AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

THE FED TURNS 100: LESSONS LEARNED OVER A CENTURY OF CENTRAL BANKING

HEARING

BEFORE THE

SUBCOMMITTEE ON MONETARY POLICY AND TRADE

OF THE

COMMITTEE ON FINANCIAL SERVICES

U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

SEPTEMBER 11, 2013

Printed for the use of the Committee on Financial Services

Serial No. 113–42

U.S. GOVERNMENT PRINTING OFFICE

86–677 PDF WASHINGTON : 2014

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

HOUSE COMMITTEE ON FINANCIAL SERVICES

JEB HENSARLING, Texas, *Chairman*

GARY G. MILLER, California, *Vice Chairman*
SPENCER BACHUS, Alabama, *Chairman Emeritus*
PETER T. KING, New York
EDWARD R. ROYCE, California
FRANK D. LUCAS, Oklahoma
SHELLEY MOORE CAPITO, West Virginia
SCOTT GARRETT, New Jersey
RANDY NEUGEBAUER, Texas
PATRICK T. McHENRY, North Carolina
JOHN CAMPBELL, California
MICHELE BACHMANN, Minnesota
KEVIN McCARTHY, California
STEVAN PEARCE, New Mexico
BILL POSEY, Florida
MICHAEL G. FITZPATRICK, Pennsylvania
LYNN A. WESTMORELAND, Georgia
BLAINE LUETKEMEYER, Missouri
BILL HUIZENGA, Michigan
SEAN P. DUFFY, Wisconsin
ROBERT HURT, Virginia
MICHAEL G. GRIMM, New York
STEVE STIVERS, Ohio
STEPHEN LEE FINCHER, Tennessee
MARLIN A. STUTZMAN, Indiana
MICK MULVANEY, South Carolina
RANDY HULTGREN, Illinois
DENNIS A. ROSS, Florida
ROBERT PITTENGER, North Carolina
ANN WAGNER, Missouri
ANDY BARR, Kentucky
TOM COTTON, Arkansas
KEITH J. ROTHFUS, Pennsylvania

MAXINE WATERS, California, *Ranking Member*
CAROLYN B. MALONEY, New York
NYDIA M. VELÁZQUEZ, New York
MELVIN L. WATT, North Carolina
BRAD SHERMAN, California
GREGORY W. MEEKS, New York
MICHAEL E. CAPUANO, Massachusetts
RUBÉN HINOJOSA, Texas
WM. LACY CLAY, Missouri
CAROLYN McCARTHY, New York
STEPHEN F. LYNCH, Massachusetts
DAVID SCOTT, Georgia
AL GREEN, Texas
EMANUEL CLEAVER, Missouri
GWEN MOORE, Wisconsin
KEITH ELLISON, Minnesota
ED PERLMUTTER, Colorado
JAMES A. HIMES, Connecticut
GARY C. PETERS, Michigan
JOHN C. CARNEY, Jr., Delaware
TERRI A. SEWELL, Alabama
BILL FOSTER, Illinois
DANIEL T. KILDEE, Michigan
PATRICK MURPHY, Florida
JOHN K. DELANEY, Maryland
KYRSTEN SINEMA, Arizona
JOYCE BEATTY, Ohio
DENNY HECK, Washington

SHANNON McGAHN, *Staff Director*
JAMES H. CLINGER, *Chief Counsel*

SUBCOMMITTEE ON MONETARY POLICY AND TRADE

JOHN CAMPBELL, California, *Chairman*

BILL HUIZENGA, Michigan, *Vice Chairman*
FRANK D. LUCAS, Oklahoma
STEVAN PEARCE, New Mexico
BILL POSEY, Florida
MICHAEL G. GRIMM, New York
STEPHEN LEE FINCHER, Tennessee
MARLIN A. STUTZMAN, Indiana
MICK MULVANEY, South Carolina
ROBERT PITTENGER, North Carolina
TOM COTTON, Arkansas

WM. LACY CLAY, Missouri, *Ranking Member*
GWEN MOORE, Wisconsin
GARY C. PETERS, Michigan
ED PERLMUTTER, Colorado
BILL FOSTER, Illinois
JOHN C. CARNEY, JR., Delaware
TERRI A. SEWELL, Alabama
DANIEL T. KILDEE, Michigan
PATRICK MURPHY, Florida

CONTENTS

	Page
Hearing held on:	
September 11, 2013	1
Appendix:	
September 11, 2013	41

WITNESSES

WEDNESDAY, SEPTEMBER 11, 2013

Bivens, Josh, Research and Policy Director, Economic Policy Institute	12
Gagnon, Joseph E., Senior Fellow, Peterson Institute for International Economics	11
Goodfriend, Marvin, Friends of Allan Meltzer Professor of Economics, Tepper School of Business, Carnegie Mellon University	5
Meltzer, Allan H., Gailliot and Scaife University Professor of Political Economy, Tepper School of Business, Carnegie Mellon University	3
Pollock, Alex J., Resident Fellow, American Enterprise Institute	7
White, Lawrence H., Professor of Economics, George Mason University	9

APPENDIX

Prepared statements:	
Bivens, Josh	42
Gagnon, Joseph E.	57
Goodfriend, Marvin	69
Meltzer, Allan H.	79
Pollock, Alex J.	97
White, Lawrence H.	104

THE FED TURNS 100: LESSONS LEARNED OVER A CENTURY OF CENTRAL BANKING

Wednesday, September 11, 2013

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

The subcommittee met, pursuant to notice, at 1:46 p.m., in room 2128, Rayburn House Office Building, Hon. John Campbell [chairman of the subcommittee] presiding.

