought a marked slowdown in the already anemic economic recovery: job creation sputtered, economic growth slowed and a manufacturing sector recovery melted away. The 2010 mid-term elections drastically changed the composition of Congress, and federal policymakers were unlikely to implement fiscal stimulus programs in an attempt to spur the economy. Within that context, Chairman Bernanke announced in August a second round of quantitative easing (QE2), in which the Federal Reserve would purchase $600 billion of U.S. Treasury securities over eight months beginning in November 2010. The purchases brought the Federal Reserve's balance sheet to nearly $3 trillion—more than triple its pre-crisis size.

Despite the Federal Reserve's extraordinary efforts in 2009, the summer of 2010 brought a marked slowdown in the already anemic economic recovery.

More recently, in August and September 2011, the Federal Reserve took two additional unconventional policy actions. First, the Federal Reserve announced in its August FOMC statement that economic conditions warranted "exceptionally low levels for the federal funds rate at least through mid-2013."[18] Federal Reserve policymakers

hoped this so-called "communications channel" would spur economic activity where large-scale asset purchases have fallen flat because it effectively commits the central bank to a highly accommodative monetary policy in the medium-term.[19]

Second, the Federal Reserve announced in mid-September that it would implement another unconventional bond-buying program, known as "Operation Twist," running through the end of June 2012. The program is modeled after the Federal Reserve's previous "Operation Twist" in the 1960's, which was considered a failure by most economists because it only lowered long-term interest rates by 10 to 20 basis points at most.[20] The effect of this program is to extend the average duration of the Federal Reserve's Treasury holdings by selling $400 billion of U.S. Treasuries with maturities of three years or less and using the proceeds to purchase $400 billion of U.S. Treasuries with maturities of six to 30 years.[21] Like quantitative easing, which reduces long-term interest rates, the program seeks to stimulate borrowing in order to finance consumer purchases of durable goods and housing and business investment in buildings, equipment, and software. However, unlike quantitative easing, the program will not increase the size of the Federal Reserve's balance sheet.

In addition to Operation Twist, the Federal Reserve has committed to reinvesting the principal payments from its holdings of federal agency debt and RMBS into agency RMBS. This change is a major policy reversal. Previously, the Federal Reserve had said that its massive intervention into housing finance was temporary and that it would allow its portfolio of federal agency debt and RMBS to decline gradually as principal was repaid. Now, the Federal Reserve has indicated that its portfolio of federal agency debt and RMBS is more or less permanent. Thus, the Federal Reserve will continue to allocate credit selectively toward politically favored borrowers.

Analyzing the impact and appropriateness of the Federal Reserve's policy over the past four years is challenging. It is difficult to differentiate between the concepts of liquidity and solvency, which are often interconnected. Moreover, dynamic and complex markets are ill-suited to clean, post-hoc dissection and explanation. A lack of consensus among economists about the ultimate effect of the Federal Reserve's discretionary actions reinforces this view.

The Federal Reserve's actions have increased market uncertainty.

However, three observations about the Federal Reserve's recent actions are worth mentioning:

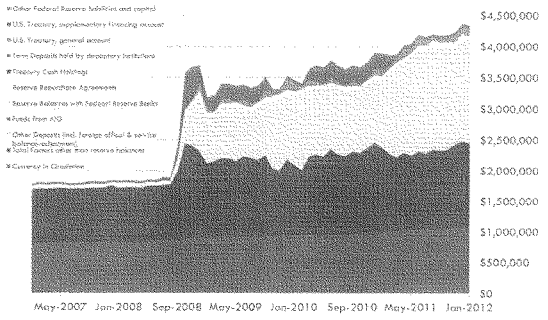
(1) The Federal Reserve's actions have increased market uncertainty. During the height of the crisis, the Federal

Reserve pursued a scattershot approach to addressing market failures. Some programs were poorly articulated, while others were implemented differently than advertised or not at all. With respect to individual firms, the Federal Reserve may have even contributed to the liquidity crisis by "saving" some firms and not others, thereby complicating creditors' risk calculus and creating moral hazard.

The Federal Reserve's decision to sustain the size of its post-crisis balance sheet through its quantitative easing programs has increased the risk for accelerating price inflation as the recovery strengthens.

(2) The Federal Reserve's decision to sustain the size of its post-crisis balance sheet through its quantitative easing programs has increased the risk for accelerating price inflation as the recovery strengthens. QE1 and QE2 have jointly extended two trillion dollars of credit to the banking sector, as reflected by the staggering increase in the monetary base beginning in the fall of 2008. To date, banks have chosen not to lend these funds out. As a result, excess reserves held on deposit at the Federal Reserve are over $1.5 trillion (Figure 3). These funds represent a real risk to the economy because if they are lent out more rapidly than Federal Reserve policy can manage, high and destructive inflation will ensue.

Figure 3. Massive Expansion of Federal Reserve Liabilities since 2006, (millions $)



Source: Federal Reserve Board

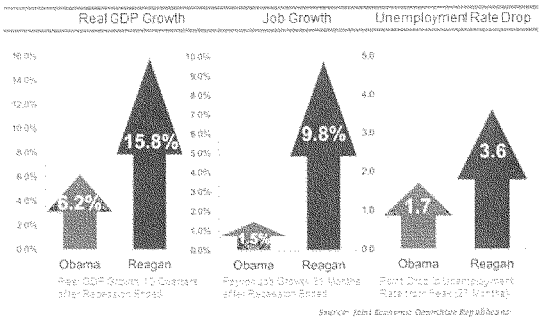
The discretionary monetary policy climate of recent years has once again correlated with a period of increased economic volatility and subpar performance.

(3) The discretionary monetary policy climate of recent years has once again correlated with a period of increased economic volatility and subpar performance. For example, the current recovery has greatly underperformed relative to the next most severe recession-recovery cycle, which occurred in the early 1980s under President Reagan. In that recession, the economy grew 15.8 percent and the unemployment rate fell 3.6

percentage points in the first ten quarters of the recovery. By contrast, the economy has grown just 6.2 percent and the unemployment rate has only fallen 1.7 percentage points since the recent economic recovery began in June 2009 (Figure 4).

Figure 4. Growth, Jobs and Unemployment

Obama Recovery Loses to Reagan Recovery on Key Measures



A NOTE ON THE FEDERAL RESERVE'S NEW INFLATION TARGET

In its most recent monetary policy statement (January 2012), the Federal Open Market Committee adopted two new policies. The first policy was an extension of an existing one: the Federal Reserve communicated that it intended to hold the rate for federal funds at extremely low levels for an additional year, until late 2014. This action places the Federal Reserve on an even more aggressive monetary policy footing.

The Federal Reserve continues its aggressive monetary policy stance.

The second policy was even more consequential: the Federal Reserve adopted an explicit inflation target. It noted, "[t]he inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation."[22] The FOMC determined that a 2% inflation rate, as measured by the annual change in the price index for personal consumption expenditures, was most appropriate.

Articulating an explicit inflation target was a significant, positive step toward a more rules-based and predictable monetary policy.

Articulating an explicit inflation target was a significant, positive step toward a more rules-based and predictable monetary policy. Many central banks, including the Bank of England, the European Central Bank, and the Reserve Bank of New Zealand, have successfully

executed monetary policy by using an explicit target for the price inflation rate.[23] The benefits of these targets are three-fold: (1) they increase accountability for monetary policy at the central bank; (2) they increase transparency of central bank monetary policy formation; and (3) they increase the independence of the central bank relative to elected policymakers.

However, the Federal Reserve needs to articulate its inflation target with more specificity.

However, there exist unknowns related to the Federal Reserve's implementation of its new target. A primary question relates to the Federal Reserve's tolerance for short- to medium-term inflation, which can also be damaging to economic growth and job creation. Does the new 2% long-term inflation target allow for 5% inflation, or perhaps more, over a short-term time horizon? If so, the current articulation would be insufficiently restrictive. What is the highest tolerable rate of inflation over 5 years? 10 years? The answers to these questions go to the heart of the Federal Reserve's commitment to price stability. A related question focuses on the 2% inflation target itself. Is the 2% inflation rate a middle point, a lower bound, or an upper bound? Again, this kind of clarification is important to revealing the Federal Reserve's true intention with its new policy.

POLICY RECOMMENDATIONS

The Federal Reserve's monetary policy deviations in the period between 2002-2005 contributed to a destructive housing bubble; and new discretionary policies in the wake of the financial crisis of 2008 have increased uncertainty in the market and risk higher inflation in the future. These recent decisions represent a distinct shift away from the rules-based policies that characterized the Great Moderation of the 1980's and 1990's. Since it is well understood that predictable, rules-based policies create macroeconomic certainty and spur long-term economic growth and job creation, it would behoove federal policy makers to return to such a rules-based approach. Thus, the Federal Reserve should implement a rules-based monetary policy going forward. This study makes four recommendations that policymakers should adopt, either individually or jointly, in order to increase the likelihood of a more stable monetary policy:

The Federal Reserve is an outlier—only two central banks out of 47 surveyed by the Bank of International Settlements have an equally weighted mandate in additional to price stability.

(1) Create A Single Mandate For Long-Term Price Stability

The Federal Reserve's dual mandate—stable prices and maximum employment—has been in place since 1977. However, in practice, most central bankers have focused their efforts on achieving long-term price stability. In fact, among the 47 central banks and monetary authorities surveyed by the

Bank if International Settlements in 2009, only the Bank of Canada and the Federal Reserve have additional mandates that are equal to the weight of price stability.[24] This is because a consensus exists among economists that monetary policy only affects real output and employment levels in the short term, whereas fundamental market factors (e.g., productivity growth and innovation, which are largely driven by budget, tax, and regulatory policies) affect real output and employment levels in the long term. Because an environment of price stability is conducive to long-run economic growth, achieving long-term price stability necessarily maximizes the sustainable positive effect that monetary policy can have on long-term employment levels.

The dual mandate opens the door to more discretion at the Federal Reserve.

A recent study by the vice president of the Federal Reserve Bank of St. Louis, Daniel Thornton, echoes this analysis and provides an additional perspective through a historical analysis of the FOMC's statement of policy objectives.[25] Interestingly, until December 2008, the Federal Reserve had never mentioned the maximum employment prong of the dual mandate in its statement of policy objectives (which is found within the policy directive the FOMC votes on every six weeks)—a period covering almost 30 years since the dual mandate was created. This first mention occurred just before the Federal Reserve began its first large-scale asset purchase program (QE1). Again, in November of 2010, as the second program (QE2) program was initiated, "[r]eference to the objective of maximum employment was more prominent."[26] Although it is unclear whether these references indicate a substantive change in Federal Reserve policy, they do suggest that Federal Reserve governors might be using the maximum employment prong of the dual mandate as a "cover" for engaging in unconventional and discretionary policies.

Shifting to a single mandate for long-term price stability will focus the Federal Reserve on what it can control and strengthen its independence.

The best way to achieve maximum real output and employment through monetary policy is, in fact, to achieve stable prices; and given the Federal Reserve's possible use of the dual mandate as a basis for engaging in disruptive, discretionary policies, policymakers may want to consider simplifying the Federal Reserve's mandate to include only stable prices.[27]

(2) Require the Federal Reserve to Monitor Asset Prices for Signs of Incipient Asset Price Bubbles

Conventional measures of inflation, including the CPI, missed the last asset bubble.

As a result, the Federal Reserve should monitor asset prices for signs of incipient inflation.

The Federal Reserve should monitor whether or not its selected price index fully captures price movements in the economy. In measuring inflation, the Federal Reserve should consider the effects of monetary policy on asset prices and the potential misallocation of capital. While an easy monetary policy usually flows evenly into the prices of goods and services, an easy monetary policy sometimes flows disproportionately into the prices of certain assets. In such cases, broad-based goods and services price indices (e.g., the consumer price index (CPI), the personal consumption expenditure (PCE) deflator) will not fully capture the price inflation occurring in the economy. As a result, the disproportionate impact of monetary ease on asset prices may cause unsustainable price bubbles in certain assets without broad-based goods and services price indices registering significant price inflation.

The Federal Reserve's response to potential asset price bubbles would vary depending upon the circumstances. No consensus exists as to whether a central bank should simply "lean against" asset price bubbles (i.e., factor them into the mix of indicators signaling inflationary or deflationary forces) or take more aggressive actions to "prick" asset bubbles.[28] The policy response might involve monetary policy tightening, supervisory suasion, or regulatory action to reduce the excessive flow of credit to fund speculation in the asset class. Of course, the correct course of action might require a combination of actions. However, regardless of the outcome of the current debate, the impact of monetary policy on individual asset classes should be considered within the context of monetary policymaking.

(3) Restrict Open Market Operations to U.S. Treasury Securities, repurchase agreements, and reverse repurchase agreements during Normal Times

Political allocation of capital will undermine the Federal Reserve independence.

The Federal Reserve's post-crisis purchase of over $1.25 trillion of residential mortgage-backed securities has been one of its most controversial actions in recent years, and with good reason. By moving beyond the confines of the U.S. Treasury market (including most repurchase agreements and reverse repurchase agreements, which are collateralized by U.S.

Treasuries), the Federal Reserve began allocating credit to selected markets, such as the residential mortgage market, which now features artificially low mortgage rates dampened by the Federal Reserve's purchase program.

The Federal Reserve faces a fundamental threat to its ability to independently conduct U.S. monetary policy when it begins allocating credit outside of the U.S. Treasury market—therein politicizing its actions. Initially, the Federal Reserve's RMBS portfolio was set to run off over time, as mortgages were refinanced, homes were sold, or principal was repaid over time. However, in September 2011, the Federal Reserve reversed this policy and announced that it would begin reinvesting the principal payments from its holdings of federal agency RMBS—thereby holding constant its position in the market—instead of allowing it to taper off as originally proposed. It may or may not be coincidental that the Fed's policy reversal coincided with intense political pressure to support the ailing housing market in order to spur a more robust recovery. Regardless, what is clear is that the Federal Reserve should not insert itself into political debates unless it is absolutely necessary under circumstances similar to those required for the Federal Reserve to invoke its 13(3) authority to extend emergency loans.

(4) Require the Federal Reserve to Articulate a Clear Lender-of-Last-Resort Policy to Govern Future Crises

In the wake of the financial crisis, Chairman Bernanke justified the extraordinary steps taken by the Federal Reserve to bail out several firms that were previously outside its regulatory purview by noting, "Because the United States has no well-specified set of rules for dealing with the potential failure of systemically critical non-depository financial institutions, we believed that the best of the bad options available was to work with the Treasury to take the actions we did to avoid those collapses."[29] To be sure, in its nearly 100 year history, the Federal Reserve has never clearly articulated its lender-of-last resort strategy.[30] Well-known economist and Federal Reserve historian Allan Meltzer clearly describes the problems this policy void creates:

In its nearly 100 year history, the Federal Reserve has never clearly articulated its lender-of-last resort strategy.

> *The absence of a [lender-of-last-resort] policy has three unfortunate consequences. First, uncertainty increases. No one can know what will be done.*

The lack of a lender-of-last-resort policy increases uncertainty, encourages political maneuvering by troubled firms, and creates moral hazard.

Second, troubled firms have a stronger incentive to seek a political solution. They ask Congress or the administration for support or to pressure the Federal Reserve or other agencies to save them from failure. Third, repeated rescues encourage banks to take greater risk and increase leverage. This is the well-known moral hazard problem.[31]

Articulating a lender-of-last-resort policy will mitigate these negative consequences.

Requiring the Federal Reserve to clearly establish a lender-of-last resort policy—or at a minimum, a framework or set of guidelines—will decrease uncertainty in the market during a future crisis and mitigate the moral hazards created by the legacy of the recent "too-big-too-fail" bailouts. A clear lender-of-last resort policy will also provide policymakers a benchmark against which oversight can be conducted.

CONCLUSION

This study suggests four possible Federal Reserve reforms that policymakers may want to consider to ensure a stable monetary policy going forward.

(1) Creating a single mandate for price stability;

(2) Requiring the Federal Reserve to monitor asset prices for signs of incipient asset price bubbles;

(3) Restricting open market operations to U.S. Treasury securities, repurchase agreements, and reverse repurchase agreements during normal times; and

(4) Requiring a clear lender-of-last-resort policy.

Each reform seeks stability through increased transparency and predictability. Concurrent with policymakers' consideration of these reforms, the Federal Reserve itself should outline a clear exit strategy from today's discretionary climate and begin fostering a climate characterized by flexible, rules-based policies.

APPENDIX A: UNCONVENTIONAL LENDING FACILITIES AND BAILOUTS		
Federal Reserve Action	***Start Date***	***Description***
Term Auction Facility (TAF)	12/12/2007	The TAF auctioned funds to depository institutions under terms similar to the Federal Reserve's discount window. The TAF initially auctioned up to $20 billion every two weeks, but this amount was increased on several occasions to as much as $150 billion every two weeks.
International Swap Lines	12/12/2007	The Federal Reserve provided dollars temporarily to foreign central banks in exchange for foreign currency collateral and interest, enabling them to stabilize dollar-based markets within their jurisdiction.
Term Securities Lending Facility (TSLF)	3/11/2008	The TSLF allowed primary dealers (e.g., investment banks) to post collateral and temporarily swap illiquid assets for highly liquid assets such as U.S. Treasuries in order to increase liquidity in financial markets.
Federal Reserve bails out Bear Stearns	3/14/2008	The Federal Reserve facilitated the sale of the investment bank Bear Stearns to JP Morgan through a nearly $30 billion loan—the first financing of a non-commercial bank institution in four decades.
Primary Dealer Credit Facility (PDCF)	3/16/2008	The PDCF sought to improve broker dealers' access to liquidity in the overnight loan market banks use to meet their reserve requirements.
Federal Reserve bails out AIG after allowing Lehman Brothers to fail	9/16/2008	Just days after allowing the investment bank Lehman Brothers to fail, the Federal government effectively nationalized the insurer American International Group and the Federal Reserve lent the firm $85 billion.
Asset-backed Commercial Paper Money Market Fund Liquidity Facility (AMLF)	9/19/2008	The AMLF made non-recourse loans to banks to purchase asset-backed commercial paper. The AMLF would soon be superseded in importance by the creation of the Commercial Paper Funding Facility.
Commercial Paper Funding Facility (CPFF)	10/7/2008	The CPFF was used to purchase highly rated secured and unsecured commercial paper from issuers. It was the first Federal Reserve facility in modern times with an ongoing commitment to purchase assets, as opposed to lending against assets, and the first time in 50 years that the Federal Reserve provided financial assistance to non-financial firms.
Money Market Investor Funding Facility (MMIFF)	10/21/2008	The MMIFF was created to lend up to $540 billion to private sector special purpose vehicles that invest in commercial paper, but the facility expired at the end of October 2009 without ever being used.
Term Asset-backed Loan Facility (TALF)	11/25/2008	The TALF addressed problems in the market for asset-backed securities (ABS). Using this facility, the Federal Reserve made non-recourse loans to private U.S. companies that had a relationship with a primary dealer to purchase recently issued, highly rated ABS.
Federal Reserve bails out Citigroup	1/16/2009	The Federal Reserve worked jointly with the U.S. Treasury and the Federal Deposit Insurance Company to provide a package of guarantees, liquidity access and capital to Citigroup.

[1] Initial investigation into these areas culminated in the enactment of the *Dodd-Frank Wall Street Reform and Consumer Protection Act.* PL 111-203 (July 21, 2010).

[2] *See* Chapter 3, "Design of Fiscal, Monetary, and Financial Policies," *Economic Report of the President together with the Annual Report of the Council of Economic Advisors* (1990).

[3] See Kydland, Finn E. and Prescott, Edward C., "Rules Rather than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy* 85/3 (1977); Barro, Robert J. and Gordon, David B., "Rules, Discretion and Reputation in a Model of Monetary Policy," NBER Working Paper No. 1079 (1983); *see also* Dennis, Richard, "Time-Inconsistent Monetary Policies: Recent Research," *Federal Reserve Bank of San Francisco Economic Letter* (2003).

[4] *See* Greenspan, Alan, "Activism," *Council on Foreign Relations* (March 3, 2011).

[5] "The Great Moderation," Remarks by Governor Ben S. Bernanke at the meetings of the Eastern Economic Association (2004).

[6] Blanchard, Olivier and Simon, John, "The Long and Large Decline in U.S. Output Volatility," Brookings Papers on Economic Activity 32/1 (2001).

[7] For a historical overview of the development of the Taylor rule, *see* Also, Pier Francesco, Kahn, George and Leeson, Robert, "The Taylor Rule and the Transformation of Monetary Policy," *Federal Reserve Bank of Kansas City Research Working Papers RWP 07-11* (2007).