Members present: Representatives Campbell, Huizenga, Pearce, Posey, Stutzman, Mulvaney, Pittenger; Clay, Peters, Foster, Sewell, and Kildee.

Ex officio present: Representative Hensarling.

Chairman CAMPBELL. Good afternoon, everyone. The Subcommittee on Monetary Policy and Trade will come to order. Without objection, the Chair is authorized to declare a recess of the subcommittee at any time.

With the concurrence of the ranking member and of the witnesses, we are beginning this hearing a little bit early in order to accommodate the vote schedule that we will have this afternoon. My understanding is that the votes will be called at 2:10, so we will continue the hearing until probably about 2:15, at which time we will recess while we go down for votes. There are 3 votes, which should take approximately 30 minutes. Then we will come back, and we will continue the hearing until whenever questions are finished, the witnesses need to leave, or the next vote is called, which I think is supposed to be around 4:15-ish, and we will adjourn the hearing at that point.

So as the Chair, I now recognize myself for 5 minutes for the purpose of an opening statement. But before I go into the opening statement, I would like to note that today is the anniversary of the attacks on America on 9/11. And although I am sure you all have seen and I have seen and we have seen the memorials and the moments of silence in New York and here in Washington and elsewhere around the country, I don't ever think we can do it too much. So I would first ask that we all observe a moment of silence in remembrance of those who perished on 9/11.

Thank you.

Now, I will continue my opening statement—which will be brief, because we are mainly here to hear all of you—which is just to explain what we are doing here. This year is the 100th anniversary of the Federal Reserve. And we felt that after 100 years of an insti-

tution, it is a good time to stand back and look at it and say, okay, why was it formed? What has it done? What has it changed? How did it start out? What did it do in the middle? Where is it now?

And to take a look at the past 100 years of the Fed with the idea of trying to understand better—I don't think anyone in this room was here in 1913 when it was founded, so given that none of us personally saw it, I think it is good to take a look at what happened and what has happened in the last 100 years and where we are today so that we can begin to think about, what does the next 100 years of the Fed look like? What should it look like? What have we done right? What have we done wrong? What successes have we had? What mistakes have we made? And what can we learn from those successes? What can we learn from those mistakes? What can we learn from what we did right and learn from what we did wrong?

I am looking forward to the testimony of all of the witnesses this morning as we begin a series of hearings on the Federal Reserve and on where it has been and then perhaps where it might be going.

So with that, I would like to recognize the ranking member, the gentleman from Missouri, for his opening statement.

Mr. CLAY. Thank you so much, Mr. Chairman, for holding this hearing on the Federal Reserve Bank then and now.

As you mentioned, in 1913 Congress enacted the Federal Reserve Act to provide for the establishment of the Federal Reserve Bank. In 1978, Congress enacted the Full Employment and Balanced Growth Act, better known as the Humphrey-Hawkins Act. This law charges the Federal Reserve Bank with a dual mandate, both maintaining stable prices and full employment.

Currently, the U.S. unemployment rate is 7.3 percent, the lowest level of unemployment in 5 years. Still, millions of Americans would like to work, but cannot get work. The Consumer Price Index, which shows the price consumers pay for goods and services, has increased over the past 12 months by 2 percent.

The cost of all items, less food and energy, has risen 1.7 percent over the last year. This compares to 1.6 percent for the 12 months ending in June. The energy index has risen 4.7 percent over the last 12 months. It is the largest increase since the 12 months ending February 2012, and the food index has risen 1.4 percent. All of these factors play a very important role in the U.S. economy.

And, again, Mr. Chairman, I want to thank you. And I look forward to questions that I may submit to the witnesses. I yield back.

Chairman CAMPBELL. Thank you. I thank the ranking member for his comments and for yielding back.

In the absence of any other opening statements, we will proceed directly to the witnesses. And we just got word that there will not be a second series of votes, so we are going to have this one series at apparently 2:10, and then after that, there will not be another series, so we will just go from 2:10 until whenever the hearing finishes after that.

So, a warm welcome to all of you. And we will start with Dr. Allan Meltzer, professor of political economy at Carnegie Mellon, and also visiting scholar at the American Enterprise Institute. He chaired the International Financial Institution Advisory Commis-

sion, known as the Meltzer Commission, and is a founding member of the Shadow Open Market Committee. He served on the President's Economic Policy Advisory Board and on the Council of Economic Advisers.

Dr. Meltzer, you are recognized for 5 minutes.

STATEMENT OF ALLAN H. MELTZER, GAILLIOT AND SCAIFE UNIVERSITY PROFESSOR OF POLITICAL ECONOMY, TEPPER SCHOOL OF BUSINESS, CARNEGIE MELLON UNIVERSITY

Mr. MELTZER. Thank you, Mr. Chairman. I welcome the opportunity to have this discussion. I think that you asked the right question: What can the Federal Reserve do better in the next century than what it has done in the past century? And the ranking member's questions about how far we have strayed from full employment and how slow we are getting back there, those are critical questions for our citizens.

The Federal Reserve has some very good things about it. One of them is that in its 100 years, it is one of the few institutions of government that has never had a major scandal. That is quite an achievement, and it is one that we should, of course, welcome.

It also has a number of blemishes. I am going to talk more about the blemishes, because those are the things that need correction.

The 1913 Federal Reserve Act created an institution with very limited powers. President Wilson's compromise resolved the main political obstacle to passing the Act. The reserve banks became semiautonomous, controlled by their managements and directors. Boards of directors had the power to reject portfolio decisions. The Board in Washington had undefined supervisory responsibility.

The United States was on the gold standard, limiting Federal Reserve actions to the requirements of that rule. In addition, the new system authorized reserve banks to discount commercial paper, banker's acceptances, and the like. The discounting operation was always at the initiative of the borrower. Also, the Act prohibited any direct purchases of Treasury debt.

All of these restrictions ended long ago. The gold standard limped to an end in the 1930s. Discounting became an unimportant part of the Federal Reserve's activities, and a limited volume of direct loans to the Treasury replaced the prohibition. Far more important, reliance on open-market operations circumvented the prohibition on direct purchases of Treasuries.

Currently, and for many years, the Federal Reserve has bought or sold unlimited amounts of Treasury securities in the marketplace at the time of the offering or at any subsequent time. The transformation occurred in many steps, many of them in response to major crises, especially the Great Depression, the Great Inflation, and the current prolonged recession and slow recovery, black marks on the Federal Reserve's record.

Within months of Benjamin Strong's departure, Board Members gained influence. Later, the Banking Acts of 1933 and especially 1935 shifted power toward the Board by giving the Board a majority on the new Federal Open Market Committee and eliminating the power of reserve bank directors to decide on their bank's participation in open-market purchases or sales.

During the Great Inflation, Congress amended the Federal Reserve Act by adding the so-called dual mandate. After the recent housing and financial crisis of 2007–2009, Congress approved the Dodd-Frank Act, containing hundreds of regulations on banks, as many as 400, according to some counts.

Among the many new regulations is the use of Federal Reserve earnings to allocate credit toward consumers. The Fed had previously resisted credit allocation, but it will henceforth finance it out of its earnings without any right to decide on the allocation. This right is reserved to the Director of the consumer agency now embedded into the Federal Reserve Act. The Director does not report to the Chairman, nor to the Congress, nor to anyone else. And although the earnings that the Director uses would otherwise return to the Treasury as receipts, Congress does not vote on the allocation. Political decisionmaking is now unavoidable.

This change is a startling reduction in the mandated independence of the Federal Reserve. Federal Reserve independence has often been compromised, but never before by act of Congress.

Once Congress understood the importance of monetary expansion for employment, it took extraordinary effort and a strong Chairman to remain independent. Paul Volcker was an independent Chairman. Alan Greenspan also remained relatively independent. Others were willing to compromise. The current Federal Reserve has engaged in such nonmonetary functions as fiscal policy, debt management, and credit allocation.

To sum up the evolution, I conclude that the Federal Reserve evolved under pressure of events and political responses to crises from independent agencies with constrained powers to become the world's major central bank with a nearly unrestricted ability to expand. It retains a vestige of independence, but it pays the price of much-reduced independence for its greatly expanded authority. Within the system, power has shifted from the reserve banks to the Board of Governors, and the reserve bank directors have a greatly diminished role.

One of the great failures of recent years has been the failure of Congress to find an effective way of providing congressional oversight. This is a serious lack of responsibility. We have an agency which is increasing—has doubled and then redoubled the size of its balance sheet without any vote by the Congress to spend that amount of money, trillions of dollars. That is a mistake, a mistake by the Federal Reserve, but an even greater mistake by the Congress, because under Article I, Section 8—

Chairman CAMPBELL. Thank you, Dr. Meltzer. Time has expired. So if you have a sentence to sum up or—I think we get the point.

Mr. MELTZER. Yes, I think the most important thing that the Congress could do to enhance its oversight and improve the performance of the Federal Reserve is to adopt a monetary rule, one which embodies the dual mandate necessary, but adopt a monetary rule—

Chairman CAMPBELL. All right.

Mr. MELTZER. —a rule which would tell you whether they have done what they said they were going to do and whether you could correctly monitor them.

[The prepared statement of Dr. Meltzer can be found on page 79 of the appendix.]

Chairman CAMPBELL. Thank you. Thank you, Dr. Meltzer.

Next, Dr. Marvin Goodfriend, who is also a professor at Carnegie Mellon, but a professor of economics, and he previously served as the Senior Vice President and Policy Advisor to the Federal Reserve Bank of Richmond, and also worked as a Senior Staff Economist for the White House Council of Economic Advisers. Dr. Goodfriend, you are recognized for 5 minutes.

STATEMENT OF MARVIN GOODFRIEND, FRIENDS OF ALLAN MELTZER PROFESSOR OF ECONOMICS, TEPPER SCHOOL OF BUSINESS, CARNEGIE MELLON UNIVERSITY

Mr. GOODFRIEND. Thank you, Mr. Chairman.