[8] *The general formulation of the Taylor rule is as follows:* $i_t = rr^* + \pi_t + \beta(\pi_t - \pi^*) + \gamma(y_t - y^*)$; *where* i_t *is the recommended policy rate;* rr^* *is the equilibrium real interest rate (assumed to be 2% in the original formulation of the Taylor rule);* $(\pi_t - \pi^*)$ *is the difference between the inflation rate and its long-run target (with* π^* *assumed to be 2% in the original version); and* $(y_t - y^*)$ is the output gap, or the difference between real GDP and potential GDP; and β and γ are both set to 0.5 in the original version. *See* Kahn, George A., "Taylor Rule Deviations and Financial Imbalances," Federal Reserve Bank of Kansas City (2010).

[9] *Ibid.* at 65.

[10] The 12 voting members consist of "the seven members of the Board of Governors of the Federal Reserve System; the president of the Federal Reserve Bank of New York; and four of the remaining eleven Reserve Bank presidents, who serve one-year terms on a rotating basis. The rotating seats are filled from the following four groups of Banks, one Bank president from each group: Boston, Philadelphia, and Richmond; Cleveland and Chicago; Atlanta, St. Louis, and Dallas; and Minneapolis, Kansas City, and San Francisco. The seven non-voting Reserve Bank presidents "attend the meetings of the Committee, participate in the discussions, and contribute to the Committee's assessment of the economy and policy options." Board of Governors of the Federal Reserve System, "Federal Open Market Committee," *available at* http://www.federalreserve.gov/monetarypolicy/fomc.htm

[11] Taylor, John, "Housing and Monetary Policy," Presentation for the Policy Panel at the Symposium on Housing, Housing Finance, and Monetary Policy, hosted by the Federal Reserve Bank of Kansas City in Jackson Hole, Wyoming (2007).

[12] *See, e.g.*, Kahn, George, "Taylor Rule Deviations and Financial Imbalances," Federal Reserve Bank of Kansas City (2010); Jarocinski, Marek and Smets Frank, "House Prices and the Stance of Monetary Policy," European Central Bank (2008); Ahrend, R., Cournede, B, and Price, R, "Monetary Policy, Market Excesses and Financial Turmoil," *OECD Economics Department Working Papers No. 597* (2008). An alternative theory, posited by Chairman Ben Bernanke, holds that a "global savings glut," which resulted in significant international capital flows into the U.S. economy, was a primary factor in causing the housing bubble. Bernanke, Ben, "International Capital Flows and the Returns to Safe Assets in the United States," Financial Stability Review No. 15, Banque de France (2011).

[13] Kahn, George, "Taylor Rule Deviations and Financial Imbalances," Federal Reserve Bank of Kansas City (2010).

[14] Bernanke, Ben, "International Capital Flows and the Returns to Safe Assets in the United States 2003-2007," Financial Stability Review No. 15, Banque de France (2011).

[15] Carlson, John et. al, "Credit Easing: A Policy for a Time of Financial Crisis," Federal Reserve Bank of Cleveland (2009).

[16] "Maiden Lane Transactions," Federal Reserve Bank of New York, available at http://www.newyorkfed.org/markets/maidenlane.html.

[17] Federal Housing Finance Agency, "Data as of October 1, 2010 on Treasury and Federal Reserve Purchase Programs for GSE and Mortgage-Related Securities," *available at* www.fhfa.gov/webfiles/17990/TreasFED10012010.pdf.

[18] Press Release, Federal Open Market Committee Statement (August 9, 2011).

[19] Historical evidence demonstrates that clear and credible Federal Reserve communications about forthcoming monetary policy actions can influence the policy's effectiveness. *See,* "Central Bank Talk and Monetary Policy," Remarks by Governor Ben S. Bernanke at the Japan Society Corporate Luncheon (2004).

[20] *See,* Bernanke, Ben, Reinhart, Vince, and Sack, Brian, "Monetary Policy Alternatives at the Zero Bound: An Empirical Assessment," Federal Reserve Board (2004).

[21] Press Release, Federal Open Market Committee Statement (September 21, 2011).

[22] Press release, Federal Open Market Committee Statement (January 25, 2012).

[23] Cobham, David (Ed.), "Twenty Years of Inflation Targeting: Lessons Learned and Future Prospects," Cambridge University Press (2010).

[24] Ortiz, Guillermo and Yam, Joseph (Chairs of the Central Bank Governance Group), "Issues in the Governance of Central Banks," Bank of International Settlements (May 2009).

[25] Thornton, Daniel, "What Does the Change in the FOMC Statement of Objectives Mean?" *Federal Reserve Bank of St. Louis Economic Synopses No. 1* (2011).

[26] *Ibid.*

[27] *See* Thornton, Daniel, "The Case for 'Inflation First' Monetary Policy," *Federal Reserve of St. Louis Economic Synopses No. 47* (2009).

[28] For an example of an analysis suggesting "asset prices are relevant only to the extent they may signal potential inflationary or deflationary forces," *see,* Bernanke, Ben and Gertler, Mark, "Monetary Policy and Asset Price Volatility," NBER Working Paper No. 7559 (200).

[29] "Federal Reserve Policies to Ease Credit and Their Implications for the Fed's Balance Sheet," Remarks by Chairman Ben S. Bernanke at the National Press Club Luncheon, National Press Club, Washington D.C. (2009).

[30] *See* Meltzer, Allan H., "Policy Principles: Lessons from the Fed's Past," in *The Road Ahead for the Fed,* Hoover Institute (2009).

[31] *Ibid.* at 22.

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OPINION March 28, 2012

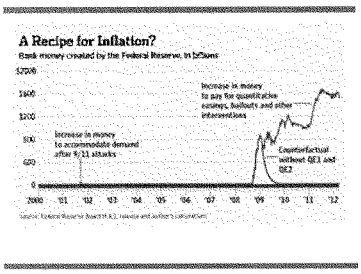
The Dangers of an Interventionist Fed

A century of experience shows that rules lead to prosperity and discretion leads to trouble.

By John B. Taylor

America has now had nearly a century of decision-making experience under the Federal Reserve Act, first passed in 1913. Thanks to careful empirical research by Milton Friedman, Anna Schwartz and Allan Meltzer, we have plenty of evidence that rules-based monetary policies work and unpredictable discretionary policies don't. Now is the time to act on that evidence.

The Fed's mistake of slowing money growth at the onset of the Great Depression is well-known. And from the mid-1960s through the '70s, the Fed intervened with discretionary go-stop changes in money growth that led to frequent recessions, high unemployment, low economic growth, and high inflation.



In contrast, through much of the 1980s and '90s and into the past decade the Fed ran a more predictable, rules-based policy with a clear price-stability goal. This eventually led to lower unemployment, lower interest rates, longer expansions, and stronger economic growth.

Unfortunately the Fed has returned to its discretionary, unpredictable ways, and the results are not good. Starting in 2003-05, it held interest rates too low for too long and thereby encouraged excessive risk-taking and the housing boom. It then overshot the needed increase in interest rates, which worsened the bust. Now, with inflation and the economy picking up, the Fed is again veering into "too low for too long" territory. Policy indicators suggest the need for higher interest rates, while the Fed signals a zero rate through 2014.

It is difficult to overstate the extraordinary nature of the recent interventions, even if you ignore actions during the 2008 panic, including the Bear Stearns and AIG bailouts, and consider only the subsequent two rounds of "quantitative easing" (QE1 and QE2)—the large-scale purchases of mortgage-backed securities and longer-term Treasurys.

The Fed's discretion is now virtually unlimited. To pay for mortgages and other large-scale securities purchases, all it has to do is credit banks with electronic deposits—called reserve balances or bank money. The result is the explosion of bank money (as shown in the nearby chart), which now dwarfs the Fed's emergency response to the 9/11 attacks.

Before the 2008 panic, reserve balances were about $10 billion. By the end of 2011 they were about $1,600 billion. If the Fed had stopped with the emergency responses of the 2008 panic, instead of embarking on QE1 and QE2, reserve balances would now be normal.

This large expansion of bank money creates risks. If it is not undone, then the bank money will eventually pour out into the economy, causing inflation. If it is undone too quickly, banks may find it hard to adjust and pull back on loans.

The very existence of quantitative easing as a policy tool creates unpredictability, as traders speculate whether and when the Fed will intervene again. That the Fed can, if it chooses, intervene without limit in any credit market—not

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only mortgage-backed securities but also securities backed by automobile loans or student loans—creates more uncertainty and raises questions about why an independent agency of government should have such power.

The combination of the prolonged zero interest rate and the bloated supply of bank money is potentially lethal. The Fed has effectively replaced the entire interbank money market and large segments of other markets with itself—i.e., the Fed determines the interest rate by declaring what it will pay on bank deposits at the Fed without regard for the supply and demand for money. By replacing large decentralized markets with centralized control by a few government officials, the Fed is distorting incentives and interfering with price discovery with unintended consequences throughout the economy.

For all these reasons, the Federal Reserve should move to a less interventionist and more rules-based policy of the kind that has worked in the past. With due deliberation, it should make plans to raise the interest rate and develop a credible strategy to reduce its outsized portfolio of Treasurys and mortgage-backed securities.

History shows that reform of the Federal Reserve Act is also needed to incentivize rules-based policy and prevent a return to excessive discretion. The Sound Dollar Act of 2012, a subject of hearings at the Joint Economic Committee this week, has a number of useful provisions. It removes the confusing dual mandate of "maximum employment" and "stable prices," which was put into the Federal Reserve Act during the interventionist wave of the 1970s. Instead it gives the Federal Reserve a single goal of "long-run price stability."

The term "long-run" clarifies that the goal does not require the Fed to overreact to the short-run ups and downs in inflation. The single goal wouldn't stop the Fed from providing liquidity when money markets freeze up, or serving as lender of last resort to banks during a panic, or reducing the interest rate in a recession.

Some worry that a focus on the goal of price stability would lead to more unemployment. History shows the opposite.

One reason the Fed kept its interest rate too low for too long in 2003-05 was concern that raising the interest rate would increase unemployment in the short run. However, an unintended effect was the great recession and very high unemployment. A single mandate would help the Fed avoid such mistakes. Since 2008, the Fed has explicitly cited the dual mandate to justify its extraordinary interventions, including quantitative easing. Removing the dual mandate will remove that excuse.

A single goal of long-run price stability should be supplemented with a requirement that the Fed establish and report its strategy for setting the interest rate or the money supply to achieve that goal. If the Fed deviates from its strategy, it should provide a written explanation and testify in Congress. To further limit discretion, restraints on the composition of the Federal Reserve's portfolio are also appropriate, as called for in the Sound Dollar Act.

Giving all Federal Reserve district bank presidents—not only the New York Fed president—voting rights at every Federal Open Market Committee meeting, as does the Sound Dollar Act, would ensure that the entire Federal Reserve system is involved in designing and implementing the strategy. It would offset any tendency for decisions to favor certain sectors or groups in the economy.

Such reforms would lead to a more predictable policy centered on maintaining the purchasing power of the dollar. They would provide an appropriate degree of oversight by the political authorities without interfering in the Fed's day-to-day operations.

Mr. Taylor is a professor of economics at Stanford and a senior fellow at the Hoover Institution. This op-ed is adapted from his testimony this week before the Joint Economic Committee, which drew on his book "First Principles: Five Keys to Restoring America's Prosperity." (W.W. Norton, 2012).

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OPINION

Congress Finally Takes on the Fed

By George Melloan

Two bills now before Congress make it clear that legislators are finally giving serious attention to a much-needed reform of the Federal Reserve System.

The most recent effort is the Sound Dollar Act (H.R. 4180) introduced in the House in March by Rep. Kevin Brady (R., Texas), vice chairman of the Joint Economic Committee. A companion bill was put before the Senate by Mike Lee (R., Utah). The Sound Dollar Act has far more hope of passage than the more radical H.R. 1098, introduced by Rep. Ron Paul (R., Texas) last year. H.R. 1098 would repeal the legal tender laws, end the Fed's monopoly on money creation, and allow the private production and use of gold and silver as specie.

The Fed's near-zero interest rate policy has punished savers without producing a strong recovery. Two bills in Congress would rein in the central bank.

The Sound Dollar Act, though more modest in its goals, would be a good start in reforming the way the U.S. dollar is created and managed. It would give the Fed a single mandate: to maintain price stability. The present dual mandate, which adds maintaining full employment as a requirement, never made any sense when it was enacted during the Carter administration in 1978. That has been amply demonstrated by the experience of the last three and a half years.

The Fed doesn't have the capability to maintain full employment and its efforts to do so have produced nothing but trouble. That mandate is the justification the Fed has cited for the near-zero interest rate policy it adopted in 2008 and promises to continue through 2014.

How has that worked out? We are suffering through one of the weakest recoveries on record. Unemployment remains above 8% and would be even higher were it not for the number of workers who have given up looking for a job. Meanwhile, the Fed's near-zero interest rate policy has reduced returns on the savings of individual investors and given managers of defined-benefit pension funds multibillion-dollar headaches as they struggle to earn enough on their portfolios to meet their obligations.

The Fed's policy clearly hasn't provided "full employment." What it does do is give the federal government cheap financing, currently only 2% on 10-year Treasurys, nearly one point less than inflation. It thus supports the current administration's profligacy, which has added $4.9 trillion to the national debt since it came to power. Federal debt has risen 72% since the Democrats took over Congress in 2007. That's why Rep. Barney Frank (D., Mass.) and other "progressives" in Congress have already mounted a tooth-and-nail campaign against Mr. Brady. They of course still insist that their main interest is "full employment."

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Eliminating the dual mandate would be a good first step, but Mr. Brady doesn't stop there. His bill is also a move to partly depoliticize the Fed. It would give all 12 regional Federal Reserve bank presidents a permanent vote on the Federal Open Market Committee, which sets monetary policy. Currently only the New York Fed president has a permanent vote. There are only four other voting seats for presidents and they rotate among the other 11 regional banks.

The change would mean that the 12 presidents, who are appointed by boards of directors made up of local bankers and business leaders in their regions, would outnumber the seven governors, who are appointed by the president of the U.S. with the advice and consent of the Senate. In other words, the Federal Open Market Committee would become more responsive to the opinions and needs of the private sector and less to the political pressures applied by Congress and the White House.

This is a not a sure-fire fix. Private interests beg for easy money, too. But the regional presidents, by and large, have a better feel for what's happening in their home regions than the Fed governors sealed up in their Beltway cocoon. That's been demonstrated recently by the fact that it's been regional presidents who have been the only dissenters against Fed Chairman Ben Bernanke's determination to maintain the near-zero interest rate policy through 2014.

Mr. Brady's Sound Dollar Act would also end another pernicious step taken by the Fed after the 2008 crash: credit allocation. The Fed bailed out the banks and housing industry by mass purchases of the toxic mortgage-backed securities that were responsible for financial sector freeze-up. The Sound Dollar Act would limit the Fed to purchases of Treasury securities.

Decision makers would have to find ways other than credit allocation to clean up messes made by ill-considered government policies, such as the federally enforced subprime lending that poisoned the mortgage-backed security market in 2008. There were indeed other ways available in 2008, but Mr. Bernanke, New York Fed President Timothy Geithner (now Treasury secretary) and Treasury Secretary Henry Paulson chose the easy way out.

The Sound Dollar Act is full of good ideas, but it can't become law until next year and only then if there is a new president and a more favorable Congress. The dollar crisis may not wait. The Fed has become the lender of first resort to a financially irresponsible government. As the Fed creates new money to finance massive federal deficits, further price inflation is a sure bet. Congress is finally getting serious, but it's very late in the day.

Mr. Melloan, a former columnist and deputy editor of the Journal editorial page, is the author of "The Great Money Binge: Spending Our Way to Socialism" (Simon & Schuster, 2009).

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Statement by Professor James K. Galbraith, Lloyd M. Bentsen, Jr. Chair in Government/ Business Relations, Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin and President, Association for Evolutionary Economics, to the Subcommittee on Domestic Monetary Policy, Committee on Financial Services, U.S. House of Representatives. May 8, 2012, Rayburn House Office Building.

Chairman Paul, Ranking Member Clay, Members of the Subcommittee, it is always an honor as a former member of the Banking Committee staff to appear before you. Today I feel particularly privileged as I was on the staff from 1975 through 1980 and on the team that drafted the Humphrey-Hawkins Full Employment and Balanced Growth Act of 1978. I drafted the Federal Reserve oversight sections of that act, and it was my responsibility to organize the hearings on the Conduct of Monetary Policy in those years, beginning with the enactment of H. Con. Res. 133 in 1975.

Let me join in the frustration that underlies the bills before you. The Constitution gives to Congress the right "to coin money, regulate the value thereof." The Congress correctly delegates the exercise of that power, but it also maintains its authority to set goals and to supervise the execution of policy. It has been a long struggle to establish the right relationship between Congress and the Federal Reserve, and to bring the right degree of openness, responsiveness and accountability to that relationship.

I endorse H.R. 3428, which would remove the Presidents of the District Federal Reserve Banks from voting status on the Open Market Committee. The Presidents are not duly constituted "Officers of the United States" under the appointments clause of the Constitution. Their status as monetary policy-makers is anomalous, and as the Supreme Court ultimately declined to grant certiorari when the issue was litigated by Chairman Reuss and Senator Riegle many years ago, the only remedy is legislation. HR. 3428 would take a useful step along the path to a better central bank.[i]

That said, we cannot escape the need for a central bank. The United States before the Federal Reserve Act suffered from chronic deflation and financial panics; for this reason the period from 1873 to 1896 was known as the Great Depression, until the 1930s got that title. In the past century only the communist countries dispensed with central banks and private banking firms, and this arrangement did not serve them well.[ii] For this reason, I cannot join in supporting bills that would repeal the Federal Reserve Act or bar lending by commercial banks.[iii]

The key issue on which I would like to comment today is not whether to have a central bank or who should vote on policy. It is what mandate Congress should give to the central bank. This is an issue fraught with politics and ideology – and worse, with economic theory.

When I served on this staff, my colleagues included the Chicago monetarists Robert Weintraub and Robert Auerbach. We worked together under Chairman Reuss to develop the "dual mandate," which was expressed as "to promote full employment, production, and real income, balanced growth, adequate productivity growth, proper attention to national priorities, and reasonable price stability" in the preamble of the Humphrey-Hawkins Act and as "maximum employment, stable prices and moderate long-term interest rates" in the Federal Reserve Act.

My staff colleagues were committed monetarists. They believed that the Federal Reserve should pursue a policy of monetary control, to contain inflation. But they did not try to dictate that to the Federal Reserve. Nor would I have tried to dictate the pursuit of full employment over all other policy goals. Writing economic theory into law is dangerous and we steered clear of it as best we could.

The purpose of the Full Employment and Balanced Growth Act in this area was instead to open a sustained dialog between the Federal Reserve and Congress, with honest and forthright reporting on economic conditions, on the outlook and on the goals and instruments of policy at any given time. We understood that conditions change. We realized that economic ideas flow in and out of fashion. We felt that the goals of Congress were best served by stressing the element of dialog and oversight, within a broad framework of agreed objectives.

The Humphrey-Hawkins Act did require the Federal Reserve to specify the range of growth rates of the major monetary aggregates that it believed consistent with its economic goals and objectives. This provision was not intended to impose a strategy of monetary control on the Federal Reserve. The intent was to permit the Banking Committees to monitor the Federal Reserve's forecasting and modeling. We felt that to allow the Federal Reserve to report in terms of economic forecasts alone would make it too easy to evade discussion of what might and should be done under differing conditions.

To stipulate an intermediate target range in terms of interest rates would, at that time, have been highly controversial. Money-growth target ranges were something conservatives could accept, because of monetarism, and that the Federal Reserve could tolerate because they were not the operational tool of open market policy. Then in the mid-1980s the relationship between money growth and prices collapsed and so did the idea that target ranges for money growth were a useful indicator of Federal Reserve policy. However, because the law had been drafted to be intellectually flexible, the congressional oversight procedures survived this statistical and academic upheaval.

This system has been in place for 37 years since H. Con. Res 133; 34 years since Humphrey-Hawkins. It has been used effectively on some occasions, less so on others. But it has stood the test of time. It has withstood changes in the wording of the law governing the hearings and reporting process. It is a robust procedure because it serves the interests of Congress, of the central bank, and of the public.

Two bills before you would now strike the employment objective presently found in the Federal Reserve Act, leaving only "price stability" and (in the case of HR 245) "moderate long-term interest rates" as statutory goals. In this they would emulate the model of the European Central Bank, whose charter stipulates price stability as the predominant mandate for that institution. HR. 4180 would be less flexible than the charter of the ECB, which permits the pursuit of other goals so long as the primary objective of price stability is met.