I will speak today on lessons learned from a century of Federal Reserve last resort lending. My overarching message is that the constraints on the Federal Reserve's lending powers were loosened gradually over time, resulting in the distortionary and destabilizing implied promise of even more expansive lending in the future.

The story starts in the Depression, when Congress was reluctant to expand the credit policy powers of the independent Fed beyond depositories and instead established the Reconstruction Finance Corporation to allocate credit widely to nonbank entities. So much has changed.

But the Fed exhibited a tendency on its own to expand lending beyond short-term liquidity assistance to banks. For instance, in 1974 Fed lending supported the insolvent Franklin National Bank, and in 1984–1985, the Fed supported the undeclared insolvency of Continental Illinois Bank. Then, the Monetary Control Act expanded access to the Fed's discount window to all depositories in 1980, whether or not they were members of the Federal Reserve System.

Anna Schwartz has documented a widespread tendency in the 1980s for Fed lending to delay the closure of insolvent banks at taxpayer expense. In 1991, the Federal Deposit Insurance Corporation Improvement Act (FDICIA) famously acted to limit Fed lending to undercapitalized banks, although the law would be compromised by capitalization measured largely on a book rather than market valuation. Overlooked in FDICIA, however, was something more important: It amended Section 13(3) of the Federal Reserve Act to enable the Fed to lend widely to nonbanks for the first time in the Fed's history, as Alan Greenspan has written, granting virtually unlimited authority to the Federal Reserve Board to lend in unusual and exigent circumstances.

Expanded Fed lending authorization unaccompanied by supervision and regulation would encourage the huge expansion of money market finance that fueled the credit boom. And in the 2007–2008 turmoil, the Fed was put in a no-win situation. Given its wide powers to lend, the Fed could disappoint expectations of accommodation and risk financial collapse or take on expansive, underpriced credit risk, as Paul Volcker put it, with the implied promise of similar actions in times of future turmoil. The Fed chose the latter course of action, even allowing two major investment

banks to quickly become bank holding companies so they could access the Fed discount window.

In the 19th Century, the Bank of England followed Walter Bagehot's classic last resort lending advice, "to lend freely at a high rate on good collateral," so as not to take on underpriced credit risk. The bank followed Bagehot's advice because the Bank of England was a private profit-maximizing institution whose shareholders earned the profit and bore the risk of loss.

The Fed, however, is inclined to take on underpriced credit risk when worried that not doing so threatens a systemic crisis. Why? Because the Fed's own funds are not at stake. The fiscal authorities receive any Fed income after operating expenses, and taxpayers bear any Fed losses.

Moreover, even when the Fed protects itself by taking good collateral, the Fed harms taxpayers if the entity to which the Fed lends fails with a Fed loan outstanding. Why? The Fed takes collateral at the expense of taxpayers exposed to losses from backstopping the Deposit Insurance Fund or from other financial guarantees that the government may have put in place. The bottom line is that fully independent Fed lending facilitates lending laxity and moral hazard.

Fed credit policy works by interposing government creditworthiness, the power to borrow credibly against future taxes between private borrowers and lenders to facilitate distressed borrowers. Fed credit policy involves lending to private institutions with freshly created bank reserves or the proceeds from the sale of Treasuries from the Fed's own portfolio.

To prevent inflation in the future, the Fed must reverse the reserve creation eventually by selling Treasuries from its portfolio or else the Fed will have to pay a market interest on reserves that is used to finance those credit policies. Either way, Fed credit policy involves the lending of public funds to particular borrowers, financed by interest-bearing liabilities issued against future taxes.

In short, Fed credit policy is really debt-financed fiscal policy. The Fed returns the interest on its credit assets to the Treasury, but all such assets carry credit risk and involve the Fed in potentially controversial disputes regarding credit allocation. So credit policy is necessarily a political fiscal policy matter that ought to be handled by the fiscal authorities, not by the independent Fed.

That said, in my view occasional Fed lending to solvent supervised depositories on short term against good collateral is protected against ex post losses and ex ante distortions, and so I believe the Fed should be given a degree of operational independence with respect to such circumscribed lending to depositories that it regulates.

But Congress should insist that the Fed adhere to a Treasuries-only asset acquisition policy, except for such occasional lending. Moreover, I believe that any expansive Fed lending initiatives should be authorized by a committee of Congress before the fact, be done only as a bridge loan, and be accompanied by an explicit taxpayer takeout, which, of course, would deter the Fed from doing such things, except in exceptional circumstances. Thank you.

[The prepared statement of Dr. Goodfriend can be found on page 69 of the appendix.]

Chairman CAMPBELL. Thank you, Dr. Goodfriend. Welcome back.

Next, Mr. Alex Pollock, resident fellow at the American Enterprise Institute. He also serves as lead director of the CME Group, and was formerly the President and CEO of the Federal Home Loan Bank of Chicago. Mr. Pollock, you are recognized for 5 minutes.

STATEMENT OF ALEX J. POLLOCK, RESIDENT FELLOW, AMERICAN ENTERPRISE INSTITUTE

Mr. POLLOCK. Thank you, Chairman Campbell, Ranking Member Clay, members of the subcommittee, and Chairman Hensarling.

I think the most striking lesson of the 100-year history of the Federal Reserve is how it has been able from the beginning to inspire entirely unjustified optimism about what it can know and what it can accomplish. In contrast to the warm hopes of 1913 and since, the Fed has not made financial disorders disappear, while it has often enough contributed to creating them.

A high point of optimism about what discretionary manipulation of interest rates could achieve came in the 1960s, when economists actually came to believe in what they called "fine-tuning." The fine-tuning notion, "turned out to be too optimistic, too hubristic, as we collectively learned," Fed Chairman Bernanke recently wrote. "So," he continued, "a little humility never hurts."

Indeed, the performance of the Federal Reserve at economic and financial forecasting in the last decade, including missing the extent of the housing bubble, missing the huge impact of its collapse, and failing to foresee the ensuing sharp recession certainly strengthens the case for humility on the Fed's part. The Fed is as poor at knowing the future as everybody else.

So as Arthur Burns, Fed Chairman in the 1970s and architect of the utterly disastrous Great Inflation of that decade said, "The opportunities for making mistakes are legion."

Nonetheless, the 21st Century Federal Reserve and its economists again became optimistic and perhaps hubristic about the central bank's abilities when Chairman Greenspan had been dubbed "the maestro." In the early 2000s, central bankers thought they were observing a durable "Great Moderation," but the "Great Moderation" turned into the "Great Bubble" and the "Great Collapse."

Then, the Dodd-Frank Act gave the Fed much expanded regulatory authority over firms deemed systemically important financial institutions, or SIFIs, in order to control systemic risk. But the lessons of history make it readily apparent that the greatest SIFI of them all is the Federal Reserve itself. It is unsurpassed in its ability to create systemic risk for everybody else. Who will guard these guardians, as the classic question goes?

In 1927, the Fed's Benjamin Strong famously decided to give the stock market "a little coup de whiskey." In our times, the Fed has decided to give the bond and mortgage markets a barrel of whiskey. This massive manipulation of government debt and mortgages has almost certainly induced a lot of new systemic interest rate risk into the economy, as well as a remarkable concentration of interest rate risk into the balance sheet of the Federal Reserve itself.

Central banking is not rocket science. In fact, discretionary central banking is a lot harder than rocket science, because it is not

and cannot be a science at all. It cannot make reliable predictions, and it must cope with ineluctable uncertainty and an unknowable future.

I believe we can draw four lessons from this instructive history. One, we should have no illusions, in sharp contrast to the 100 years of illusions we have entertained, about the probability of sustained success of discretionary central banking, no matter how intellectually brilliant and personally impressive its practitioners may be.

Two, we should try to implement Henry Thornton's classic advice from 1802, "to limit the total amount of paper money issued, to let it vibrate only within certain limits, to allow a slow and cautious extension of it, as the general trade enlarges itself," in other words, to have the Fed focus on the medium- to long-term noninflationary or very low inflationary expansion of base money. The Fed is much more likely to succeed at this than in trying to manage the economy.

Three, given that the Fed is the single greatest source of systemic risk, we should reconsider who should guard these guardians. Are there appropriate checks and balances, rather than a philosopher king-like independence? This includes the question of rules, the role of Congress, and as Allan Meltzer mentioned, the internal balance between the regional Federal Reserve banks and the Federal Reserve Board.

Fourth and last, a serious 100-year review, as this subcommittee is undertaking, of the 6 mandates of the Federal Reserve make sense. It has been 78 years since the Fed was restructured by the Banking Act of 1935, 36 years since the Federal Reserve Reform Act of 1977, and 35 years since the Humphrey-Hawkins Act, which the ranking member mentioned, was enacted. A careful, rigorous, thoughtful review of the many difficult questions involved in governing the pure fiat currency, paper dollar, floating exchange rate world we have is certainly appropriate.

Thank you.

[The prepared statement of Mr. Pollock can be found on page 97 of the appendix.]

Chairman CAMPBELL. Thank you, Mr. Pollock.

Dr. Larry H. White is a senior scholar at the Mercatus Center and a professor of economics at George Mason University, and also serves as a member of the Financial Markets Working Group. He previously taught at the University of Missouri in St. Louis, and at the University of Belfast, and worked as a visiting scholar at the Federal Reserve Bank of Atlanta.

I want to mention, before I forget, that without objection, all of your written statements will be made a part of the record. Also, I did fail to mention—as Dr. Meltzer mentioned that the Federal Reserve has had no scandals in its 100-year history, I want to point out that this body, the U.S. House of Representatives, has not had a scandal in the last week of which I am aware.

[laughter]

And so I don't know if that is equivalency, but I just thought I would mention that.

With that, Dr. White, you are recognized for 5 minutes.

STATEMENT OF LAWRENCE H. WHITE, PROFESSOR OF ECONOMICS, GEORGE MASON UNIVERSITY

Mr. WHITE. Thank you, Chairman Campbell, Ranking Member Clay, and members of the subcommittee. Thank you for inviting me to testify.

In my written testimony, I argue that the actions of the Federal Reserve during the financial crisis of 2007 to 2010 abandoned the rule of law. That is, the Fed abandoned the principle that those in authority should execute the law as written, predictably and in accordance with established precedent. The Fed instead took arbitrary, ad hoc measures without clear statutory authority or precedent.

The rule of law would have been a better guide to resolving the crisis and I think a better guide to helping us avoid future financial crises. So in enunciating this principle, I follow the historian and philosopher David Hume in affirming that the long-term benefits of consistently adhering to the rule of law outweigh the short-term convenience of ad hoc measures.