The presence of "price stability" among monetary policy objectives is established law; the question is whether it should be (apart from "moderate long-term interest rates") the sole stated objective. The case that this is so rests on a technical hypothesis, known as the "natural rate of unemployment" or "non-accelerating inflation rate of unemployment" (NAIRU). This hypothesis was advanced by Milton Friedman and by Edmund S. Phelps in 1967, and it has been a staple of textbooks, but also of controversy, ever since.

In a nutshell, the Friedman-Phelps natural rate hypothesis held that the labor market would settle the rate of employment and output, that money is "neutral" in the long run, and that any effort to create jobs with expansionary monetary policy would lead to runaway inflation. (The theory has bells and whistles, including "adaptive" or "rational" expectations and a "vertical Phillips Curve," but that is the essence of it.) From this it follows that the best strategy for monetary policy is to pursue a steady rate of inflation; other matters will take care of themselves. And from there one can argue that the best steady rate of inflation is a zero rate. It is this that HR 4180 and HR 245 would now write into law.

A variant on this position is called "inflation targeting," which has been supported by Chairman Bernanke, at least in academic work. The theoretical target under inflation targeting is a *stable* rate of inflation, not necessarily a *zero* rate. Advocates argue that inflation targeting is consistent with the dual mandate, because (in their view) that rate of employment at which inflation is stable is the maximum sustainable rate. If that is correct, then the employment part of the dual mandate causes no harm and there is no cause to remove it. In a sense, under this view, the presence of "maximum employment" in the mandate is what *permits* non-zero-inflation targeting to be an accepted policy.

"Price stability" is a stricter standard. To remove "maximum employment" from the mandate would seem to imply a directive from Congress to pursue *zero inflation at whatever cost to jobs*. In a world where wages normally vary with the changing age structure of the population (they tend to rise as workers get older) and where some important prices are set outside the country, this is a mandate to generate unemployment, so as to force internal devaluation, in response to practically any form of internal change or external stress.

We can see a policy of this type at work in Europe, where there is a two-percent inflation standard. It is producing a relentless debt-deflation, under which unemployment rises, social institutions such as education, health care and transport are destroyed, and yet public deficits and the ratios of debt to GDP continue to soar. The unemployment rate in Spain today is twenty-five percent. At a meeting in Berlin in April, a high official of the European Central Bank stated that the ECB had been "fully faithful" to its mandate. Members of Congress might not be happy, should the Federal Reserve say the same thing at a moment when twenty-five percent of Americans were out of work. Unlike the ECB, the Federal Reserve is a statutory agency for which, ultimately, Congress is responsible.

HR 4180 makes an explicit commitment to certain ideas, including the NAIRU[iv], the "neutrality"of money in the long run[v] and the accelerationist hypothesis. It makes debatable empirical assertions about the efficacy of a price-stability mandate; I attach for the record a book review from *Foreign Affairs*, showing that not even Ben Bernanke and his distinguished co-authors could make this case with conviction[vi]. HR 4180 also admits that the concept of "price stability" is not easily measured; it sets out an array of statistical issues that would have to be resolved. This recalls the "definition of money" problem that bedeviled us when monetarism was in fashion[vii], calling to mind Goodhart's Law, which holds that as soon as an economic statistic is used for policy purposes, the meaning of the statistic will change.

Welcome to Hamelin, in other words. Economists do not know as much as some assert. The recent record of the profession, which massively failed to anticipate the great financial crisis, especially does not inspire confidence. But let me now try to step outside the narrow parsing of terms in statutes and textbook economics, to say a few words about the real world.

Back in the 1970s, we economists did feel that the Federal Reserve held vast powers over inflation and employment. That was a legacy of the post-war American self-image, of our power, wealth and influence, combined with the influence of brilliant polemicists such as John Maynard Keynes and Milton Friedman on many people.

Many economists hold a more reserved view now. Given the financial crisis and our deplorably slow recovery from it, many recognize that having honest, well-regulated banks is important – and that the damage done by catastrophic deregulation and desupervision cannot be repaired easily. So jobs will not easily recover, simply because interest rates to banks are low. To us, the fact that quantitative easing has been a disappointment is no surprise.

Many economists also now recognize that when inflation disappeared in the early 1980s it was not simply because of the powerful personality of Paul Volcker or the fact that Congress started transmitting the Federal Reserve's views to the public via the Humphrey-Hawkins hearings. Disinflation was global. The high dollar, world debt crisis, collapse of commodity and especially oil prices, collapse of the Soviet Union and rise of manufacturing in China were part of the reason. Once these causes were set in motion, the Federal Reserve had little control over the course of events. Statements by Federal Reserve officials in recent decades on their anti-inflation vigilance look silly now. Here we had a reverse King Canute, standing on the beach at low tide, congratulating himself.

The global economy is a fact. The financial debacle is a fact. We cannot escape from either one. In years ahead we may well face continuing trouble with resource prices. We surely face a future of fewer jobs, especially so long as we do nothing about debts and banks.

These are matters over which monetary policy, as such, has little influence. They cannot be fixed by fiddling with interest rates. They could not be fixed by returning to money-growth targets. We are in a realm where the appropriate response of monetary policy is not clear; it will depend, in part, on what happens in the world and on the decisions that Congress takes on other matters, such as financial sector reform, bank supervision, energy policy and job creation.

This reality should make us a bit less inclined to play King Canute, even if today there is a risk the tides may rise again. It should make us more inclined to study, learn, discuss and review, between Congress and the Federal Reserve, both the prevailing situation and the many lines of policy that will bear on the outcome. Whether to pay the cost of achieving any particular policy goal – including price stability – should depend on what that cost actually is. And that will depend on circumstances, which, as a point of notorious fact, you cannot rely on economists to predict.

Today in economics our pressing need is for a fresh look at theory, and a thorough revision of doctrines that have dominated the subject for decades. In view of this, any law prescribing a single line of thought for the Federal Reserve would be a serious step in the wrong direction.

Were we writing today the preamble of the Humphrey-Hawkins Act, or Section 2a of the Federal Reserve Act, it's likely that we would choose different language. But the language that is there, with its multiple goals and objectives, is flexible and pragmatic; it permits discussion to continue in times of uncertainty, when learning is needed. It does not lock either side into a rigid formula that it will then become necessary to evade. It is serviceable. That is the enduring value of the process now in place.

I close therefore by reminding you of the words of the immortal American poet, Ogden Nash:

"If there is one principle to Americans unknown,
It is: leave well enough alone."

Thank you for your time and attention.

i HR 1401 would shorten the terms of the Governors and rearrange the memberships of Presidents on the FOMC; it offers improvement over current arrangements but it does not address the constitutional issue. For this reason I would prefer the solution proposed in HR 3428. Another solution would be to vest the entire voting power on monetary policy in the Board of Governors, and constitute the Presidents as a non-voting Advisory Committee. This would solve the constitutional question while making the smallest adjustment to present arrangements, since all the Presidents (or their representatives) attend the FOMC meetings in any event. In comparison, I can see no compelling reason to create full-time positions at the Board of Governors for functionaries whose entire job would be to contemplate a short-term interest rate that may not deviate from zero for years and years. On the history of congressional lawsuits against voting participation by the District Bank Presidents on the FOMC, see Robert D. Auerbach: http://tinyurl.com/7bw93cs , especially this paragraph: "*...during the 1980s, four lawsuits were brought to require the presidents of the twelve Federal Reserve Banks to be Constitutional officers: Presidential nomination and Senate confirmation. The complainants believed that individuals who vote on the nation's money supply -- and also vote on loans to foreign governments and warehousing funds for the Treasury, both bypassing Congress -- should not be internally selected without displaying their views and credentials in a public Senate confirmation hearing. The complainants were House Banking Chairman Henry Reuss, (Democrat, Wisconsin), Senate Banking Chairman Donald W. Riegle Jr. (Democrat, Michigan), Senator John Melcher (Democrat, Iowa) and The Committee for Monetary Reform (President and Chairman Randall E. Presley of a coalition of 95 corporations and 779 individuals). Two former staffers on the Democratic staff of the House Banking Committee assisted: Grasty Crews argued these cases and I was an expert advisor. The lawsuits failed and the use of internally appointed people to make government policies is still a contentious issue as is exemplified in the 2010 Reform Act's provision for the Inspector General of the new Bureau of Consumer Financial Protection.*"

ii The case of Hong Kong is celebrated by opponents of monetary discretion, but Hong Kong was a colony before it was returned to China in 1997. I also pass over such countries as Panama and Ecuador which have adopted the US dollar, and the zone franc countries of West Africa, which rely on Paris. All major industrial countries in the world today have central banks and private banking systems; to depart from this norm would be, at least, a substantial experiment.

iii I confess I do not yet fully understand the thrust of HR. 2990, which I received only this past Friday. The bill accurately calls attention to the dire conditions faced by many Americans and calls appropriately for action. But the apparent direction of action, to forbid "lending against deposits," seems to overlook the fact that bank loans create deposits in the first place. However, I have not had time to study the later sections of this bill in detail.

iv See my article, "Time to Ditch the NAIRU" *Journal of Economic Perspectives,* Vol 11, Number 1, Winter 1997, 93-108. Available at: http://tinyurl.com/7cf8jer

v HR 4180 thus denies the possibility of hysteresis, or path dependency, a concept that long-term outcomes are influenced by the course of short-term decisions. Hysteresis is fundamental to an evolutionary (which is to say scientific) view of economic process. It has been widely debated, and substantially accepted by many leading economists in recent years, undermining the concept of a long-run equilibrium for employment determined by non-monetary matters. However, these properly remain academic issues; Congress would be wise to avoid interjecting itself into debates of this kind.

vi "The Inflation Obsession: Flying in the Face of the Facts" a review of Ben S. Bernanke, Thomas Laubach, Frederic S. Mishkin and Adam S. Posen, Inflation Targeting: Lessons from the International Experience," *Foreign Affairs*, January-February 1999, 152-156.

vii The economist Kenneth Boulding summarized this in verse: "We must have a good definition of money/For if we have not/Then what have we got/But a Quantity Theory of no-one-knows-what?"

The Inflation Obsession

By James K. Galbraith

James K. Galbraith is Professor at the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin, as a Senior Scholar of the Jerome Levy Economics Institute. His new book is *Created Unequal: The Crisis in American Pay.*

Ben S. Bernanke, Thomas Laubach, Frederic S. Mishkin and Adam S. Posen, *Inflation Targeting: Lessons from the International Experience*, Princeton: Princeton University Press, 1999, 365 pp., bibliography, $24.95.

Should a central bank address a broad agenda of economic growth, price stability and full employment? Or should it focus single-mindedly on controlling inflation? This debate is mounting in Europe, where calls from social democratic governments for lower interest rates are growing louder as the continent prepares for a central bank. In the United States, where federal law stipulates full employment as a policy goal, Republican proposals to require that the Federal Reserve focus only on inflation surface regularly in Congress.

Ben Bernanke and his colleagues, each a veteran of the Federal Reserve Bank of New York research staff, make the case for inflation targeting, in a book that is a manifesto in everything but its tone. The tone is, rather, the worried one familiar to followers of the recurrent debates over competitiveness, which cater to national vanity in similar terms:

> ... the United States has lagged behind other industrial countries in considering monetary policy frameworks and institutions that might help ensure good economic performance in the long term.
>
> One might say that we face a frameworks-and-institutions gap.

Since the early 1980s, a handful of countries have declared formally that low and stable inflation should be the overriding objective of monetary policy. These countries, which include New Zealand, Canada, the UK and Sweden, are the main focus of this book. *Inflation Targeting* uses them as examples, to argue that inflation targeting would also enhance American "economic performance in the long term."

The authors have a curious view of the phrase "economic performance in the long term." They do not use it to refer to rising living standards, full employment, declining inequality in pay, or similar recent improvements in American well-being. Indeed, they explicitly deny that monetary policy should be praised for these blessings, since, they argue, such gains of an expansionary monetary policy are temporary and unsustainable. Hence, they cannot be counted as among the benefits of monetary policy "in the long term."

In other words, America's present affair with full employment is sure to end badly, in accelerating inflation followed by recession. The right strategy is to keep unemployment high enough all the time -- at the natural rate -- to prevent inflation from emerging. A central bank

which allows itself to be distracted by the pursuit of economic growth and full employment is therefore to be condemned. A central bank that achieves price stability but with chronic high unemployment -- as in Germany -- has done its highest duty. The European Central Bank, charter-bound to price stability whatever the cost, represents the pinnacle of monetary policy architecture. Next to it our own Federal Reserve -- unmentioned in the Constitution, subservient to Congress, obliged to report on unemployment -- seems a pathetic weakling among central banks.

off target?

The case for inflation targeting, as Bernanke and his colleagues present it, rests on a theory that links monetary policy exclusively to inflation control and denies central banks any important role in determining economic growth or employment. They favor inflation targeting not simply as the better choice among strategies, but as the *only* strategy consistent with sound economics.

But are their principles correct? Oddly, this book does not provide an answer. Bernanke and his colleagues merely tell us that these truths were presented by Milton Friedman in 1967, refined by Robert Lucas in 1976, and consequently accepted by most economists. The theme of consensus crops up time and again. We read that "most macroeconomists agree" that the inflation rate is the only variable that monetary policy can affect in long run (because unemployment will tend always to return to the natural rate), that there is "by now something of a consensus that even moderate rates of inflation are harmful," that there "is a growing belief among economists and central bankers" that low inflation is good for efficiency and good for growth. For Bernanke and his colleagues, this case is closed; a consensus of economists has settled the issue.

But in fact, no such consensus exists and none has ever existed. To take just a few examples, Robert Eisner, a former President of the American Economics Association and a renowned macroeconomist, has never accepted the Friedman/Lucas view. Neither has James Tobin, Paul Samuelson or Robert Solow, or the late William Vickrey, all Nobel Laureates. Neither did Ray Fair at Yale, James Medoff at Harvard, William Dickens at Brookings. Bernanke and his colleagues maintain the illusion of consensus by simple silence about the actual debate, which has grown more intense, not less so, in recent years.

There are two basic reasons why controversy persists. First, while the Friedman/Lucas doctrine has enjoyed academic dominance, the theory rests on a very peculiar philosophical position, which regards the future as only differing by purely random error from the past. This point of view, for instance, would require us to see the Asian financial crisis not as a failure of policies but as merely a bad lottery outcome -- tough luck, nothing to be done. Many thoughtful economists reject this starting point. Second, the real world has been openly contradicting the theory for years now. Three years ago, every advocate of the natural rate of unemployment doctrine firmly held that unemployment below six percent would spark inflation. Unemployment then fell, but contrary to theory it not only remained below the supposed natural rate but failed to produce inflation. The Friedman/Lucas arguments received a clear empirical rebuke.

Indeed, deflation, not inflation, has reared its head in much of the world this year as the financial crisis spun out of control. The adherents of the natural rate theory were never able to see this threat. They were still arguing for an anti-inflation policy when the Asian crisis broke in 1997, and they were still clinging to it in the summer of 1998, as U.S. financial markets began to crack under the strain. As the case for urgent action grew evident to everyone else, including Federal Reserve Chairman Alan Greenspan, the diehard natural raters inside the Federal Reserve obstructed forceful action. The concrete result: interest rate reductions were at first too slow, and too small, to impress the financial markets or to affect the economy itself, and so the crisis deepened.

Can one have inflation targeting without the natural rate doctrine? Although Bernanke and his co-authors make no effort to separate the two, it would be quite possible to base inflation predictions on something other than the unemployment rate. An inflation-targeter could have argued, at the Fed last August, that the Asian crisis had eliminated inflation risk and that large cuts in interest rates were essential to ward off the threat of price *deflation.* Indeed some of the old-line supply-siders, such as Jude Wanniski, have taken this very position.

This supply-side view may be an improvement. But it is still much less sensible than current practice. Economists opposed to rate cuts would have countered, correctly, that deflation outside the United States will probably not produce general price deflation inside the country. Most American wages, on which most prices still depend, are unlikely to fall in money terms. The serious danger of the Asian crisis is not falling U.S. price levels but falling employment, recession, and rising inequality. A doctrine of inflation targeting, even if not tied to natural rate dogma, would have weakened the argument for interest rate reductions meant to stabilize employment and output, not to mention the financial markets and the banking system.

a case for cuts

In any case, events have already overtaken our authors. The only potentially effective response to the global slump available to the Fed is a sharp drop in U.S. interest rates and concomitant depreciation of the dollar. These measures would slow the flight of capital to the United States, return some confidence to Asian markets, and help to restore the balance sheets of otherwise insolvent Japanese banks. Inflation-targeting would have delegitimized these policy goals, which were, in fact, partly pursued as the crisis deepened in late 1998. The argument for having the Federal Reserve fight inflation exclusively does not just ignore the reality of the crisis but assaults the urgent present priorities of the Fed itself.

What of the claim that inflation-targeting countries have enjoyed superior economic performance, even if employment and growth are omitted and inflation alone is considered? A fair evaluation of this claim would require a comparative perspective, which the authors do not provide. We are left then to review the historical experience and ask, what kind of evidence do Bernanke and his colleagues actually present that inflation targeting has succeeded?

This part of *Inflation Targeting* merits careful reading, for much of the story in detail is

interesting and, within the extremely narrow limits that the authors place around their topic, it is competently told. But what is striking is that even the authors admit that inflation targeting in practice has done little actually to fight inflation. In the case of New Zealand, they write, "the decision to announce inflation targets occurred after most of the disinflation... had already taken place." The same is true for Canada, while Britain also embraced inflation targets when "it was most likely to meet them." Sweden, "was in deep recession" with inflation "down to a historically low rate of 3% per year," when its central bank adopted inflation targets.

In other words, the countries in question never introduced inflation targets when inflation posed a serious threat, nor did the adoption of targets reduce the cost of any ongoing inflation fight. In all cases, the declaration of war came after the fighting was over.

So why did the central bankers do it? Bernanke and his colleagues are quite honest about the reasons. Inflation targeting in all cases coincided with high unemployment, and its main effect was to excuse central bankers from addressing that problem. Second, in some cases inflation targeting could substitute for the messy practice of *money-supply* targeting, an earlier misguided enthusiasm that Britain had once embraced that Germany is still using today. Third, and in sharp contradiction with the first motive, inflation targeting provided in a few cases some camouflage for central bankers who were actually planning to ease policy in order to fight unemployment. It was a case of saying one thing to placate conservatives, and doing another to accommodate the political and economic realities of the hour.

Central bankers, like generals, are often accused of fighting the last war. But as this description of the actual motives behind inflation targeting makes clear, this is different. First, inflation targeting amounts to *a commitment in principle* to the last war -- the war against inflation -- as a way of avoiding conscription into the next one, against unemployment. Second, it is a way to declare *a change of tactics* for the last war, even though it ended. And third, in some cases inflation targeting permits central bankers to assert that the last war is still going on, and to *pretend* to fight it, while in fact sending a small covert force to the actual battle against unemployment. These mechanisms doubtless have their uses from the narrow political and public relations perspective of a central banker, but it cannot be said that they actually related to economic performance, including the pursuit of low inflation.

What should the United States do? The Federal Reserve is an independent executive agency under the authority of Congress. It therefore comes under the Humphrey-Hawkins Full Employment and Balanced Growth Act of 1978, which rewrote U.S. economic policy objectives to specify that they include full employment, balanced growth and reasonable price stability. In particular, the act set interim targets of four percent unemployment and three percent inflation -- goals that have now, within a few tenths of a percentage point, been achieved.

The authors of *Inflation Targeting* do not discuss the Humphrey-Hawkins Act. If they had the chance, however, they would likely rewrite that statute and direct the Federal Reserve to fight inflation alone. They do not say what would then become of the goal of "full employment." In principle, perhaps some other agency could address the task of sustaining

full employment, for example through jobs programs funded by tax increases or deficit spending. But it is unlikely that Bernanke and his colleagues have this in mind. One suspects that what they really want is to abandon full employment as a formal objective of American policy.

It is ironic that this book appears just as Alan Greenspan, Alice Rivlin, and the rest of the Fed leadership have demonstrated how spurious the natural rate doctrine is by proving that full employment, balanced growth and reasonable price stability are not mutually exclusive. This is a remarkable accomplishment, and it is due in part to the willingness of Chairman Greenspan to override the adherents of the Friedman/Lucas view, and to experiment cautiously with continuing reductions in unemployment. In this way, Greenspan and company have affirmed the good sense of the framers of the Humphrey-Hawkins law. The fact that the unfolding crisis of go-go globalization now threatens this accomplishment does not diminish validity or its importance. And in their attempt to stabilize the financial markets and world economy as the crisis of 1998 unfolded, the Fed's leadership has shown far more sophistication, flexibility and common sense than Bernanke, Laubach, Mishkin and Posen show in this evasive, unpersuasive book.

Written Testimony by

Jeffrey M. Herbener

Professor of Economics

Grove City College

Before the

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Production of Money on the Market

In a seminal article published in 1920, Ludwig von Mises demonstrated that there is only one test of whether or not production of something conveys a benefit on society at large.[1] It must be shown that resources have greater value when used to produce a good to satisfy the preferences of some people than when they are used to produce a different good to satisfy the preferences of other people. Production left to the market satisfies the profit and loss test of socially beneficial production. For Tim Cook to obtain computer chips, glass screens, labor and other resources to produce iPads, he must bid them away from other entrepreneurs who would have used them to produce other goods. By incurring the costs of production, Apple Inc. compensates the owners of resources for the value of the other goods they could have produced to satisfy a different group of consumers. Apple then uses the resources to produce iPads, which consumers of its products value more highly as demonstrated by their generating enough revenue for Apple Inc. to more than cover its costs.

The profit and loss test applies to all production in the market, including mining gold and minting coins. A gold mining company will produce when the revenues from the sale of its output exceed the costs of buying its inputs. The company moves labor, mining equipment, land, and other resources away from uses consumers find less valuable into gold mining, which consumers find more valuable. A minting company will produce when the revenues from the sale of its service in certifying gold exceed the costs of buying its inputs. The company moves labor, minting equipment, land, and other resources away from uses consumers find less valuable into minting coins, which consumers find more valuable.

[1] This is an implication of Mises's famous argument that central planners cannot economize the use of resources in society. See Ludwig von Mises, *Economic Calculation in the Socialist Commonwealth* (Auburn, Ala.: Mises Institute, 1990 [1920]) and Mises, *Human Action*, scholar's edition (Auburn, Ala.: Mises Institute, 1998 [1949]), pp. 685-711.

Like the production of all other goods, production of money left to the market is regulated by profit and loss. Additional money is produced when demand for money increases or demand for other goods produced by the same resources decreases. If the demand for money increased, the value of gold coins would rise. Minting companies would increase production to capture the profit. As they increased the supply of certification service, its price would decline and as they increased their demands for resources to certify gold, resources prices would rise and the profit would dissipate. If demand for other goods declined, input prices would fall. Minting companies would increase production to capture the profit and, by doing so, eliminate profit from further production. In this way production of money in the market is socially optimal.[2]

The profit and loss test also applies to the production of money certificates in the market.[3] Money certificates are titles of ownership to money issued by banks that serve as money substitutes. People may find convenience and safety in using checking account balances instead of commodity money when making trades. Banks will produce and maintain checking accounts for customers if they are willing to pay fees to banks that generate revenues sufficient to cover the costs of managing the accounts. If the demand for checking accounts increased, then banks would expand them to capture the profit. As they increased their supply of checking account services, the fees would decline. And as they increased their demand for the resources to manage checking accounts, their prices would rise. As a consequence, profit would dissipate and additional production would cease at the socially optimal point.

The profit and loss test also applies to financial intermediation. Banks perform a middleman function in credit markets by borrowing from savers and lending to investors. They

[2] Mises wrote that making money production conform to profitability and not politics, "is not a defect of the gold standard; it is its main excellence," *Human Action*, p. 471.
[3] On bank production of money certificates and credit intermediation, see Jesús Huerta de Soto, *Money, Bank Credit, and Economic Cycles*, trans. Melinda Stroup (Auburn, Ala.: Mises Institute, 2006 [1998]), pp. 1-36.

provide the services of pooling the savings, checking the credit worthiness of investors, and bearing the risk of loan defaults. If customers of banks find these services valuable, they will be willing to accept lower interest rates for lending to banks than investors will be willing to pay banks to borrow. Banks will provide financial intermediation services, if the revenues earned from the interest rate differential are large enough to cover the costs of producing the services. If demand for these services increases, banks will increase production of them. Their increased demand to borrow from savers and supply to investors will reduce the interest rate differential. Their increased demand for the resources will raise their prices. Profit will dissipate and additional production will cease at the socially optimal point.

By subjecting all production, including that of money and banking, to the test of profit and loss, the market renders an integrated system of production that economizes the use of all resources for society at large.

Monetary Inflation and Credit Expansion

An elastic currency breaks the integration of production on the market by being an element foreign to the test of profit and loss. An elastic currency has two characteristics: a central bank empowered to issue fiat paper money and commercial banks empowered to issue fiduciary media.[4] The production of fiat paper money cannot be regulated by profit and loss. It is always profitable to produce more. In 2011, the average cost of the 5.8 billion Federal Reserve Notes produced was $0.091.[5] So a profit of around $4.90 is made by printing and spending a $5 bill. If the Fed continued order the printing of FRNs as long as it was profitable, then eventually prices of inputs would rise so that it cost more than $5 to print a $5 bill. Then the Fed could order the printing of $50 bills instead and so on indefinitely as we have witnessed in hyperinflations

[4] On elastic currency, see Murray Rothbard, *The Case against the Fed* (Auburn, Ala.: Mises Institute, 1994).
[5] Bureau of Engraving and Printing. (moneyfactory.gov/uscurrency/annualproductionfigures.html). April 27, 2012.

like Zimbabwe's. To avoid destruction in hyperinflation, production of fiat paper money must be regulated by policy, by a rule that is arbitrary with respect to economizing production for society at large.

The production of fiduciary media cannot be regulated by profit and loss.[6] Fiduciary media are redemption claims for money which are fractionally backed by a reserve of money. Banks issue fiduciary media by creating loans. For example, a customer applies at his local bank for an auto loan of $25,000. If the bank agrees to extend the loan, it just writes a $25,000 balance into the customer's checking account. The loan generates interest revenue for the bank while the cost of issuing fiduciary media is nominal. It is always profitable for the bank to create another loan by issuing fiduciary media. If a bank issues more fiduciary media by creating credit as long as it is profitable, it will become illiquid and insolvent and end in collapse. To avoid such destruction, a bank must regulate its issue of fiduciary media via credit creation by policy, by a rule that is arbitrary with respect to economizing production for society at large.

Advocates of an elastic currency realize that its production cannot even be subjected to, let alone pass, the profit and loss test. As F.A. Hayek wrote, "There is no justification in history for the existing position of a government monopoly of issuing money. It has never been proposed on the ground that government will give us better money than anybody else could."[7] Advocates of an elastic currency merely assert that it can achieve a desirable outcome that a system of commodity money and money certificates cannot. There are three such claims for an elastic currency. First that it can keep the price level stable. Second, that it can prevent price deflation. And third, that it can accelerate economic growth.

Maintaining Price Stability

[6] On fiduciary issue and credit creation, see Murray Rothbard, *The Mystery of Banking* (Auburn, Ala.: Mises Institute, 2008 [1983]).
[7] F.A. Hayek, *Denationalization of Money*, 2nd edition (London: Institute of Economic Affairs, 1978 [1974]), p. 7.

There is no social benefit from keeping the price level stable. The alleged benefit is that price stability prevents wealth transfers between creditors and debtors and between workers and capitalists. But such transfers assume that entrepreneurs fail to anticipate changes in money's purchasing power. Entrepreneurs can earn profits and avoid losses by anticipating these changes just as well as changes in prices of other goods. If they anticipate rising prices for goods overall, then they will increase their demands for resources today bidding up wages today. Likewise, lenders will insist on higher interest rates today. An elastic currency adds another dimension of uncertainty to changes in money's purchasing power. It makes the task of entrepreneurs more, not less, difficult. In extreme cases, an elastic currency can result in wildly unstable prices that paralyze entrepreneurial decision making and destroy production on the market. Being regulated by profit, production of commodity money responds only to changes in people's demands. If money demand rises, the resulting increase in money's purchasing power would bring forth more production of money and moderate falling prices. The modest price deflation over time in a market economy is integral part of its economizing production.

Moreover, in practice the advocates of price stability aim at price inflation of around two percent per year. But, if entrepreneurs can adjust their expectation to cope with a two percent per year price inflation in an elastic currency system, then certainly they can properly anticipate and deal with a two percent per year price deflation under a commodity money system.[8]

Finally, two of the periods of most rapid economic growth in U.S. history were from 1820-1850 and 1865-1900. In each of these periods, the purchasing power of the dollar roughly doubled.[9]

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[8] The annualize rate of increase in the purchasing power of the dollar from 1815-1850 was 2.24 percent and from 1865-1900 was 1.75 percent.
[9] Murray Rothbard, *A History of Money and Banking in the United States* (Auburn, Ala.: Mises Institute, 2002), pp. 42-179.

Preventing Price Deflation

There is no social benefit from preventing price deflation. There are two claims to the contrary. The first alleged benefit is that if prices begin to fall, then people form expectations that they will fall further and they put off spending today which pushes prices down even further which re-enforces deflationary expectations. The collapse of spending discourages production and employment. But, the downward spiral of prices is merely the logical implication of assumptions about expectations within formal economic models. If you assume that the agents operating in an economic model suffer from expectations that are self-reinforcing, then the model will produce a downward spiral. But, people in the real world can only obtain the services of goods by buying them. They choose at some point, to buy a good even if they expect its price to fall further. This happens every day in markets for consumer electronics as people buy tablet computers, cell phones, and so on knowing that prices will be lower and quality higher in the future.

Because there is demand for goods and hence prices, whether people expect prices to increase, decrease, or stay the same, speculation earns profit and avoids loss by accurately anticipating the level of future prices. If people anticipate a significantly lower price for a good in the future and withhold their demands for it today, the price quickly falls to the level they anticipated and then they buy the good. Speculation moves prices before they would move without speculation, but not further than they would move without it. This happens every day in financial markets as speculators move prices up and down without generating upward or downward spirals.

The second alleged benefit is that price deflation pushes down output prices but input prices are sticky; therefore, profits evaporate and entrepreneurs cut production and fire workers.

But entrepreneurs choose the degree of price stickiness that their customers and employees prefer. In many cases consumers prefer prices of goods to remain more stable from day to day or hour to hour or minute to minute instead of fluctuating with every increase and decrease in demands. In other cases, buyers prefer complete flexibility in prices. Entrepreneurs can earn profits and avoid losses by catering to these preferences. In many cases, workers prefer to have their wages set over a period agreed upon with the entrepreneurs instead of having them move daily or hourly with the movements in demand for the goods they help produce. In cases where workers desire more flexibility in their compensation, an entrepreneur will make stock in the enterprise part of their compensation. When circumstances change, it is in everyone's interest to modify the normal arrangements. Entrepreneurs offer deep discounts of their goods when demand permanently falls. They renegotiate contracts with workers and other input suppliers when losses accumulate. In this way, the degree of price stickiness in markets can be changed to avoid adverse effects.

Moreover, entrepreneurs earn profits and avoid losses by anticipating these changes. If they anticipate falling prices of their outputs, they will reduce their demands for inputs today pushing their prices down. When output and input prices fall together, profit and production are maintained. The symmetric process occurs during price inflation. If entrepreneurs anticipate higher output prices, they will increase their demands for inputs today pushing their prices up. As a result, output and input prices move up together and profit and production are maintained.

Even if the prices of inputs entrepreneurs buy remain sticky downward, the effect on their profit and production is cushioned by the decline in the value of the assets they own. The market value of their assets adjusts downward with the decline in the prices of their outputs as investors reduce their demands to hold claims to these assets in financial markets. A decline in the value of

their assets restores the profitability of production. Entrepreneurs with superior foresight in anticipating declines in the prices of their output will invest sufficient equity in their enterprises to cushion the blow and provide time for adjustments in the prices of their inputs.

UCLA economist, Andrew Atkinson, and Minneapolis Federal Reserve Bank economist, Patrick Kehoe, in a 2004 *American Economic Review* article, have shown that there is no correlation between deflation and depression.[10] Looking at the evidence across 17 countries over more than 100 years, they concluded, "A broad historical look finds more periods of deflation with reasonable growth than with depression, and many more periods of depression with inflation than with deflation. Overall, the data show virtually no link between deflation and depression."[11] Even for the Great Depression, they find that while all 16 countries for which there were data experienced deflation only 8 of them had a depression. And the relationship between deflation and depression was not statistically significant. For all other periods, beginning in 1820 for some countries, 65 of 73 deflation episodes had no depression and 21 of 29 depressions had no deflation. They wrote, "In a broader historical context, beyond the Great Depression, the notion that deflation and depression are linked virtually disappears."[12] When all periods are put together, they found that "a 1-percentage-point drop in inflation is associated with a drop in the average real growth rate of just 0.08 of a percentage point, say, from 3.08 to 3.00."[13] Finally, when they break the data into Pre-WW II and Post-WW II, they find a stronger correlation between deflation and depression for the early period, but a correlation between inflation and depression in the later period.

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[10] Andrew Atkinson and Patrick Kehoe, "Deflation and Depression: Is There an Empirical Link," *American Economic Review Papers and Proceedings* 94 (May 2004): 99-103. They define deflation "as a negative average inflation rate" and depression "as a negative average real output growth rate." Ibid., p. 99.
[11] Ibid., p. 102.
[12] Ibid., p. 101.
[13] Ibid., p. 102.

Stimulating Economic Growth

There is no social benefit from attempting to accelerate economic growth. The alleged benefit is that monetary inflation through credit expansion builds-up the capital structure of the economy more fully than otherwise. Monetary inflation and credit expansion generate the boom-bust cycle, however, not economic growth.[14] The capital structure of the economy is the stages of production from extraction of raw materials to the production of intermediate capital goods to the production of consumer goods. Iron is mined out of the ground, then steel is made, then fenders for an automobile, then the automobile is assembled. In a market economy, not only is each production process justified by passing the profit and loss test, but the entire capital structure satisfies people's inter-temporal, or time, preferences. The degree to which they desire to postpone their current consumption by saving and investing to build up capital capacity across the capital structure in order to enjoy more and better consumer goods in the future is satisfied in the market. If people intensely desire present consumption over future consumption, then the premium they place on the present, that is, the interest rate, will be high and the amount of their saving and investing will be small and their consumption will be large. Only a small number of investment projects will be profitable; therefore, the capital structure will not be built up extensively. If people lower their time preferences, then the interest rate will fall and they will save and invest more and consume less in the present. With more resources at their command, entrepreneurs will build up the capital structure more extensively. The greater productivity of the expanded capital structure results in the production of more and better consumer goods. This is the process of economic growth. And, as with other aspects of production in a market economy, people get the amount of economic growth that they prefer.

[14] On the boom-bust cycle, see Mises, *Human Action*, pp. 535-583;de Soto, *Money, Bank Credit, and Economic Cycles*, pp. 265-395; F.A. Hayek, *Prices and Production and Other Works* (Auburn, Ala.: Mises Institute, 2008 [1931]); and Murray Rothbard, *America's Great Depression* (Auburn, Ala.: Mises Institute, 2000 [1963]).

Credit expansion suppresses interest rates below the levels determined by people's time preferences and increases funds for investment beyond the amount determined by people's preferences for saving. When the borrowers spend the additional money, they bid up the prices of the goods they are buying. Prices of houses and cars, for example, are pushed up by the addition demand of consumers made possible by credit creation. Prices of producer goods are also bid up by the additional demand of entreprenours made possible by credit creation. Prices for auto factories, lumber mills, are pushed up and the capital goods across the capital structure used to produce goods in the expanding areas, iron mines, timber lands, and so on. Monetary inflation through credit expansion makes it possible for borrowers to demand more assets without lenders reducing demands for other goods. Therefore, rising asset prices increase the profitability of their production while the profitability of other goods need not decline. Not enough resources are released from the production of other goods to complete all of the projects made profitable by the credit expansion. With a market monetary system, the proper amount of resources are made available because an increase in the supply of credit can only be brought about by people saving more and consuming less. The additional investment projects made profitable by the increase in saving are balanced by the projects no longer profitable because of the reduced consumption. But with an elastic currency system, the build-up of capital capacity and other investment projects financed with created credit do not wind up satisfying people's time preferences. The build-up of the capital structure during the boom is unsustainable. It ends in the liquidation of the build-up in the bust.

What brings the boom to an end is the re-establishment of people's time preferences and preferences for saving. People do this through the disbursement of their incomes. The credit created during the boom is spent by the borrowers to buy goods, houses, factories, etc. The

entrepreneurs who produce these goods then receive the new money as revenues for selling the goods. They pay producers to buy the resources used to produce the goods. The new money is then income for the producers. People disburse their income to satisfy their preferences, including their time preferences. They prefer to save only a fraction of their incomes. Although the entire amount of the new money issued starts out increasing the supply of credit, only a fraction of it winds up as supply of credit. Monetary inflation and credit expansion runs counter to people's time preferences and market economies operate to satisfy people's preferences.

Another factor working against the sustainability of the boom is that the further credit expansion extends the risker the projects and the less credit worthy the borrowers become. As financial intermediaries, banks economize credit, lending to the highest return, most secure projects and the highest interest rate, most credit-worthy borrowers. Additional credit must be extended to lower return, less secure projects and lower interest rate, less credit-worthy borrowers. If monetary inflation and credit expansion go on far enough, investors refuse to accept the additional risk and sell out of the lines of production expanded during the boom. Since the prices of assets in the more sound projects have been bid up along with the prices of projects in the less sound projects, investors in the more sound projects will also lose wealth if they continue to hold their investments.

Once people restore interest rates and asset prices to the levels that reflect their preferences, the particular lines of production in which mal-investments have been made in building-up the capital structure during the boom are revealed. The bust consists of reconfiguring the malformed capital structure to best satisfy people's preferences. Mal-invested assets must be sold to entrepreneurs in lines of production that will prove to be profitable. Labor must be re-allocated away from boom lines into production supported by people's preferences. As with all

production decisions, these can be made in the most economizing fashion by entrepreneurs earning profits from their superior foresight in satisfying preferences and suffering losses for their inferior foresight.

An elastic currency is the cause of financial crises and economic downturns. Supplant it with a market system of commodity money and money certificates and there would be no crises and downturns. The residual business fluctuations would not justify government intervention to solve the social problems associated with crises and downturns.

As the monetary system has become more elastic in American history, booms and busts have worsened. George Selgin, William Lastrapes, and Lawrence White conclude, in their 2010 *Cato Working Paper*, that recent research demonstrates that the Fed has not lived up to its original promise.

Selgin, Lastrapes, and White summarize their findings on the performance of the Fed in these words: "Drawing on a wide range of recent empirical research, we find the following: (1) The Fed's full history (1914 to present) has been characterized by more rather than fewer symptoms of monetary and macroeconomic instability than the decades leading to the Fed's establishment. (2) While the Fed's performance has undoubtedly improved since World War II, even its postwar performance has not clearly surpassed that of its undoubtedly flawed predecessor, the National Banking system, before World War I. (3) Some proposed alternative arrangements might plausibly do better than the Fed as presently constituted. We conclude that the need for a systematic exploration of alternatives to the established monetary system is as pressing today as it was a century ago."[15]

[15] George Selgin, William Lastrapes, Lawrence White, "Has the Fed Been a Failure?," *Cato Working Paper* Dec. 2010, p. 1.

I concur with their conclusion. Economic theory and historical evidence demonstrate that a central bank confers no benefit on society at large. The Fed should be abolished and a market monetary system of commodity money and money certificates should be established.

Monetary Reform

The goal of monetary reform is to make money production subject to the profit and loss test of socially beneficial production. Money production must become an integral part of the market economy. There may be several viable paths of transition to a system of market production of money, but any such path must take account of Carl Menger's famous demonstration that an item can only arise as money consistently with what people are actually using as the most widely traded good.[16] After the transition, a monetary system integrated into the market economy could begin.[17]

Federal Reserve Notes are money in the American economy. Thus, the most direct way to establish a market monetary system is to reestablish FRN as redemption claims for commodity money. The most widely-recognized commodity money today is gold coins. The primary step in monetary reform, then, is to turn FRNs into 100-percent-reserve redemption claims for gold coins.

The other step along this path to a market monetary system is to establish a 100 percent reserve of money against bank issued fiduciary media. The Fed's tripling of its balance sheet in response to the crisis of 2008 makes this part of the transition easier. Banks now hold reserves against their checkable deposits in excess of 100 percent. In early April, banks held $1,587 billion in total reserves against $1,204 billion in total checkable deposits. Fifty billion dollars of

[16] Carl Menger, "On the Origin of Money," *Economic Journal* 2 (1892): 239–55; Peter G. Klein and George A. Selgin, "Menger's Theory of Money: Some Experimental Evidence," in John Smithin, ed., *What Is Money?* (London: Routledge, 2000), pp. 217–34.