Now, what measures am I talking about? You are all aware of the Fed's having created special purpose vehicles, the Maiden Lane, LLC, I, II and III to protect the bondholders of Bear Stearns by taking $30 billion of bad assets off of its books, thereby sweetening an acquisition deal for JPMorgan Chase to take over the remainder of the firm. It declined to do the same for Lehman Brothers, but it created two other vehicles to buy and hold bad assets from the failed insurance company AIG.

There wasn't any precedent for this. There wasn't any apparent legal authority in the Federal Reserve Act for such a special purpose funding operation. That is well-known.

Equally worthy of note, but not often noticed, is that the Fed in 2008 assumed the role of selectively channeling credit in directions that it favored. It began to lend funds to and purchase bad assets from an array of financial institutions it deemed worthy, going beyond the traditional scope of its lending to commercial banks. The Fed began lending to firms that do not participate in the payment system for the first time—well, not the first time, but the first time in recent memory, namely investment banks, primary dealers, broker-dealers, and even mutual funds.

These funds it lent, as other speakers have mentioned, weren't allocated to it by Congress. They were created by the Fed itself out of thin air, as they say, and in the amounts that the Fed itself decided. The total of the Fed's credits outstanding at the end of 2008 stood at over $1.5 trillion, more than double the size of the Treasury's bailout authority.

Now, the Fed has an established role as a lender of last resort. What does that role involve? That role involves injecting cash into the system to keep the broader money stock from shrinking. It does not call for the Fed to inject capital into failing firms by overpaying for assets or by lending at below market rates, actions that, as Marvin Goodfriend said, put taxpayers at risk.

The Fed's statutory authority to lend is actually limited, even in exigent circumstances, and was never meant to encompass the sort of capital injections that the Fed took in 2008 through its Maiden Lane vehicles.

Now, the Dodd-Frank Act properly places limits on this kind of lending, but in other ways, the Dodd-Frank Act enshrines the Fed's discretion to lend. It enshrines the too-big-to-fail doctrine, the application of which inherently involves arbitrary judgments. I think it thereby erodes the rule of law, increases the probability that taxpayers will be funding bailouts in the future, and it weakens the market discipline between risk and reward.

In justification of these actions, the Fed during the crisis repeatedly invoked the lender of last resort rule, but I think in so doing, they were stretching the term beyond its proper meaning. The Fed, of course, conducts monetary policy. Lender of last resort should be thought of as an adjunct to monetary policy; that is, it is injecting enough cash into the system to keep the money supply from shrinking.

It does not involve preferential credit allocation, which is what the Fed has gotten into. Subsidizing, papering over inadequate net worth, delaying the resolution of insolvent institutions, that has nothing to do with keeping the money supply from shrinking.

So the lender of last resort rule doesn't require, and the traditional guidelines of Walter Bagehot that have been mentioned actually forbid, providing insolvent firms with capital injections or loans at below market interest rates. In fact, the lender part of the lender of last resort is actually an anachronism. As Professor Goodfriend mentioned, the Fed can inject cash without making loans to particular banks by purchasing securities, and it doesn't need to purchase securities from those banks. It can purchase Treasuries in the open market.

The Fed claimed legal authority for its actions—

Chairman CAMPBELL. If you could wrap up, because your time has expired.

Mr. WHITE. —under 13(3) of the Federal Reserve Act, but I think even as amended, Section 13(3) did not convey unlimited or carte blanche authority.

So, in conclusion, I think we should be concerned to prevent arbitrary credit allocation by the Federal Reserve, however well-meaning the Members of the Board undoubtedly are. Thank you.

[The prepared statement of Dr. White can be found on page 104 of the appendix.]

Chairman CAMPBELL. Thank you, Dr. White.

There are three votes on the Floor right now, so we will recess the hearing for the moment. According to the people on the Floor, these votes should be over about at 2:50, and so we will return in about 30 minutes or so, and we will reconvene at that point, and continue with Dr. Gagnon and Dr. Bivens. So, the hearing is in recess.

[recess]

Chairman CAMPBELL. All right. The committee will return to order. And we will continue with the testimony on the part of our witnesses. We will now turn to Dr. Joseph Gagnon, a senior fellow at the Peterson Institute for International Economics. He previously served as the Associate Director of Monetary Affairs at the Federal Reserve Board of Governors and as an Economist at the U.S. Treasury Department.

Dr. Gagnon, you are recognized for 5 minutes.

STATEMENT OF JOSEPH E. GAGNON, SENIOR FELLOW, PETERSON INSTITUTE FOR INTERNATIONAL ECONOMICS

Mr. GAGNON. Thank you, Chairman Campbell, Ranking Member Clay, and members of the subcommittee. I welcome this opportunity to testify.

In my view, the Federal Reserve has performed at least as well over its first 100 years as could have been expected, given the powers it was granted and the evolving understanding of how the economy operates. The key to improving performance in the future is to give the Fed the tools it needs to do its job, to allow the Fed free reign in using those tools, to demand that the Fed explain its actions fully, and to hold the Fed accountable for any failure to achieve its objectives.