[17] On such monetary reform, see Rothbard, *Mystery of Banking*, pp. 247-268; Salerno, *Money, Sound and Unsound*, pp. 333-363; and de Soto, *Money, Bank Credit, and Economic Cycles*, pp. 736-745.

their total reserves consisted of vault cash and $1,537 billion reserve balances in accounts with the Fed. Therefore, banks would need to build their cash reserves up to 100 percent of their checkable deposits of $1,204 by redeeming $1,154 billion of their reserve balances at the Fed for cash. The Fed could acquire the cash needed by selling some of the more than $2 trillion in assets it built up on its balance sheet during the crisis or by printing more FRNs or some combination of the two. Whatever the total value of FRNs was at the point where checkable deposits are 100 percent backed by a reserve of cash, the redemption value of all FRNs could be set by calculating the ratio of FRN to the gold holdings of the Fed. If no change in the stock of FRNs outstanding was necessary to accomplish the transition, then the calculation would be as follows. The Fed is showing on its balance sheet of April 18, $11.041 billion in gold holding. Valued at $42.22 per ounce, this is 261.5 million ounces of gold. On the same balance sheet, the Fed shows $1,100,160 million in currency in circulation. Thus, the redemption ratio would be $4,207 per ounce of gold. The actual calculation, however, could only be done after an audit of the Fed and the process of establishing a 100 percent cash reserve, described above, were completed.[18]

Once this transition was accomplished, the government should permit private production of money and money certificates according to the general laws of commerce. Mining and minting companies would produce commodity money that people made profitable by their demands. To earn profit, entrepreneurs would produce coins from the metals, in the weights, and with the designs people preferred. They would keep their costs down and invest and innovate when people's demands made it profitable. Scholars have chronicled many historical episodes of private production of coins. Recently, George Selgin, in his book *Good Money*, has recounted the

[18] Data from Federal Reserve Statistic Releases: H.3 Aggregate Reserves of Depository Institutions; H.6 Money Stock Measures; and H.4.1 Factors Affecting Reserve Balances. April 19, 2012.

production of private coinage in England in the late 18th and early 19th centuries. As he shows, private coinage thrived until the British government outlawed it in 1821. [19]

Banks, too, should be put under the general laws of commerce including those relating to warehousing money by holding a 100 percent reserve of money against their money substitutes. Banks would earn profit by producing the amounts and types of money substitutes that satisfied people's demands. To earn profit, they would keep their costs down and invest and innovate when people's demands made it profitable. The operation of 100 percent reserve banking is described in Jesús Huerta de Soto's book, *Money, Banking, and Economic Cycles*. As he documents, money warehouse banks thrived in Amsterdam for over a hundred years in the 17th and 18th centuries.[20]

Conclusion

No one can describe today the configuration of commodity money and money certificates that entrepreneurs would bring about if permitted to operate private enterprises in their production any more than one could have predicted in 1900 the development of the 21st century automobile industry or predicted in 1950 the 21st century consumer electronics industry. What we do know is that their production would be regulated by profit and loss and therefore, would result in the satisfaction of people's preferences. The monetary inflation and credit expansion of our elastic currency system would be eliminated and with it the booms and busts that have plagued our history.

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[19] George Selgin, *Good Money: Birmingham Button Makers, the Royal Mint, and the Beginnings of Modern Coinage, 1775-1821* (Ann Arbor: University of Michigan Press, 2008).
[20] De Soto, *Money, Bank Credit, and Economic Cycles*, pp. 37-114.

TESTIMONY BEFORE

U.S. HOUSE COMMITTEE ON FINANCIAL SERVICES

DOMESTIC MONETARY POLICY AND TECHNOLOGY SUBCOMMITTEE

May 8, 2012

Peter G. Klein

Division of Applied Social Sciences
University of Missouri
135 Mumford Hall
Columbia, MO 65211
573-882-7008
573-882-3958 (fax)
kleinp@missouri.edu
http://web.missouri.edu/~kleinp

Introduction

I specialize in the economic theory of organizations—their nature, emergence, boundaries, internal structure, and governance—a field that is increasingly important in economics and was recognized with the 2009 Nobel Prize awarded to Oliver Williamson and Elinor Ostrom. (Ronald Coase, founder of the field, is also a Nobel Laureate). Much of my recent research concerns the economics of entrepreneurship and the entrepreneurial character of organizations, both private and public. Like business firms, public organizations such as legislatures, courts, government agencies, public universities, and government-sponsored enterprises seek to achieve particular objectives, and may innovate to achieve those objectives more efficiently.[1] Public organizations, like their for-profit counterparts, may act entrepreneurially: They are alert to perceived opportunities for gain, private or social, pecuniary or not. They control productive resources, both public and private, and must exercise judgment in deploying these resources in particular combinations under conditions of uncertainty. Of course, there are important distinctions between private and public organizations—objectives may be complex and ambiguous, performance is difficult to measure, and some resources are acquired by coercion, not consent.

In the remarks below I evaluate the Federal Reserve System—and the institution of central banking more generally—from the perspective of an organizational economist. While I strongly disagree with many of the key policies of the Federal Reserve Board both before and after the Financial Crisis and Great Recession, my argument does not focus on particular actions taken by this or that Chair and Board. The problem is not that the Fed has made some mistakes—perhaps addressed by restating its statutory mandate, scrutinizing its behavior more carefully, and so on—but that the very institution of a central monetary authority is inherently destabilizing and harmful to entrepreneurship and economic growth.

A central bank is a government entity in charge of the monetary system—an entity that "controls the money supply," in layman's terms—with the task of maintaining "price stability,"

[1] Peter G. Klein, Anita M. McGahan, Christos N. Pitelis, and Joseph T. Mahoney, "Toward a Theory of Public Entrepreneurship," *European Management Review* 7 (2010): 1-15.

achieving a "full employment" of the economy's resources, and other national economic performance objectives. (The Federal Reserve System is charged explicitly with achieving both price stability and full employment, the so-called "dual mandate" now challenged by proposals from Representatives Pence and Brady.[2]) The Fed, like other modern central banks, also serves as a "lender of last resort" tasked with protecting the financial system from bank runs and other panics by standing ready to make loans to commercial banks, using funds that are created instantly, from nothing, at the click of a mouse.

The central bank's job, in short, is to "manage" the monetary system. As such, it is the most important economic planning agency in a modern economy. Money is a universally used good and the loan market, through which newly created money enters the economy, is at the heart of the investment process. Ironically, though economics clearly teaches the impossibility of efficient resource allocation under centralized economic planning, as demonstrated (theoretically) in the 1920s and 1930s by economists such as Ludwig von Mises and F. A. Hayek,[3] and (empirically) by the universally recognized failure of centrally planned economies throughout the twentieth century, many people think that the monetary system is an exception to the general principle that that free markets are superior to central planning. When it comes to money and banking, in other words, it is essential to have a single decision-making body, protected from competition, without effective oversight, possessing full authority to take almost any action it deems in the best interest of the nation. The organization should be run by an elite corps of apolitical technocrats with only the public interest in mind.

And yet, everything we know about organizations with that kind of authority, without oversight, or any external check or balance, tells us that they cannot possibly work well. Just as economy-wide central planners lack the incentives and information to direct the allocation of produc-

[2] H.R. 245 and H.R. 4180, respectively. Some observers refer to a "triple mandate" that also requires "moderate long-term interest rates."

[3] Ludwig von Mises, "Economic Calculation in the Socialist Commonwealth" [1920], in Hayek, ed., *Collectivist Economic Planning* (London: Routledge and Sons, 1935); F. A. Hayek, "Economics and Knowledge," *Economica* NS 4(13): 33–54; Hayek, "The Use of Knowledge in Society," *American Economic Review* 35(4): 519–30.

tive resources, monetary planners lack the incentives and information to make efficient decisions about open-market operations, the discount rate, and reserve requirements. The Fed simply does not know the "optimal" supply of money or the "optimal" intervention in the banking system; no one does. Add the standard problems of bureaucracy—waste, corruption, slack, and other forms of inefficiency well known to students of public administration—and it becomes increasingly difficult to justify control of the monetary system by a single bureaucracy.[4] This is especially true when the good in question is money, the only good that exchanges against all other goods, meaning the good in which all prices are quoted. Mismanagement of the money supply not only affects the general price level, but distorts the relative prices of different goods and industries, making it more difficult for entrepreneurs to weigh the benefits and costs of various forms of action, leading to malinvestment, waste, and stagnation. Price inflation rewards debtors while punishing savers, just as artificially low interest rates reward homeowners while punishing renters. Instead, market forces should determine levels of borrowing and saving, owning and renting, and entrepreneurial activity. Put differently, the monetary system is so important that it cannot be entrusted to a government agency—even a scientifically distinguished, nominally independent, prestigious organization like the Federal Reserve System.

Critics of discretionary monetary policy have argued for fixed rules, such as Milton Friedman's famous recommendation of a fixed rate of money-supply growth, or Professor Taylor's more accommodating set of countercyclical rules.[5] Others debate whether inflation targeting or nominal-income targeting is a more straightforward and realistic policy for the Fed.[6] However, none of these proposals is as effective as eliminating the monetary authority altogether, and relying on the voluntary decisions of market participants to determine the money supply and interest

[4] Anthony Downs, *Bureaucratic Structure and Decision-making.* Rand Corporation: Santa Monica, Calif.: 1966; William A. Niskanen, *Bureaucracy in Representative Government.* Aldine-Atherton: New York, 1971); Peter G. Klein, Joseph T. Mahoney, Anita M. McGahan, and Christos N. Pitelis, "Capabilities and Strategic Entrepreneurship in Public Organizations," *Strategic Entrepreneurship Journal,* forthcoming.

[5] Milton Friedman, *A Program for Monetary Stability* (New York: Fordham University Press, 1960); John B. Taylor, "Discretion versus Policy Rules in Practice," *Carnegie-Rochester Conference Series on Public Policy* 39 (1993): 195–214.

[6] Christina D. Romer, "Dear Ben: It's Time for Your Volcker Moment," *New York Times,* October 29, 2011.

rates. A commodity standard, for example, removes even the possibility of central government intervention in the monetary system. If rules are better than discretion, the best policy is to eliminate all discretion, and to achieve a monetary standard that is wholly independent of political or technocratic interference.

The Fed's performance before and after 2008

My own views on monetary theory and policy derive from the "Austrian school" of Ludwig von Mises, F. A. Hayek, Murray N. Rothbard, and other important scholars and analysts.[7] From this perspective, the cause of the housing bubble was not irrational exuberance, corporate greed, or lack of regulation but the highly expansionist monetary policy of the Fed under Chairmen Greenspan and Bernanke.[8] After the dot-com crash the Fed turned on the printing presses, increasing the monetary base by 5.6% in 2001, 8.7% in 2002, and 6.3% in 2003, while MZM rose by 15.7%, 13.0%, and 7.3% during those years. Greenspan slashed the federal funds rate from 6.5% in January 2001 to 1% by June 2003, keeping it at 1% until late 2004, a level not seen since 1954. This infusion of credit led to overinvestment in housing and other capital-intensive industries, aided by federal government policies designed to increase the rate of home ownership by relaxing underwriting standards.[9]

The correct response to the collapse of Lehman Brothers on September 16, 2008, and Washington Mutual ten days later, would have been to let these insolvent institutions fail and to encourage a massive de-leveraging of the economy and an increase in savings and investment. An

[7] Ludwig von Mises, *The Theory of Money and Credit* (New Haven: Yale University Press, [1912] 1953); F. A. Hayek, *Prices and Production* (London: Routledge & Sons, 1931); Murray N. Rothbard, *America's Great Depression* (Princeton, N.J.: D. Van Nostrand, 1963); Douglas W. Diamond and Raghuram G. Rajan, "Illiquidity and Interest Rate Policy," NBER Working Paper No. 15197, July 2009.

[8] The monetary and financial system is one of the most regulated sectors of the US economy, and there hasn't been any "deregulation" since the Gramm-Leach-Bliley Act of 1999, which if anything mitigated the harm of the financial crisis by allowing acquisitions, such as Bear Stearns by JP Morgan Chase and Merrill Lynch by Bank of America, that shielded bondholders from losses.

[9] Marek Jarocinski and Frank R. Smets, "House Prices and the Stance of Monetary Policy," *Federal Reserve Bank of St. Louis Review* (July 2008): 339–66; Stanley J. Liebowitz, "Anatomy of a Train Wreck: Causes of the Mortgage Meltdown," in Randall G. Holcombe and Benjamin Powell, eds., *Housing America: Building Out of a Crisis* (Oakland, Calif.: Independent Institute, 2009); Johan Norberg, *Financial Fiasco: How America's Infatuation with Home Ownership and Easy Money Created the Economic Crisis* (Washington, D.C.: Cato Institute, 2009).

economic crisis represents a misallocation of productive resources, and the best policy response is to allow market participants to redirect resources from lower- to higher-valued uses. In short, once investments are revealed to be mistakes, it is critical to let the market *liquidate the bad investments as quickly as possible* to make them available for other purposes.[10] Of course, physical and human resources cannot be instantly and costlessly reallocated to alternative uses. However, contracting parties should be allowed to renegotiate resource use without central banks getting in the way. Existing mechanisms for liquidating existing investments and organizations, such as bankruptcy, should be used where appropriate.

The Fed, working hand-in-hand with the Treasury department under the Bush and Obama Administrations, has done precisely the opposite, bailing out insolvent financial institutions and industrial concerns, driving interest rates to zero, and injecting trillions of dollars into the financial system—increasing the monetary base, for example, by an average of 33.7% per year between 2008 and 2012, a cumulative increase of 198%. In short, the Fed's philosophy has been *to prevent, as much as possible, entrepreneurs from liquidating any bad investments*—indeed, to perpetuate those bad investments as long as possible. Insolvent financial institutions, rather than go through bankruptcy and reorganization, with poorly performing executives replaced by better ones, have received billions of dollars of free money. Incompetent executives remain at the helm.

The Fed has too much power

The Fed's defenders acknowledge that its recent actions are controversial. But, they say, that is the nature of the beast. Someone has to be in charge of the monetary system, and during a crisis, leaders have to make tough decisions. If not the Fed chairman and staff—intelligent, competent, well-trained economists—who else? Who better than the distinguished Princeton macroeconomist Ben Bernanke?

[10] Rajshree Agarwal, Jay B. Barney, Nicolai Foss, and Peter G. Klein, "Heterogeneous Resources and the Financial Crisis: Implications of Strategic Management Theory," *Strategic Organization* 7, no. 4 (2009): 467–84.

Economist Lawrence Ball produced an interesting paper in February of this year on the psychology of the chairman.[11] Ball traced the evolution of Bernanke's thinking between 2000 and 2012, arguing that, since 2008, "the Bernanke Fed has eschewed the policies that Bernanke once supported." Ball attributes to the change in Bernanke's thinking to groupthink and to the chairman's own personality, which Ball describes as shy, withdrawn, and unassertive.

Without intending to, Ball makes powerful arguments against discretionary monetary policy itself, which relies on a small, elite group of powerful technicians, interest-group representatives, and political advisers to design and implement rules and procedures that affect the lives of millions, that reward some (commercial and investment bankers, homeowners) while punishing others (savers, renters), that shape the course of world events. Under central banking, there are no rules, only discretion. Do we really want a system in which one person's personality type has such a huge effect on the global economy?

Yes, the Fed's defenders insist. It is vital, they say, that the Fed not be constrained in any way from pursuing whatever policies it deems best. Federal Reserve officials are regarded as Plato's philosopher-kings. When a group of distinguished economists expressed skepticism in 2008 about what became the Troubled Assets Relief Program—the government rescue of inefficient, badly managed financial firms, Harvard's Gregory Mankiw offered the following response:

> I know Ben Bernanke well. Ben is at least as smart as any of the economists who signed that letter or are complaining on blogs and editorial pages about the proposed policy. Moreover, Ben is far better informed than the critics. The Fed staff includes some of the best policy economists around. In his capacity as Fed chair, Ben understands the situation. . . . If I were a member of Congress, I would sit

[11] Lawrence M. Ball, "Ben Bernanke and the Zero Bound," NBER Working Paper No. 17836, February 2012.

> down with Ben, privately, to get his candid view. If he thinks [the bailout] is the right thing to do, I would put my qualms aside and follow his advice.[12]

One can hardly imagine a more dangerous perspective on government decision-making. It ignores differences in theoretical frameworks between, say, Keynesian, Austrian, monetarist, new classical, and other economists. It ignores differences in the interpretation of data, which is a matter of *judgment,* not intelligence. It ignores the possibility that key decision-makers, including Fed and Treasury officials, have private and conflicting interests. And of course it ignores normative concerns—some citizens may oppose rewarding incompetent managers with taxpayer funds, regardless of the efficiency consequences. More generally, Mankiw's argument would seemingly apply to any and all forms of government economic planning. Why have markets at all, if we can have smart, well-informed planners directing the allocation of resources?

Sadly, Mankiw is hardly alone in holding to this worldview.[13] It is the implicit philosophy underlying the institution of central banking. And, to be sure, "Ben" did exactly the wrong things. Contrary to a popular storyline that the Fed and other central banks prevented financial catastrophe, and made the Great Recession less harmful than it otherwise would have been, the Fed's actions have made a bad situation much worse, by perpetuating the very structural imbalances that brought about the Recession in the first place. The problem with the US economy today is hardly a lack of effective aggregate demand, as Keynesian economists like to say, but a structural imbalance brought about by two decades of cheap credit, imbalances the Fed is working hard to make permanent (e.g., keeping the discount rate close to zero, and promising to do so through the end of 2014). And needless to say, the issue here is not Chairman Bernanke himself, but the impossible situation he faces as Fed chair.

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[12] N. Gregory Mankiw, "If I Were a Member of Congress," Greg Mankiw's Blog, September 26, 2008 (http://gregmankiw.blogspot.com/2008/09/if-i-were-member-of-congress.html).

[13] Alan Blinder recently dismissed concerns about inflation resulting from the massive increase in the money supply since 2008: "To create the fearsome inflation rates envisioned by the more extreme critics, the Fed would have to be incredibly incompetent, which it is not."

Fed independence

In 2009 a group of economists circulated a petition in support of Federal Reserve "independence," and against Congressional attempts to exercise increased oversight and governance.[14] The idea that the Fed must be independent of any external constraint and must not be audited, governed, or supervised in a serious manner has become a shibboleth of contemporary macroeconomic policy. But it should be challenged. I declined to sign the petition, for two reasons:

First, proponents of Fed independence focus exclusively on monetary policy, as if the Fed's Congressional critics simply want to know how the Federal Funds Rate is set. But the Fed conducts not only monetary policy but fiscal policy as well, increasingly so since 2008. If the Fed can buy and hold any assets it likes,[15] if it works hand-in-hand with the White House and the Treasury to coordinate bailouts in the hundreds of billions of dollars, if it facilitates trillion-dollar deficits by buying all the treasuries the federal government wants to sell, isn't it reasonable to have a bit more oversight? (And don't forget bank supervision. Even the Fed's defenders recognize a need to separate its monetary-policy and bank-supervision roles. But as long as the Fed continues as a bank regulator, shouldn't someone should be watching the watchmen?)

Second, and more generally, the Fed is a national economic planning agency, and it performs about as well as every national economic planning agency in history. Have we learned nothing from the collapse of centralized economic planning in the Eastern Bloc, its demise in China, and its crippling hold on places like North Korea? "Independence," in this context, simply means the absence of external constraint. There are no performance incentives and no monitoring or governance. There is no feedback or selection mechanism. There is no outside evaluation. Why would we expect an organization operating in that environment to improve overall economic performance? The Fed is run by men, not gods.

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[14] "Petition for Fed Independence," *Wall Street Journal,* July 15, 2009 (http://blogs.wsj.com/economics/2009/07/15/petition-for-fed-independence/).

[15] While the Fed primarily holds US Treasuries, it is legally permitted under Section 13(3) of the Federal Reserve Act to hold other assets under "unusual and exigent circumstances," a provision liberally exploited under the Bernanke Fed. See Christian A. Johnson, "Exigent and Unusual Circumstances: The Federal Reserve and the U.S. Financial Crisis," *European Business Organization Law Review* (forthcoming).

Supporters of independence argue that Congressional or other oversight will pressure the Fed to pursue short-term goals (boosting output) at the expense of long-term performance (controlling inflation).[16] But these arguments ignore what economists, following Ronald Coase and Harold Demsetz, call "comparative institutional analysis."[17] Of course, there are potential hazards associated with Congressional oversight, but also potential benefits of stronger governance and greater transparency. For instance, exposing monetary policy (and the Fed's other controversial actions, e.g. bailing out foreign central banks) to Congressional scrutiny could put pressure on the Fed to service short-term political goals, but under the present system, the Fed can make trillion-dollar bets without any monitoring and feedback system. Unfortunately, cost-benefit analysis is usually forgotten where the Fed is concerned. Consider Mark Thoma's defense of independence: "The hope is that an independent Fed can overcome the temptation to use monetary policy to influence elections, and also overcome the temptation to monetize the debt, and that it will do what's best for the economy in the long-run rather than adopting the policy that maximizes the chances of politicians being reelected."[18]

This naive wish is simply that, a hope. Where is the argument or evidence that a wholly unaccountable Fed would, in fact, "do what's best for the economy in the long-run"? What are the Fed officials' incentives to do that? What monitoring and governance mechanisms assure that Fed officials will pursue the public interest? What if they have private interests? Maybe they are influenced by ideology. Suppose they make systematic errors. Maybe they are unduly influenced by the banking industry or other special-interest groups. To make a case for independence, it is not enough to demonstrate the potential hazards of political oversight. You have to show that these hazards exceed the hazards of an unaccountable, unrestricted, ungoverned central bank. A naive faith in the wisdom of central bankers to do what's right just isn't good enough.

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[16] See, for example, Anil K. Kashyap and Frederic S. Mishkin, "The Fed Is Already Transparent," *Wall Street Journal,* November 9, 2009.

[17] Ronald H. Coase, "The Regulated Industries: Discussion," *American Economic Review* 54 (1964): 194–97; Harold Demsetz, "Information and Efficiency: Another Viewpoint," *Journal of Law and Economics* 12, no. 1 (April 1969): 1–22.

[18] Mark Thoma, "Why The Federal Reserve Needs To Be Independent," *CBS Moneywatch,* November 12, 2009 (http://www.cbsnews.com/8301-505123_162-39740151/why-the-federal-reserve-needs-to-be-independent/).

Do We Need a Central Bank?

Without a central bank, how can a monetary system work? Don't we need a central bank to create bank reserves? Isn't the Fed necessary to maintain stable prices? Don't we need the government to create and regulate money? Actually, the reverse is true.

One of the first scientific analyses of the nature and origin of money, Carl Menger's 1892 essay "On the Origin of Money," explains how money—a generally accepted medium of exchange—emerges from the trading patterns of individual market participants.[19] Menger was challenging the then-dominant "state theory of money," which held that money must be created, *ex nihilo,* by benevolent central planners. Rather, as decades of research in monetary theory and history have shown, there is no need whatsoever for government participation in the monetary and financial system. Money—whether a physical commodity like gold or silver or their paper equivalents—is essentially a commodity that is selected and "governed," so to speak, by the choices of entrepreneurs and consumers in the market. This is as true today, in an era of paper currencies and electronic payments, as it was under the international gold standard. There is no need for a government agency to increase or decrease the supply of money. Indeed, according to the Austrian school, government attempts to control the money supply create distortions in the economy by interfering with relative prices and warping the capital structure, encouraging the bad investments that manifest themselves over the course of the business cycle. Rather, the value of money should be determined on the market, as part of the normal, day-to-day process of exchanges between money and goods and services.

How, then, is price stability to be maintained? The answer is that the economy doesn't need "stable" prices, just market prices. Some of the proposals discussed at this hearing suggest removing the Federal Reserve Act's language about "maximum employment," keeping just the part about "stable prices." Eliminating the dual mandate would be a step in the right direction, as

[19] Carl Menger, "On the Origin of Money," *Economic Journal* 2 (1892): 239–55; Peter G. Klein and George A. Selgin, "Menger's Theory of Money: Some Experimental Evidence," in John Smithin, ed., *What Is Money?* (London: Routledge, 2000), pp. 217–34.

it would reduce the Fed's incentive to increase the money supply when unemployment rates rise beyond some arbitrary threshold. But the requirement of price stability should be removed as well. The idea that a central bank is need to maintain a stable or modestly rising price level—to prevent high levels of inflation, in other words—is based on a misunderstanding of inflation. In a growing economy, with a stable or slightly growing money supply (as under a commodity standard), prices will tend to fall, as in the US during the 19th century, when the US experienced dramatic increases in production and living standards. Price levels rise because the real economy is shrinking or—as is almost universally the case in practice—because the money supply is increasing faster than the increase in real production. Inflation is not caused by an "overheated" economy that the government needs to somehow cool off. Inflation, as Milton Friedman famously put it, is everywhere and always a monetary phenomenon. Central banks don't fight inflation; they create it.

But isn't it vital that a government agency try to control interest rates, keeping interest rates sufficiently low to generate economic growth? Not at all. Interest rates are prices, prices that clear the markets between suppliers and demanders of loans. Increasing the money supply in an attempt to lower interest rates can indeed give the economy a short-term "boost," but at the cost of channeling resources into areas—housing, for instance—where the market does not want them to go. Driving down interest rates below their market-clearing rates does not create real economic growth, but only distortions, by making it more difficult for entrepreneurs to anticipate the future goods and services that consumers will want to purchase, and thus be profitable.[20] Credit expansion shifts wealth from savers to borrowers (and, in the case of mortgage lending, from renters to owners), from less time-sensitive investment projects to more time-sensitive ones; and from those who are last to receive the new money to those who are first in line.[21] In short, activist monetary policy always, whether intentionally or not, picks winners and losers, increases un-

[20] In Mises's terminology, credit expansion that lowers interest rates, increases price levels, and alters relative price ratios "falsifies economic calculation." Ludwig von Mises, *Human Action: A Treatise on Economics* (New Haven: Yale University Press, 1949), pp. 549 and 553.

[21] Mark Spitznagel, "How the Fed Favors the 1%," *Wall Street Journal,* April 19, 2012.

certainty, and destroys real wealth.[22] We don't want a government agency setting the price of tomatoes or shoes or forklifts or computer software; why do we want a government agency setting the price of loans?

What about the need for a lender of last resort? Even proponents of central banking recognize that the lender-of-last-resort function encourages what economists call "moral hazard": banks take on more risk than they would if they had to bear the full consequences of their portfolio decisions. The presence of a central bank, armed with an infinite supply of "liquidity," ready to supply liquidity to any bank in financial distress, discourages prudent behavior.[23] Diamond and Rajan link the Financial Crisis to "the actions of the Federal Reserve earlier in the decade, not only in convincing the market that interest rates would remain low for a sustained period following the dot-com bust because of its fears of deflation, but also in promising to intervene to pick up the pieces in case of an asset price collapse—the so-called Greenspan put.[24]

More generally, a dynamic, wealth-creating market economy relies on the power of competition—what Joseph Schumpeter famously called "creative destruction"—to sort between high-valued and low-valued use of resources, including the displacement of less efficient firms by their more efficient rivals. The banking industry is no different. If a bank, like any other business, cannot profitably produce goods and services that its customers demand, it should be liquidated and its assets made available to entrepreneurs who can do a better job. Bailouts, subsidies, and other forms of special privilege for particular entrepreneurs hinder the market process of directing productive resources to their highest valued uses. As Luigi Zingales reminds us, the price of bailouts is "billions of dollars in taxpayer money and, even worse, the violation of the funda-

[22] Robert A. Higgs, "Regime Uncertainty: Why the Great Depression Lasted So Long and Why Prosperity Resumed after the War," *Independent Review* 1, no. 4 (1997): 561–90; Scott R. Baker, Nicholas Bloom, and Steven J. Davis, "Measuring Economic Policy Uncertainty," Working paper, Chicago Booth School of Business, 2011.

[23] Indeed, programs such as the Troubled Assets Relief Program are forms of corporate welfare that redistribute resources from the more prudent financial institutions—for example, banks that stayed out of the market for mortgage-backed securities—to the more reckless ones.

[24] Diamond and Rajan, p. 33.

mental capitalist principle that she who reaps the gains also bears the losses."[25] Besides explicit bailouts, implicit subsidies from "too-big-to-fail" guarantees stymie the entrepreneurial selection process, not only by protecting unsuccessful entrepreneurs and entrepreneurial ventures, but also by rewarding lobbying and other forms of rent-seeking, directing investment toward subsidized activities (at the expense of consumer preferences), and discouraging entry by nascent entrepreneurs who lack political connections.

These principles apply fully to the banking industry. Of course, financial firms are closely linked through complex transactions and instruments such as derivatives and other contracts. The failure of a particular financial institution imposes costs on various counterparties, including other financial institutions. But the production of virtually every good and service in a mature industrial economy is characterized by a complex, interlocking web of transactions, mutual obligations, and contractual relationships. Banking is not unique in this regard. Yet we do not worry about contagion effects sweeping the computer hardware or retail clothing or dairy industry should one or two leading firms go bankrupt. Moreover, the extent to which parties expose themselves to counterparty risks, in banking or any other industry, depends on the protections offered by the regulatory system. If a computer hardware company knows that it is Too Big to Fail, or that a Computer Industry Resource Provider of Last Resort stands ready to supply labor, machines, and raw materials in case of trouble, that company will engage in all kinds of risky behaviors it would have otherwise avoided.

Alternatives to Central Banking

Many scholars and practitioners support the Federal Reserve System, and central banking more generally, because they cannot conceive of any alternative. "If we got rid of the Fed," they ask, "who would control the money supply?" Of course, to ask the question that way is to answer it: the market would control the money supply, just as it "controls" the tomato supply, the shoe supply, the forklift supply, and the Angry Birds supply.

[25] Luigi Zingales, "Why Paulson is Wrong," VoxEU, September 21, 2008 (http://www.voxeu.org/index.php?q=node/1670).

Exactly how a market-based monetary system would function, what form it would take, and how an economy can transition from government-controlled to market-based money, are interesting and important subjects that have stimulated large and growing academic and practitioner literatures.[26] Most proponents of market-based money favor a commodity standard, though competing paper currencies have been suggested as well.[27] All these schemes have the basic advantage of taking the value of money out of the hands of government planners, allowing it to be determined by supply and demand, as with every other good and service in a market economy.

Another advantage of a commodity standard is that it prevents allowing a central bank to monetize the government's debt by purchasing government bonds (and reducing debt payments by generating price inflation). In the interest of transparency, it is far better to require that federal government spending be financed through taxation or borrowing from the public. Wouldn't this constrain the federal government's ability to "stimulate" the economy with increased spending during times of recession? Yes, and that's exactly the point—a commodity standard imposes fiscal discipline, something the US economy desperately needs. Such discipline would rescue entrepreneurs from the unpredictable and often arbitrary whims of monetary planners, freeing them to invest, innovate, and create economic growth—not just in the long run, but in the short run as well.

Conclusion

There is an old joke about a central bank official picking up a pizza. (Perhaps it's Chairman Bernanke, on his way home after a long day of quantitative easing.) The clerk asks, "Do you want it cut in six slices, or eight?" The central banker responds: "I'm feeling extra hungry today; better make it eight."

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[26] Murray N. Rothbard, "The Case for a 100 Per Cent Gold Dollar," in Leland Yeager, ed., *In Search of a Monetary Constitution* (Cambridge, Mass.: Harvard University Press, 1962), pp. 94–136; Friedman, *A Program for Monetary Stability,* pp. 4–8; George A. Selgin and Lawrence H. White, "How Would the Invisible Hand Handle Money?" *Journal of Economic Literature* 32, no. 4 (1994): 1718–49; Rothbard, *The Case Against the Fed* (Auburn, Ala.: Ludwig von Mises Institute,1994), pp. 146–51.

[27] F. A. Hayek, *Denationalization of Money*. London, Institute of Economic Affairs, 1974.

Of course, dividing the stock of goods and services by a larger quantity of money does not create wealth. One of the most important lessons of economic theory is that the only way for a society to generate economic growth is to consume less than it produces. The surplus (real savings) can be invested in the production of capital goods (and innovation) that allows for greater production in the future. Conversely, one of the oldest economic fallacies is the idea that the economy sometimes gets "stuck" with low production and high unemployment due to a shortage of money, and that the way to get it unstuck is to print more money to increase "total spending"—to consume more than the economy produces. Some sixty years ago Ludwig von Mises ridiculed this as the "spurious grocer philosophy" (the merchant's view that his products aren't selling because buyers lack enough currency), noting that this fallacy is essentially the philosophy of Lord Keynes, the twentieth-century apostle of central banking and macroeconomic stabilization policy.

Keynes was wrong. Cheap credit does not help bring an economy out of recession (particularly when it was cheap credit that caused the recession in the first place). More generally, a monetary system controlled by an all-powerful central bank is inherently destabilizing and harmful to economic growth. The mistakes made by the Fed before and after 2008 are not isolated incidents, mistakes that can be corrected by making minor changes to the Fed's charter, structure, or independence. They are the predictable result of giving control of the monetary and financial system to a government agency. The best option is to replace the central bank and let the market be in charge of money.

The position advocated here is often dismissed as radical or extreme, a kind of "market fundamentalism" (to use a derogatory term). But it is a reasonable, pragmatic, realistic view. Economics and management scholarship teach that monopoly providers are inefficient and ineffective, and a government monopoly on money is no different. Markets are not perfect, but neither are Fed chairs. It's time to make the supply of money independent of political interference.

"The Case for Preserving the Federal Reserve's Dual Mandate"

Testimony of Alice M. Rivlin

Domestic Monetary Policy and Technology Subcommittee

Financial Services Committee

U.S. House of Representatives

Tuesday, May 8, 2012

Chairman Paul and Ranking Member Clay:

I am happy to have this opportunity to testify before the subcommittee as you consider a diverse set of bills designed to alter the role, structure, or functioning of the Federal Reserve. I will focus my brief remarks this morning on the importance of preserving the Federal Reserve's dual mandate to target both maximum employment and price stability. I believe that the dual mandate has served the United States well, and that it would be a mistake to restrict the Fed's policy actions to fostering stable prices alone, as proposed by Mr. Brady in HR 4180 and Mr. Pence in HR 245.

I would like to make clear at the outset that I believe a strong, independent central bank is essential to keeping the United States economy functioning as productively as possible without unnecessarily costly swings in economic activity. Market capitalism has proven its ability to produce goods and services efficiently and deliver a rising standard of living, but it is prone to instability. Monetary policy, along with fiscal policy, can help moderate booms and busts, although it cannot erase the business cycle. Leaning against the economic winds, however, often involves unpopular actions, such as raising interest rates as a boom gathers excessive steam. There is always huge uncertainty about how the complex machinery of the economy is actually working and what results monetary policy can expect to achieve. Nevertheless, chances of successful monetary policy are highest when these difficult decisions are delegated to a group of qualified, experienced people, who are as insulated as possible from political pressures to please the public in the short run. Without a strong independent central bank functioning to mitigate economic and financial instability, the United States would have a weaker, far more chaotic economy and lose its leadership position in the global economy.

The objective of economic policy—including monetary policy—should be a rising standard of living for most people over the long run. That means maximizing sustainable economic growth and productive employment. Controlling inflation is a crucial element of the larger objective because high and, especially, rising inflation is a serious threat to sustained growth. The expectation of rising prices distorts both consumer and investor behavior and can even turn into a destructive, self perpetuating hyperinflation. Hence, an essential

prerequisite for steadily increasing prosperity is a widespread, firmly anchored expectation that reasonably stable prices will prevail in the future.

Hence, I believe the dual mandate is simply a reflection of what average citizens ought to expect their central bank to do: Let the economy create as many jobs as possible, but don't let inflation interfere with that job growth. Economists translate that common sense exhortation into a monetary policy aimed at keeping the economy as close as possible to its long-run potential growth, without seriously overshooting in either direction. This idea is encapsulated in Pro. John Taylor's famous rule that prescribes easing or tightening when observed economic growth appears to be deviating from potential in either direction.

The problem for the Fed's decision makers is that potential growth is not observable, because it depends on trends in productivity growth, which can shift unexpectedly. In the stagflation of the 1970s, hindsight indicates that monetary policy makers overestimated potential growth and did not tighten soon enough to avoid the acceleration of inflation at the end of the decade. The aggressive tightening of monetary policy in 1979—and the deep recession of the early 1980s that followed—might have been mitigated if the Fed had acted more aggressively sooner. In the 1990s, when I was at the Fed, we faced a happier version of the same uncertainty. Unemployment had fallen to levels that past experience indicated could trigger inflation, but inflation was actually falling. We held off tightening on the presumption, which proved correct, that accelerating productivity growth had raised potential growth and reduced the risk of inflation.

Partly thanks to the Fed, the late 1990s illustrated the benefits of very tight labor markets without significant inflation. Marginal workers found jobs, acquired skills, and work experience, while firms had strong incentives to retain workers by training them, using their skills more effectively, and moving them into better paid jobs. We also had appropriately tightening fiscal policy that balanced the budget—a feat far easier to accomplish in a strongly growing economy. The sooner we get back to those conditions, the better!

But the late 1990s also illustrated the inadequacy of the Fed's toolkit in response to asset price bubbles. Some have criticized the Fed for not tightening monetary policy in response to "irrational exuberance" in the dotcom stock bubble of the late 1990s. But raising interest rates enough to prick that bubble sooner would probably have tipped the economy into recession, punishing workers and companies across the country for no good reason. Influencing the federal funds rate through open market operations is simply not an

effective way of calming an asset price bubble. That lesson had to be learned again in the far more dangerous housing price bubble that gathered steam in the 2000's and whose bursting precipitated the financial crash of 2008 and the ensuing Great Recession. Arguably the Fed kept interest rates too low too long, exacerbating the housing bubble, but interest rates were not the main cause of the catastrophe, nor could monetary policy alone have averted it. Among multiple culprits, I fault the Fed for not using its regulatory powers, in conjunction with other regulators, to raise underwriting standards for mortgage lenders, punish predatory lending, and rein in excessive financial leverage. While we should not have needed a catastrophe to learn this lesson, the Dodd-Frank Act now gives the Fed and the Financial Stability Oversight Council (FSOC) responsibility for financial stability and new tools with which to help achieve it.

The dual mandate is not inconsistent with strong emphasis on controlling inflation when appropriate or even with an explicit target for inflation. Indeed, last January the Fed confirmed a long run inflation goal of two percent. Operating under the dual mandate the Fed has successfully controlled inflation for three decades. To change the language of the law to imply that the Fed's <u>only</u> concern should be inflation would send a misleading signal to a public rightly concerned with jobs and growth, as well as inflation. It would imply that inflation is serious current threat to American prosperity, which seems to me unwarranted.

Exclusive attention to inflation and firmly announced inflation targets served central banks well in the last century, especially in small open economies that could ill afford importing inflation through swings in their currencies. But it would be ludicrous for the United States to put sole emphasis on inflation now, when we have slack labor markets and substantial excess capacity in most economic sectors. Some have urged the Fed to try to create more inflation in the current situation, but that would he hard to achieve, even if it were desirahle. Our economy is far less inflation prone than it was in the 1970s. It is more flexible, less dependent on energy prices, has easy access to more sources of supply in the face of domestic prices increases, no longer has wages dominated by multi-year indexed labor contracts, and benefits from expectations that reflect 30 years of reasonably stable prices. That recent oil price shocks have had so little effect on core inflation is evidence of lower inflation risk than the 1970s.

What we need now is a continuation of accommodative monetary policy plus fiscal policy that combines additional investment in long run growth and jobs with credible long-run action to stabilize the debt. In short, monetary policy as executed by the Fed under the dual mandate has a positive track record and is currently appropriate. I would urge the Congress not to tamper with legislative language that has served us well.

Thank you for your attention. I would be happy to answer questions.

Testimony before the
Subcommittee on Domestic Monetary Policy and Technology of the
Committee on Financial Services
U.S. House of Representatives

"Improving the Federal Reserve System:
Examining Legislation to Reform the Fed and Other Alternatives"

May 8, 2012

John B. Taylor[1]

Chairman Paul, Ranking Member Clay, and other members of the subcommittee, I thank you for the opportunity to testify at this hearing on improving the Federal Reserve System. I especially appreciate the efforts of this subcommittee to bring these crucial monetary policy issues to a prominent place in the public debate. As you requested, I will first explain why there is a need for improvement and then consider whether this need is addressed by six reform bills:

- *H.R. 245* introduced by Rep. Mike Pence,
- *H.R. 1094* introduced by Rep. Ron Paul,
- *H.R. 1401* introduced by Rep. Marcy Kaptur,
- *H.R. 2990* introduced by Rep. Dennis Kucinich and John Conyers,
- *H.R. 3428* introduced by Rep. Barney Frank, and
- *H.R. 4180* introduced by Rep. Kevin Brady and others.

A Need for Improvement

Nearly a century of experience under the Federal Reserve Act has provided plenty of evidence that more systematic rules-based monetary policies work and more unpredictable discretionary policies don't. The Fed's well-known mistake of cutting money growth in the Great Depression which led to very high unemployment is now part of a much larger body of evidence. From the mid-1960s through the 1970s, the Fed intervened with discretionary go-stop changes in money growth that led to frequent recessions, high unemployment, low economic growth, and high inflation. In contrast, through the 1980s and 1990s and until recently the Fed ran a more predictable, systematic policy with a clear price stability goal, which eventually led to lower unemployment, lower interest rates, longer expansions, and stronger economic growth.