My biggest worry is that the Fed faces more restrictions on its powers than any of the world's other major central banks, raising the risk that it may be unable to achieve its objectives at some time in the future. Under U.S. law, the Fed has been asked to foster a sound and stable financial system which will help to achieve its broader goals of full employment with low inflation.

Historically, however, the Fed has had three major failures. First, the Fed did not have the tools to prevent a leveraged equity bubble in the 1920s, and it did not use its tools adequately to prevent the bursting of this bubble from causing the Great Depression. Second, through a protracted period of passivity in the late 1960s and 1970s, the Fed allowed inflation to ratchet upward to damaging levels. Third, through insufficiently aggressive use of its supervisory and regulatory authorities, the Fed allowed a leveraged housing bubble to develop in the 2000s, but it did a better job of responding to the ensuing crisis than it did in the 1930s.

I group the lessons learned from Fed history into four categories: monetary objectives; monetary rules; policy tools; and emergency lending. On monetary objectives, I support the dual mandate. Experience shows that successful central banks do not focus solely on inflation, even if that is their only mandate. Stabilizing employment is a socially valuable objective in itself and it helps to stabilize inflation. Making the employment mandate explicit is an acknowledgement of reality that has benefits for credibility, transparency, and accountability.

It might be helpful, but not essential, for political leaders to specify a numerical goal for inflation. We are all aware of the dangers of inflation that is too high. And the evidence is mounting of the harm from inflation that is too low. The target should not be set below 2 percent, and some believe that a slightly higher target would be beneficial, perhaps as high as 4 percent. I don't have a strong view on that, but I note that an average inflation rate of 4 percent in the late 1980s was widely viewed as a huge success.

On rules versus discretion, it is not possible to design a policy rule that can allow for all contingencies. The best strategy is for the Fed to use various rules in assessing the stance of policy. Whenever it deviates noticeably from popular rules, the Fed should explain clearly why it is doing so.

The difficulty of using policy rules is highlighted by the experience of the past 5 years, when some proposed rules called for large negative interest rates that are not technically feasible. The Fed's

response was to engage in quantitative easing, or QE, an unconventional policy that was not contemplated by the existing policy rules.

My own call for more QE back in 2009 was based on the fact that the Fed did not forecast a return to full employment and target inflation within 3 years. Looking forward over the next 3 years, there still seems to be some room for easier Fed policy, but the case is less strong than it was back in 2009.

On policy tools, I note that of the world's major central banks, the Fed faces the greatest restrictions on its powers. It can buy only government- and agency-backed debt. Other central banks can buy corporate debt, equities, and even real estate. As long as there is sufficient transparency and accountability, there is no reason to restrict the Fed's ability to achieve its mandate. I note that the Bank of Japan is buying broad baskets of Japanese equity and real estate as part of its fight against deflation.

Another important tool is the ability to impose loan-to-value limits and/or debt-to-income limits on consumer and business loans. Strict lending limits kept the equity bubble of the 1990s from causing excessive damage when it burst in 2000. We need to make it easier for the Fed to impose similar limits on leverage in real estate. We also need higher capital standards for banks.

Finally, on lender of last resort, during the recent crisis the Fed made emergency loans to specific institutions, which attracted considerable criticism. Yet, the Fed was scrupulous in requiring sufficient collateral on its loans, as evidenced by the fact that all of its loans were fully repaid at a profit to the taxpayer.

The new limit on the Fed's ability to make emergency loans raises the risk of disorderly failures in the future. And it is not clear how much of this risk is offset by the advanced resolution plans that are now required of large-scale financial institutions.

Thank you. This concludes my opening remarks.

[The prepared statement of Dr. Gagnon can be found on page 57 of the appendix.]

Chairman CAMPBELL. Thank you, Dr. Gagnon.

And last but not least, Dr. Josh Bivens is research and policy director at the Economic Policy Institute and conducts research on macroeconomics, globalization, social insurance, and public investment. Dr. Bivens, you are recognized for 5 minutes.

STATEMENT OF JOSH BIVENS, RESEARCH AND POLICY DIRECTOR, ECONOMIC POLICY INSTITUTE

Mr. BIVENS. Thank you. I would like to thank the members of the subcommittee for the invitation to testify today. I have submitted written testimony for the record.

The year of the 100th anniversary of the Federal Reserve would always be an appropriate time to assess its role in the American economy, and the current swirl of questions surrounding its conduct in the wake of the Great Recession makes it especially so.

I am going to make essentially five quick arguments today. First, the economy remains far from fully recovered from the Great Recession, and the obvious barrier to this full recovery is clearly deficient aggregate demand for goods and services.

Second, this demand shortfall has been aggravated in recent years by too contractionary fiscal policy.

Third, given this demand shortfall and given this contractionary fiscal policy, the Fed's current efforts to boost economic activity and employment through unconventional monetary policy are entirely appropriate and talk of reducing the extent of this economic boost, or tapering as it is sort of called in the popular press, is clearly premature.

Fourth, the lessons of the burst housing bubble and the consequent Great Recession for the Fed should be that: one, it is crucial to keep asset market bubbles from inflating in the first place; and two, we cannot rely solely on conventional monetary policy to return the economy to full employment after they burst.

This unique episode again illustrates that monetary policy has to balance too many competing demands and will encounter too many contingencies over any window of time to make very simple, tailored rules the optimal policy.