Recently, however, the Fed has returned to unpredictable discretionary policies with disappointing results. Starting in 2003-2005 it departed from the more systematic policies it followed in the 1980s and 1990s. It held interest rates too low for too long and thereby

[1] Mary and Robert Raymond Professor of Economics at Stanford University and George P. Shultz Senior Fellow in Economics at Stanford's Hoover Institution. Parts of this testimony are based on Chapter 4, "Monetary Rules Work and Discretion Doesn't," of my book *First Principles: Five Key's to Restoring America's Prosperity* (New York: W.W. Norton, 2012), and my testimony before the Joint Economic Committee on March 27, 2012.

encouraged excessive risk-taking and the housing boom. It then overshot the needed increase in interest rates which worsened the bust. Since then the interventions have been truly extraordinary, even if you ignore actions during the 2008 panic—including the bailouts of the creditors of Bear Stearns and AIG—and consider only quantitative easing—the large scale purchases of mortgage-backed securities and longer term treasuries in 2009 and later.

In fact, the Fed's discretion is virtually unlimited. To pay for its large-scale securities purchases, it simply credits banks with electronic deposits—called reserve balances. The result has been an explosion of reserve balances. Before the 2008 panic, reserve balances were about $10 billion. Now they are $1,493 billion. If the Fed had stopped with the emergency responses of the 2008 panic, instead of embarking on quantitative easing, reserve balances would now be back to normal levels. This large expansion of reserve balances creates risks. If it is not undone, then the bank reserves will eventually pour out into the economy, causing inflation. If it is undone too quickly, banks may find it hard to adjust and pull back on loans.

The very existence of quantitative easing as a policy tool creates unpredictability, as traders speculate whether and when the Fed will intervene and guess what the impact will be. That the Fed can intervene without limit into any credit market—not only mortgage-backed securities but also securities backed by automobile loans or student loans—creates more uncertainty and raises questions about why an independent agency of government should intervene in these areas at all. In the spirit of the Constitution, they are best left to the Congress and the president through the appropriations process.

Reform Proposals

For all these reasons, there is a great need for improvement in the degree to which the Federal Reserve follows rules rather than discretion. To achieve this end, some argue that we should abolish the Fed, as does ***H.R. 1094***, repeal the Federal Reserve Act, and perhaps replace it with a commodity standard. The goal of such legislation is to move American monetary policy away from discretion and toward rules. However, a more practical and effective approach, in my view, is to reform the Federal Reserve and create strong incentives for rule-like behavior.

The starting place for such a reform is the recognition that a clear well-specified goal usually results in a consistent and effective strategy for achieving that goal. Too many goals blur responsibility and accountability, causing decision makers to choose one goal some times and another goal at other times in an effort to chart a middle course. In the case of monetary policy, multiple goals enable politicians to lean on the central bank to do their bidding and thereby deviate from a sound money strategy. More than one goal can also cause the Federal Reserve to exceed the normal bounds of monetary policy—moving into fiscal policy or credit allocation policy—as it seeks the additional instruments necessary to achieve multiple goals.

Despite these obvious pitfalls, a multiple mandate for the Fed swept in during the great interventionist wave of the 1970s, when Congress passed the Federal Reserve Reform Act of 1977. This law explicitly gave the Federal Reserve the goals of promoting both "maximum

employment" and "stable prices." This was the wrong remedy for the inflationary boom-bust economy at the time, and monetary policy worsened for a while.

Paul Volcker reversed policy when he became chairman in August 1979, focusing on inflation like a laser beam. Of course he had to interpret the law in a way consistent with this reversal. To achieve maximum employment, he argued that he had to reduce inflation even if that increased unemployment in the short run. While that approach eventually worked well, it also set a precedent that the dual mandate was open to interpretation by Fed officials. In recent years the dual mandate has been used by the Fed to justify massive interventions on the questionable grounds that these will reduce unemployment in the short run.

Thus, an important step toward a more rule-like policy would be to remove the dual mandate and bring focus to a single goal as does ***H.R. 4180***, introduced by Rep. Kevin Brady and others, in which the goal is "long-run price stability" or ***H.R. 245,*** introduced by Rep. Mike Pence, in which the goal is "stable prices." In my view, the adjective "long-run" is useful because it clarifies that the mandate does not mean that the Fed should overreact to minor short-run ups and downs in inflation from month to month or even quarter to quarter. The single mandate wouldn't stop the Fed from providing liquidity when money markets freeze up as they did after the 9/11 terrorist attacks, or serving as lender of last resort to banks during a panic, or reducing the interest rate in a recession.

Some worry that a focus on the goal of price stability would lead to more unemployment. But history shows just the opposite. One reason the Fed kept its interest rate too low for too long in 2003-05 was the concern that higher rates would increase unemployment, contrary to the dual mandate. If the single mandate had prevented the Fed from keeping interest rates too low for too long, then it would likely have avoided the boom and bust which led to very high unemployment.

Recent history shows that a single mandate would help to avoid excessive discretionary interventions. Since 2008 the Fed has explicitly cited the dual mandate to justify its unusual interventions, including the quantitative easing from 2009 to 2011. During the 1980s and 1990s, Fed officials rarely referred to the dual mandate, even during the period in the early 1980s when unemployment rates were as high as today. When they did so, it was to make the point that achieving price stability was the surest way for monetary policy to keep unemployment down. In fact, until the recent interventionist period, written policy statements and directives from the Fed did not mention the "maximum employment" part of the dual mandate in the Federal Reserve Act. There was not a single reference from 1979 until late 2008, just as the Fed was about to embark on its first bout of quantitative easing. It increased its references to maximum employment in the fall of 2010 as it embarked on its second bout of quantitative easing.

While a single mandate would reduce excessive discretionary interventions and encourage more rule-like policy, it would be wise to supplement the existing legislative proposals with additional incentives for the Fed to place greater emphasis on the strategy or rule for setting the monetary policy *instruments* (the interest rate or the monetary aggregates). Until the year 2000 the Federal Reserve Act had a specific reporting requirement about the growth of the monetary aggregates. It called for the Fed to submit a report to Congress and then testify about its plans for money growth for the current and next calendar years.

The reporting requirement was fully repealed in 2000, because the data on money growth had become less reliable as people found alternatives to money—such as credit cards or money market mutual funds—to make payments. The Fed thus focused more on the interest rate, but the problem was that nothing about reporting on its interest rate policy was put in its place of its reporting about money growth.

In order to further encourage more rule-like monetary policy, the Congress could reinstate the reporting requirements. But rather than focus only on money growth, it would also focus on the systematic response of the interest rate that changes in money growth bring about. In doing so, it would not require that the Fed choose any particular rule for the interest rate, only that it establish some rule and report what the rule is. But if the Fed deviates from its chosen strategy, it must provide a written explanation and testify at a public congressional hearing.

In addition to the change in the mandate and enhanced reporting requirements, overall restraints on the composition and the size of the Federal Reserve's portfolio would reduce monetary policy uncertainty. It is therefore appropriate, in my view, to limit asset purchases by the Fed to U.S. Treasury securities, as called for in ***H.R. 4180*** with exceptions as provided in that bill. This would also clarify that the Fed's responsibility is monetary policy not credit allocation policy, and thus strengthen the independence of the Fed. In contrast **H.R. 2990,** introduced by Rep. Kucinich, would effectively reduce the independence of monetary policy decisions by creating a new monetary authority under the general oversight of the Secretary of the Treasury.

Improving the balance of voting rights on the Federal Open Market Committee (FOMC) would also reduce the likelihood of harmful discretionary actions. Giving all Federal Reserve district bank presidents voting rights at every FOMC meeting, as called for in ***H.R. 4180,*** would better balance voting power across the entire economy and reduce the tendency for policy decisions to favor particular regions, sectors, firms, or groups over others. ***H.R. 1401,*** introduced by Rep. Marcy Kaptur, also improves the balance among the district banks and Federal Reserve Board members by having the voting authority of all the presidents rotate on and off in the same manner and by reducing the length of terms of the members of the Board of Governors. ***H.R. 3428*** introduced by Rep. Barney Frank would worsen the balance, in my view, by replacing the district bank presidents who vote on the FOMC with additional Fed Board members thereby concentrating more power in Washington and likely increasing the discretionary power of the Federal Reserve.

In sum, legislative reforms which clarify the Fed's mandate, enhance reporting requirements about its strategy or rule for the monetary instruments, restrict the nature of the its purchases of securities, and balance voting rights on the FOMC would allow Congress to exercise appropriate political control without becoming involved in day-to-day monetary policy operations or otherwise micromanaging the Fed. In my view the reforms would enhance the independence of the Fed by adding reassuring accountability appropriate for an independent agency of government and clarifying that its overall responsibility is monetary policy not fiscal policy or credit allocation policy. History and basic economics tells us that such reforms would greatly improve employment and price stability and would help restore America's prosperity.

Statement for the Record of Congressman Dennis J. Kucinich
Hearing of the Domestic Monetary Policy and Technology Subcommittee
"Improving the Federal Reserve System: Examining Legislation to Reform the Fed and Other Alternatives"
May 8, 2012

> "This is a staggering thought. We are completely dependent on the commercial banks. Someone has to borrow every dollar we have in circulation, cash or credit. If the banks create ample synthetic money we are prosperous; if not, we starve. We are absolutely without a permanent monetary system.
>
> When one gets a complete grasp upon this picture, the tragic absurdity of our helpless position is almost incredible–but there it is. ...
>
> Our statesmen have consistently declined to study this question and provide a sound monetary system, an adequate permanent currency, scientifically calculated to expand consistently with our increasing population and our increasing ability to produce. ...
> It is the most important subject intelligent persons can investigate and reflect upon. It is so important that our present civilization may collapse unless it is widely understood and the defects remedied very soon.
>
> It is your problem and mine."[1]

Robert H. Hemphill, Former Credit Manager of the Federal Reserve Bank of Atlanta

> "I have never yet had anyone who could, through the use of logic and reason, justify the Federal Government borrowing the use of its own money. It is absolutely wrong for Government to issue interest–bearing obligations. It is not only wrong, it is absolutely unnecessary. I believe the system should be changed. The Constitution of the United States does not give the banks the power to create money. The Constitution says that Congress shall have the power to create money. I believe the time will come when people will demand that this be changed. I believe the time will come in this country when they will actually blame you and me and everyone else connected with this Congress for sitting idly by and permitting such an idiotic system to continue."[2]

Congressman John William Wright Patman, Chairman, House Committee on Banking and Currency (now the House Committee on Financial Services, whose Committee meeting room is named the Wright Patman Room in honor of the long-serving Congressman from Texas)

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[1] "Foreword by A Banker" in the first (1935) edition of ***100% Money: Designed to keep checking banks 100% liquid; to prevent inflation and deflation; largely to cure or prevent depressions; and to wipe out much of the National Debt*** by Irving Fisher, LL.D., Professor of Economics, Yale University.
[2] September 9, 1941, Congressional Record, pages 7582-7583.

In the fall of 2008 the financial system of the United States nearly collapsed. Since then, little has changed to prevent the same thing from happening again. I have introduced H.R. 2990, the National Emergency Employment Defense Act of 2011, which provides America with a monetary system fit for the 21st Century, and beyond. It enables Congress to promote the general welfare by enabling Congress to:

- Restore Constitutional money
- Provide a stable currency
- Provide a stable monetary system
- Provide a stable economy
- Create a full employment economy
- Create a sustainable economy
- Assure income security for seniors
- Promote balanced trade
- Reduce the cost of investment
- Reduce individual income taxes

H.R. 2990 was developed by learning the lessons from past experience and applying them to the present, with a view to the future. It is clear that tinkering with the present system will not produce different results. Structural reform is needed to achieve desirable results.

In short, H.R. 2990 reasserts the constitutional authority granted solely to Congress to originate money and regulate its value. It accomplishes this using three structural reforms to our current monetary system:

First, H.R. 2990 calls for dismantling the Federal Reserve System as it exists in its present form. It first makes clear that per Article 1, Section 8, of the Constitution of the United States, issuance of money is solely under the authority of Congress. To provide a seamless transition to the new structure, important operational functions such as check clearing and settlements would be carried on by a bureau within the U.S. Treasury. An independent and autonomous Monetary Authority would be responsible for monitoring the monetary system so it is neither inflationary nor deflationary. The Monetary Authority would advise Congress as to when new money is needed in the economy. Congress would authorize the Treasury to originate money to be spent into circulation in ways that promote the general welfare.

Second, the bill would end "fractional reserve" lending; all past monetized bank credits would be converted into U.S. money. Banks would then act as intermediaries, accepting savings deposits and loaning them out to borrowers. This stabilizes the money system, the payments system, and the banking system without bailouts.

Third, the U.S. Congress would authorize the U.S. Treasury to spend new money into circulation as required. This would enable non-tax funding for 21st century infrastructure, education, and health care. Under the bill, 25% of money originated annually is granted to the states to supplement their state budgets.

This structural reform can be implemented smoothly. H.R. 2990 provides for an orderly transition so that – without disrupting or affecting anybody's day-to-day business – our monetary system will have these key features:

1. Issuance of money is solely under the authority of Congress, per Article 1, Section 8, of the Constitution of the United States.
2. Many practices which destabilize the economy are ended by ending the privilege given to some businesses to create our money supply primarily as interest-bearing debt.
3. Investment in infrastructure and research and development is made possible without taxing or borrowing so we can build on our competitive advantage without burdening future generations.

H.R. 2990 enables America's longstanding prosperity to be preserved, while at the same time reducing taxes and paying off the national debt. The following sections provide an overview of the problems faced by our economy that result from the current monetary system as well as an explanation of how H.R. 2990 reforms this system to solve these problems.

H.R. 2990 Restores Constitutional Money

Congress must reassert its Constitutionally-granted authority over creation of money. In doing so it will take back the privilege of money-creation that has been given to private financial institutions. Constitutional money is money originated by an Act of Congress. This means the power to originate money, in any form, as Constitutional scholar Robert G. Natelson concludes in an article published in the ***Harvard Journal of Law & Public Policy***:

> "[T]he money thus "coined" did not need to be metallic. Paper or any other material that Congress selected would suffice. Because the power to coin paper was express, it requires no justification by the incidental powers doctrine of the Necessary and Proper Clause."[3]

Therefore, under the Constitution, Congress has the power to originate money and determine what money is, including its form. Whatever is accepted in payment of taxes to government and settlement of debts will be money. Money is thus a matter of law.

Today most of our money is digital and is created by banks and some other depository institutions whenever they make loans or purchases. Treasury coin and Federal Reserve notes can only enter circulation through a withdrawal from a bank account. This means no one in the economy can obtain cash or pay for anything unless somebody has first gone into debt to a bank or sold something to a bank. Conversely, whenever banks buy bonds, stocks, land, gold, or pay their staff and suppliers, they create money to do it.

Federal Reserve banks also create money when they make loans or purchases. This money is only held in banks' accounts at Federal Reserve banks. If a Federal Reserve bank makes a loan

[3] Robert G. Natelson, "Paper Money and the Original Understanding of the Coinage Clause" ***Harvard Journal of Law & Public Policy***, Vol. 31 No. 3, Summer, 2008, page 1079.

or purchase with a bank's customer, the Federal Reserve bank credits the bank's Federal Reserve bank account and the bank credits their customer's account. Of course, the bank customer would normally not have something to sell unless they had money to pay for it in the first place, so again this means somebody would have first had to go into debt to a bank or sold something to a bank.

These arrangements clearly put banks in an extremely privileged and powerful position. They get to create the money that everybody else in the economy needs and wants, and can create money to pay their expenses. This gives banks an extraordinary advantage over other businesses that have to earn their money in some way. To provide a level playing field among all businesses, H.R. 2990 ends this extraordinary privilege so that banks have to compete fairly with other types of lending institutions which do not create money, such as finance companies.

Because the economy generally needs more money as population and economic activity increases, a source of additional money will still be needed. To avoid privileging any particular group in society, the fairest thing to do is have the money created by society as a whole; the fairest way to do it is in ways that benefit society as a whole.

H.R. 2990 does this by enabling Congress to authorize the entry of money into circulation. It would not benefit society if the additional money were lent into circulation, as this would put society into debt. H.R. 2990 defines money as that which confers upon its bearer an unconditional means of payment, by Act of Congress. Because federal spending has to be authorized by an Act of Congress, this additional money would be Constitutional money. Therefore, H.R. 2990 provides for additional money to be spent into circulation, without adding any debt.

The standard accounting conventions that facilitate this process are contained in the Federal Accounting Standards Advisory Board's Handbook, which identifies this type of money origination as seigniorage and classifies it as an "other financing source":

> "Seigniorage is the face value of newly minted coins less the cost of production (which includes the cost of the metal, manufacturing, and transportation). It results from the sovereign power of the Government to directly create money and, although not an inflow of resources from the public, does increase the Government's net position in the same manner as an inflow of resources. Because it is not demanded, earned, or donated, it is an other financing source rather than revenue. It should be recognized as another financing source when coins are delivered to the Federal Reserve Banks in return for deposits."[4]

Note that while this specific section relates to the coins originated by the Bureau of the U.S. Mint, the same principles can be applied to any other form of money authorized by Congress. H.R. 2990 thus provides for money in the form of currency notes and electronic currency to be originated in a similar manner by the relevant agencies.

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[4] Federal Accounting Standards Advisory Board (FASAB) Handbook: Statement of Federal Financial Accounting Standards 7 (SFFAS 7): Accounting for Revenue and Other Financing Sources and Concepts for Reconciling Budgetary and Financial Accounting, page 106-107.

H.R. 2990 also provides for all of the existing money that had been previously created by banks to be accorded the very same legal status as any additional money subsequently originated by an Act of Congress, so that all money is treated as Constitutional money and the value of everyone's monetary assets are assured.

H.R. 2990 Provides a Stable Currency and is Non-Inflationary

A stable currency is a currency which maintains its purchasing power over time. This can be expressed (and measured) as the prices of things valued in that currency staying about the same over time. This is called price stability.

The Federal Reserve System has failed to maintain price stability. Since the establishment of the Federal Reserve, the dollar has lost 96% of its purchasing power.[5] This is because banks have been allowed to create as much money as they desire. Because banks create money mainly in the form of bank loans for profit, they usually create as much as possible. Banks do this regardless of the Federal Reserve's official monetary policy. A recent paper co-authored by a senior Federal Reserve Board staff member made this clear when it concluded that "bank loan supply does not respond to changes in monetary policy"[6] – i.e., the Federal Reserve's official monetary policy is, in effect, ineffective.

Only a relatively small fraction of the money banks create goes into new production. A much greater fraction has gone into the purchase of existing assets like real estate, and to speculation, as in the speculation on the price of commodities. Thus money is created without anything new being produced. This causes bubbles and asset price inflation in the areas where the money goes, which can spill over into general inflation. If new money is being created without new production, inflation is a likely result.

Conventional monetary policy as practiced by the Federal Reserve now is ineffective in its attempts to combat inflation. The response of conventional monetary policy to inflation is to raise interest rates. But this does not deter more money being created in bubble areas where prices are rising at a faster rate than the interest rate. Instead of promoting investment into productive areas of the economy, conventional monetary policy actions result in investment in areas of the economy where prices are rising at a faster rate than the interest rate. Thus the effect of conventional monetary policy is that not only meaningless to stopping asset price inflation, it also deters new production and raises the costs of any production that does occur. To cover these higher costs, prices have to be raised, and inflation occurs.

Conventional monetary policy is thus a blunt instrument which hits everything except the thing it needs to hit, and can result in the opposite of what it was supposed to achieve. The recession that began in late 2007 is a guide: The economy lost millions of jobs due to the effects of a

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[5] Bureau of Labor Statistics, CPI Inflation Calculator, at: http://www.bls.gov/data/inflation_calculator.htm
[6] Carpenter, Seth B., and Selva Demiralp (2010), "Money, Reserves, and the Transmission of Monetary Policy: Does the Money Multiplier Exist?", Finance and Economics Discussion Series, Divisions of Research & Statistics and Monetary Affairs, Federal Reserve Board, Washington, D.C.

complete loss of confidence in the housing market. The resulting massive cuts by employers and lowering of demand by consumers led to a vicious cycle; banks nationwide failed, businesses no longer sought out loans, and the glut of commercial real estate led to sharply restricted commercial lending. The Fed's conventional monetary policy response of lowering interest rates to near zero for a sustained period has been ineffective, because when, as in 2008, financial bubbles burst and prices collapsed, no firm seeks to invest in making a loss, no matter how low the interest rate of borrowing is. Businesses and consumers loaded up with debt from the speculative bubble years predating the crash cannot now be induced into taking on more debt just as they are trying to reduce their debt. Furthermore, the costs of servicing debt incurred in times of higher interest rates do not reduce, even if prices do. The economy is still in a "debt overhang."

The experience of the 1930s and 1970s also show that both price deflation and price inflation deter investment and hamper production and employment. The experience of the 1980s shows that sharply raising interest rates to try to curb inflation will plunge the economy into recession and lead to high unemployment, while lowering interest rates to near zero to try to avoid deflation and induce employment does not work either.

All of the above indicates that the Federal Reserve System as it is presently constructed cannot create conditions conducive to either price stability or maximum employment.

A New Path Forward

To change this paradigm of boom and bust cycles which the Federal Reserve is currently powerless to stop, there must be a direct relationship between the amount of new money entering the economy and the amount of new goods and services being produced. Under H.R. 2990, new money will go directly into the creation of new goods and services, while purchases of existing assets such as real estate or existing stocks will have to be financed out of savings of pre-existing money. This will make bubbles and asset price inflation virtually impossible. Thus under H.R. 2990 it will be a relatively simple matter to maintain a stable currency.

The governing principle for monetary policy in H.R. 2990 is to maintain a supply of money that is neither inflationary nor deflationary. The aggregate price level for a given amount of production remains stable, which means it will be a stable currency. In other words, the dollar will be able to maintain its purchasing power over time.

H.R. 2990 Will Promote a Stable Monetary System by Preventing Systemic Failures and Making Ordinary Banking Safe Again

The events of the fall of 2008 revealed just how fragile our present monetary system is; far too little has changed since then. If the past is any guide, it is only a matter of time before our financial system fails again. When the monetary system crashes, millions of peoples' lives are ruined. To prevent this from happening again, H.R. 2990 reforms banking practices so that banks no longer hold outsized power in our economic system, while still allowing them to continue to compete as profit-making firms.

In the wake of the Great Recession, millions of honest, hard-working Americans lost their jobs, their homes, their health insurance and their whole way of life while the largest banks and financial institutions that were the cause of the crash got trillions of dollars in support for their troubles. These entities are now stronger than ever. This is a recurring problem.

There have been 47 depressions or recessions since the country was founded: on average one every 5 years. America has suffered 19 of these depressions or recessions since the Federal Reserve System was established (maintaining the average of one every 5 years), with an average duration of 1.1 years. That means the system has been down over 20% of the time, which is a dismal track record.

When these system failures occur, they create a wave of bankruptcies and foreclosures which, while they may start with the least creditworthy borrowers, will very often end up bringing down large numbers of good borrowers in their wake. These are borrowers who would have been able to make their payments under normal conditions. This is unfair to the greater number of businesses and homeowners whose lives are ruined.

The common denominator that makes banks so prone to failure is the misplaced creation of money. As the late economist John Kenneth Galbraith said, "[t]he process by which banks create money is so simple that the mind is repelled.[7]"

Bank loans and purchases from bank depositors create bank deposits. This means that our money supply is primarily created by being loaned along with a burden of interest-bearing debt. Conversely, when bank loans are repaid or when banks sell assets to bank depositors, bank deposits are destroyed. Banks keep the difference between the amount they create with the loan and the larger amount they destroy when the loan is repaid as their profit. This reduces our money supply. If the amount of new bank loans being made is less than the amount of old bank loans being repaid, the money supply will keep shrinking.

To maintain our money supply, the economy has to continuously go into debt to banks. Otherwise the amount of money available to pay down debt or pay for other things is reduced. Thus, the economy is without a permanent money supply. It is impossible to get out of debt when the money used to pay old debt is created with new debt.

At some point, the amount of money that has to go to service debt becomes unbearable, and defaults start to rise. This happens on a regular basis. When borrowers default on loans, banks take a paper loss on their balance sheets. So when it happens, banks become risk averse and the amount of new bank loans starts to drop. This in turn further reduces the amount of money available for paying down debt and paying for other things, making the situation gets worse and worse.

A rise in defaults not only increases losses on banks' balance sheets, it can also call into question the value of banks' loans, securities and other assets. This in turn can call banks' solvency – and therefore creditworthiness – into question. This can make banks reluctant to lend funds to each

[7] Galbraith, J. K. (1975) ***Money: Whence it came, where it went***, London: Penguin, pp. 18-19.

other, as they become less certain that they will be paid back. In the present system, banks rely heavily on inter-bank loans to clear and settle the payments they have to make for their customers. When banks stop trusting each other and the inter-bank lending markets freeze-up, all of their customers' check, credit card, debit card, and other electronic payments may not clear, and businesses and individuals may not get paid. This scenario would be an overnight disaster for the whole economy; commerce would soon grind to a halt. Imagine what would happen if food did not get to market.

This is what nearly happened in the fall of 2008, when inter-bank lending markets came close to freezing-up. Congress was threatened with martial law if the banks did not get a bailout.

It is outrageous that the welfare of any particular business should be able to threaten the United States with martial law. It is ridiculous that the welfare of any particular business should be able to threaten our payments system, and thus our entire economy, democracy, freedom, and way of life. The present monetary system thus represents an existential threat to America. H.R. 2990 removes this threat by completely separating our payments system from banks' lending business. Banks would not pose a systemic risk to our payments system: no more "Too-Big-To-Fail" banks, no more bank bailouts, no more corporate welfare and no more crony capitalism.

It is clear that present bank regulations do not work. So-called "capital adequacy" rules are ineffective because the profits that banks make from their lending and other activities feed into and add to their capital. That then allows them to continue fueling speculative bubbles that blow up the economy. These rules guarantee that the biggest banks will keep getting bigger and even more "Too-Big-To-Fail" as we have seen happen already. Thus the present arrangements and rules make the system more risky, not less. This is obviously an unsustainable path and will inevitably lead to even bigger failures in the future.

We know from recent experience that mere regulatory reform does not work in the long run within a system where the big get bigger, because the concentration of wealth and power will be used to deregulate the regulations. We then go through the same pathetic process of bust–regulate–boom–deregulate–bust all over again. Congress needs to be smarter than that in order to properly serve the American people.

H.R. 2990 ends this cycle and prevents systemic failure in a very simple way. It makes the money in people's bank accounts <u>belong</u> to them – the same as the cash in their pockets – instead of their bank's promise to pay them money. This means that the money in people's bank accounts that they use for making electronic transactions will be their monetary assets; their bank will be a custodian of those assets. In legal terms, the money in people's transaction accounts will be their bailed property. The depositor will be the owner of the money (not an unsecured lender, as they are now), and their bank will act as their custodian and fiduciary agent, instead of their creditor.

In accounting terms, the money in people's transaction accounts will be their monetary assets, and will be treated on their bank's balance sheet as riskless memorandum items, instead of liabilities. Transactions will be able to be made directly between bank customers by simple

transfers between accounts at the same or different banks, in the same way that transfers between customers' accounts at the same bank are made now.

This simple change means a bank can fail and it will not impact on depositors' money whatsoever; they can simply transfer their deposits to another bank. This will greatly improve banks' cash flow situation, as their customers' deposits will no longer be a call on the bank's own funds that may have to be paid away to other banks at any time on demand or very short notice. Banks will then be free to use their own funds for their own purposes, without having to worry about what demand their customers may put on their funds. This will make banks' business operations much easier and less risky, which should improve their financial stability.

Going forward, banks will keep all of their own funds in the accounts they hold with other banks and Federal Reserve banks. They will be able to use these funds to repay all the amounts that they had previously borrowed from other banks and other sources in the past. There will be sufficient funds available to banks to do this because the funds previously borrowed came from the same aggregate amount of funds (reserves) that existed before.

In consideration for relieving banks of their deposit liabilities payable to their depositor customers, an equal amount will instead be payable into a revolving fund, established by H.R. 2990, as the principal on pre-existing bank loans are paid by borrowers to the bank. Banks will continue to keep the interest and fees from these loan repayments for their income, as they do now. This process will enable banks to retire these liabilities from their balance sheets in a way that does not impact on their cash flow or profit. The revolving fund will recycle money back into circulation as and when required, including loans to banks, to maintain a stable and sufficient money supply.

Bank customers' savings and time deposits will be placed with banks for their bank to lend or invest on their behalf, and will be treated as bank customers' financial assets – claims on their previously-held monetary assets – and recorded as the bank's liability to repay their customer on a certain date or after a certain notice period. Bank customers will be able to roll over some or all of these amounts so the money can remain on loan.

Banks will then act as true intermediaries between the lenders and borrowers of funds. This is the way most people – including many economists – think or assume the system works now, but it does not. At present, not a cent of the trillions of dollars of savings and time deposits is ever lent to anyone. Instead, banks create brand new deposits every time someone wants to borrow money or sell something, including their labor, to a bank.

Because under the present system deposits are not lent to borrowers, the amounts of deposits in savings and time deposits keep building up. This means that banks have to keep finding more and more borrowers to make loans to so they can pay their interest bill to depositors and still make a profit. Because more bank loans means more deposits, the amount of money banks create increases exponentially, along with interest-bearing debt, until it becomes unbearable, defaults rise, and the cycle self-corrects.

This pattern of money creation destabilizes the whole economy as it sets-off a chain-reaction that leads to boom–bust cycles have nothing to do with real demand in the real economy, which would otherwise be quite stable. The present monetary system thus superimposes instability over an otherwise stable economy. H.R. 2990 replaces this instability with a much simpler system which enables a steady and stable amount of money to enter circulation into the economy in line with the monetary needs of the economy without a build up of debt.

The Purpose of H.R. 2990 is to Make Monetary Policy Serve the Needs of Job Creation in America

Under the current system, monetary policy cannot support real production or job creation. All it can do is support the liquidity and solvency of banks. This is why the banks and other financial institutions that caused the recession were the ones that got the trillions of dollars in support, while American businesses and families were thrown into bankruptcy and foreclosure. This is the way the system designed. If we want a better result, we have to use a better system.

Under H.R. 2990, monetary policy will support the real economy and job creation directly, as new money will go directly into creating real wealth such as improved infrastrueture. This is done without taxing or borrowing. Nobody's money is taken away from other economic activities, and there is no debt and interest costs to service year after year.

Because H.R. 2990 separates the origination and entry of money into circulation from the commercial considerations of banks, it eliminates the conflict of interest that currently exists between what is best for the banks and what is best for the economy as a whole. This removes all risk and short-term commercial pressures from the process so that it can be focused solely on what is in the best, long-term interests of the economy as a whole. There will then be no reason for far too much money being added at some times and far too little at other times, which is the pattern that has repeatedly occurred under the current regime where banks decide how much money is created, based on their own short-term commercial considerations.

Under H.R. 2990, monetary policy and the agencies that carry it out will be accountable to Congress and the American people. While the implementation of monetary policy will be independent of political pressure, it will not be immune from the democratic process, and will be subject to accountability. Thus, our monetary system will at last serve the interests of all Americans, not just the interests of a few.

H.R. 2990 therefore enables a smooth, steady, and stable supply of money in the economy that will mitigate or even eliminate boom–bust cycles. This can only result in a much more stable economy. Our economy will be far less reliant on fiscal policy decisions, because if Congress refuses to authorize the origination of any additional money, the Treasury could still maintain the money supply by recycling existing money through the revolving fund. This will create much greater certainty and confidence about economic conditions in the future, which will encourage more long-term investment.

How H.R. 2990 Will Create a Full Employment Economy

Presently, banks create our money for profit. A large part of it goes into bubbles and speculation for quick gains without producing any real wealth. Today, there are nearly 25 million Americans who are unemployed or under-employed. As the American Society of Civil Engineers recently pointed out, $2.2 trillion is needed over a five-year period to keep our infrastructure safe. These two serious deficiencies in our economy call out for corrective action; financial institutions are not driving the repair and replacement of that infrastructure. This is because financial institutions are motivated, or even incentivized toward short-term profit activities like speculation.

H.R. 2990 will address these serious deficiencies because the government, not the banks, will provide the funds for investment in our infrastructure. This will directly and indirectly create millions of good jobs in the private sector as the money flows through the economy as contractors increase their orders to suppliers and both increase their demand for high-skilled workers. Workers, in turn, will increase their orders for a wide range of new goods and services in the economy. This will greatly improve the cash flow of the productive sector and make lending to that sector much more attractive. The investments in infrastructure will be distributed without taxing or borrowing, on a per-capita equalized basis across the whole country, to avoid any political conflict or bias.

H.R. 2990 provides for 25% of any additional money authorized by Congress to be distributed to State governments, who can then augment federal infrastructure investment at the State level. This will protect, create and induce millions more good jobs in the private sector. H.R. 2990 also provides for the distribution of funds to local governments via a system of interest-free loans. This will in turn protect, create and induce the creation of millions of good jobs in the private sector.

H.R. 2990 provides for additional funding for a range of other purposes including the distribution of funds to State and local education systems and school districts, and distribution of funds to State and local governments to assist them with their health care and rehabilitation programs, pensions, housing assistance and federal mandates that are presently unfunded. Again this will protect, create and induce the creation of millions of good jobs.

H.R. 2990 protects the purchasing power of the dollar and stabilizes the economy. It provides the certainty needed to foster a positive business climate for investment, which will induce the creation of millions more jobs in the private sector. Furthermore, because H.R. 2990 provides funding to relieve budgets and reduce debt servicing charges, taxes need not rise and may even be reduced. This means taxpayers will keep more of their own money in their own pockets, which they can spend or invest. This all adds up to a situation where our millions of high school, college and university graduates will have good career opportunities awaiting them, and our servicemen and women will have a supportive economy with good job opportunities to come home to.

None of this will cause inflation because the money will be spent on creating new real wealth or maintaining the value of existing wealth, instead of bidding-up the prices of existing assets, as so

much of the money created by banks does. The overall effect of this will be that America will have a full employment economy where everyone has the opportunity to participate and make their contribution.

H.R. 2990 Lays the Foundation for a Sustainable Economy

Today, the monetary system creates interest-bearing debt when it creates money and requires debt to be paid with money created with interest-bearing debt. An artificial and unnecessary tension is placed over the whole economy because our money supply is always being pulled out of circulation to service the debt it was created with. This then requires more debt to be added if that money supply is to be maintained. Thus the whole economy is made to rely on a kind of giant Ponzi scheme for its money supply. This is obviously unsustainable and inevitably has to break down. The empirical evidence for this is clear as noted above.

H.R. 2990 avoids this unsustainable situation by providing for our money supply to be supplied to the economy with no debt attached. It can remain in circulation, instead of being continuously pulled out and returned to banks, with interest. Debt will not continue growing exponentially, In turn, the money supply will not have to grow exponentially. This means producers and consumers will not have to use resources at rates that try to keep up with this exponential growth in debt due to the corresponding exponential growth in debt servicing costs, which drive more production to obtain more income to service more debt.

The unsustainable nature of the present monetary system is reflected in the economy:

- State and local government budgets are fiscally unsustainable.
- State and local government pensions are financially unsustainable.
- Unemployment levels and income disparities are socially unsustainable

While the productivity of American workers has risen constantly, in the past few decades the share of compensation going to workers has increasingly fallen behind, and wages have been declining in real terms. H.R. 2990 provides for a sustainable monetary system which can provide the means to address these issues. It provides a monetary system that is compatible with the real needs in the economy, which are relatively stable, and the reality of finite resources.

H.R. 2990 Guarantees Retirement Security for All Americans

H.R. 2990 provides for a full employment economy. With a full employment economy, payroll contributions to Social Security will increase and this will maintain and sustain the solvency and cash flow for Social Security and other contributor-funded programs. Because H.R. 2990 provides for federal government debt to be paid off as it comes due, the redemption of securities accumulated by trust funds such as Social Security is assured.

Finally, Title V of H.R. 2990 contains a provision that will cover any shortfall in Social Security which may arise in the more distant future.

H.R. 2990 Promotes Balanced Trade and Reduces the Cost of Long-Term Investment

Today, the United States has a large trade deficit with foreign countries, such as China. H.R. 2990 provides for all U.S. Government debt to be retired and no more to be generally issued. Other countries will no longer be able to accumulate interest-earning Treasury securities in exchange for the funds that accumulate in accounts at Federal Reserve banks due to these trade surpluses. Instead, our trading partners will have to find another use for the non-interest-earning dollars that accumulate in their US bank accounts, like buying US products in exchange. Thus, H.R. 2990 creates conditions which promote more balanced trade that is also more fair.

One of the main factors that go into determining long-term interest rates is the expectation of inflation. This is why longer-term interest rates tend to be higher, and this raises the cost of long-term capital investments, such as businesses purchases of new machinery. Because H.R. 2990 provides for a monetary policy and monetary system without inflation, inflation expectations will not be factored into long-term interest rates. With a stable and sustainable economy, default risk will be much lower also. This will reduce interest rates for the financing businesses' long-term capital investments and if long term interest rates are lower, short term interest rates will be lower also.

This may then make equity a more attractive financing option, and the economy can start to transform from a debt-based economy to ownership- and performance-based economy, with returns based on performance. The overall effect will be that the cost of capital investment for both public and private purposes will reduce, which will help in the development of a more sustainable and prosperous economy.

H.R. 2990 Can Reduce Individual Income Taxes

Congressional Budget Office projections show the net interest cost on the national debt increasing 170% in nominal terms over the next 10 years; 70% relative to GDP. It is not a coincidence that individual income taxes are also projected to increase by nearly 150% in nominal terms; over 50% relative to GDP.

H.R. 2990 provides for the national debt to be paid off as it comes due. This means most of the interest cost in the federal budget will be gone in 10 years. H.R. 2990 also provides for the means to reach a full employment economy. This means most of the unemployment cost in the federal budget can be gone within a few years.

These two factors combined mean that a portion of the federal budget that equates to a significant portion of federal individual income taxes can be removed. This means federal individual income taxes can be reduced significantly. A score of the tax-saving potential of H.R. 2990 by the Congressional Budget Office would likely provide evidence.

H.R. 2990 also provides for assistance to state and local governments and school and fire districts, enabling their income, sales and property taxes to be reduced also.

Conclusion

H.R. 2990 embodies a methodological approach that has used the lessons of history, including the recent past, to determine a course that aims to avoid repeating mistakes.

The underlying ethos is to put into effect the minimum amount of change necessary to achieve this with the minimum amount of interruption to day-to-day business. H.R. 2990 offers real choices instead of forced choices by replacing an oppressive system with a just system, which can enable genuine democracy and freedom.

Most importantly, H.R. 2990 provides the means to assure that future generations of Americans will be better off.

Statement for the Record of Congressman Mike Pence
Hearing of the Domestic Monetary Policy and Technology Subcommittee
"Improving the Federal Reserve System: Examining Legislation to Reform the Fed and Other Alternatives"
May 8, 2012

In late 2010, the Federal Reserve entered uncharted territory with a $600 billion purchase of U.S. Treasury securities, dubbed "QE2." This action further expanded the Fed's balance sheet in an act of money creation second only to the purchase of $1.25 trillion of Fannie Mae and Freddie Mac securities in 2008 and 2009—the first round of quantitative easing.

The justification for keeping interest rates low through quantitative easing is the dual mandate created by the Federal Reserve Reform Act of 1977, which directs the Fed to support maximum employment *and* stable prices. Yet persistently high unemployment is a testament to the fact that the Fed has not achieved its goal.

Furthermore, monetary stimulus on a large scale is not good for maintaining the long-term value of the dollar. When the dollar is strong, America is a magnet for investment and growth. When the dollar is weak, Americans can afford less and savings drop in value.

Unfortunately, monetary policies at the Fed are likely to cause more pain with outcomes of high inflation and possibly the creation of another credit bubble. Congress should seize the opportunity to prevent repeating errors of the last decade. We should simplify the Fed's mandate.

Short-sighted actions that make the Fed a massive buyer in certain markets risk severe unintended consequences, such as global financial instability or restrictions on foreign investment by our trade partners. I believe the Federal Reserve is taking these risks in an effort to support the "maximum employment" half of its mandate and fill the void of pro-growth fiscal policies, which should be the domain of Congress and the Administration.

I have introduced a straightforward bill (H.R. 245) to give the Fed a single mandate. This legislation would eliminate the dual objectives of the Fed, clarifying a more appropriate role for our monetary authorities by eliminating the "maximum employment" consideration from the Federal Reserve's mandate. Price stability and a strong dollar are imperative to sound job growth over the long-term. Coupled with the tools of pro-growth fiscal policies such as tax reform, reduced federal spending, and regulatory overhaul, this is a more sustainable path to putting Americans back to work.

The American people know we cannot spend our way back to prosperity and we should avoid any perception of monetizing our national debt through currency devaluation. We must refocus the Fed and give clarity to the purpose of monetary policy in order to prevent rapid inflation and protect the value of the dollar.

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