And fifth, as the Fed in the future becomes a hopefully more vigilant financial regulator, it should follow the complete version of what are often referred to—and people on the panel have referred to it—the Bagehot rules, should lend freely during a crisis, but at a penalty rate against collateral that is valuable during noncrisis times, and only to fundamentally solvent institutions.

And to be clear, I find little to fault with how the Fed managed the crisis of 2008–2009. I think it was balancing many things. We were not well-prepared for such a financial crisis. And it chose the path that would support economic activity and employment, even at the expense of perhaps giving some financial aid to specific financial institutions that engaged in too many excesses. That said, we should be better prepared for next time. Hopefully, the Dodd-Frank legislation has, indeed, made us better prepared for next time.

To expand just a little bit, as of June 2013, a full 4 years after the official end of the Great Recession, the gap between actual economic output and what could be produced if all productive factors were fully utilized is nearly $900 billion in annualized terms. This is $900 billion of pure economic waste that persists because we have not engineered a full recovery from the Great Recession.

This output gap is mostly driven by deficient aggregate demand. And, again, that has been aggravated in recent years by contractionary fiscal policy. Given this, it is premature to argue the Fed should begin tapering its own support for the economy.

There has been a lot of uncertainty about the estimates of how much the Federal Reserve quantitative easing programs have boosted the economy over the past couple of years. It is important to realize that none of the estimates say it has damaged economic activity or employment growth over that time. There may be considerable uncertainty about just how much it has boosted this activity, but it is important to realize that it has boosted it and the economy has needed a boost.

Trying to engineer a recovery using just monetary policy when fiscal policy is going in the wrong direction is far from optimal, but flying an airplane on one engine is a lot better than zero.

Lastly, the source of the Great Recession is as clear as day: There was an $8 trillion bubble in home prices that formed and then burst. The Federal Reserve and all other macroeconomic policymakers were far too reluctant in the run-up to that bubble to deflate it before it formed to such damaging levels, and they were too confident in their ability to use conventional monetary policy, short-term interest rate cuts to neutralize its effects when it burst.

These lessons should be heeded. In going forward, the Fed needs to be willing to intervene to keep destructive financial sector excesses from providing tinder for another crisis, and it has a greatly expanded menu of tools to do this, with legislation that has passed since the crisis, and not least of which is simply public comment. We all have seen recently, for good or bad, that just public comment on the part of Fed officials can move financial markets. It should be cognizant of this power. And it should use it to deflate destructive asset market bubbles before they reach crisis levels. They should be willing to use these new tools in the future.

Thank you. I would be happy to answer any questions the subcommittee may have.

[The prepared statement of Dr. Bivens can be found on page 42 of the appendix.]

Chairman CAMPBELL. Thank you so much, Dr. Bivens.

I will now recognize myself for 5 minutes for questioning. And I have in this 5 minutes just one question, which I will ask all of you to answer, and then in the second round, I will have a second question for all of you, because I am sure we will be able to do a second round here.

My first question—and I will go in reverse order. We will start with you, Dr. Bivens, and go down this way. Is the Federal Reserve today more or less independent than it was at its founding or somewhere near its creation? And is it more or less independent in your judgment than it ought to be? Dr. Bivens?

Mr. BIVENS. On the first question, more or less independent than at its founding, I am afraid I am going to have to defer to experts. My sense is, it is an independent institution. That independence means being willing to break the economy when it—or to break economic growth when it is going too fast and threatening inflation, but it also means having the freedom to reflate the economy when in the Fed's judgment that is what is needed. I think it retains that independence today, and so I think the idea that it has become too tied to the winds of other economic policymakers is not a criticism I endorse.

Chairman CAMPBELL. So in your opinion, its independence is proper at the current time?

Mr. BIVENS. That is correct.

Chairman CAMPBELL. Adequate.

Mr. BIVENS. Thank you.

Chairman CAMPBELL. Dr. Gagnon?

Mr. GAGNON. Yes, I would agree that its independence is proper. Having worked there, I was always quite struck—and I worked in other parts of the government as well—by how independent the Fed really is. Throughout almost all the process of decision-making, it is only thinking about what is right and any thought about political influence is very small, as far as I could tell.

Chairman CAMPBELL. From a historical perspective?

Mr. GAGNON. From a historical perspective, I think at the founding of the Fed until the 1930s, independent, well, it was certainly independent from Washington. It may have been too independent and too closely tied to regions of the country and the banking industry, and I think that was changed, appropriately so, in the 1930s to give it more control from Washington.

And yet the balance was struck right, because you have these long fixed terms, even though they were appointed by Washington. They then had the freedom to go out and, without short-term pressure, do what they think is in the national interest.

Chairman CAMPBELL. Dr. White?

Mr. WHITE. There are at least two meanings of independence. One is that the Fed gets to choose its own goals, and the other is that the Fed gets to choose its own operations, but given a set of goals. When the Fed was founded, it was understood that the gold standard would constrain the monetary system, so the Fed's independence to set its own goals was very limited.

That, of course, has changed. There is no longer that kind of constraint on the Fed. We have gone from a gold standard to a PhD standard. That is how monetary policy is made these days.

I think the Fed is probably too independent. I think it should be accountable. And to the extent that is at variance with independence, understood as they get to choose their own goals, then I am in favor of less independence for the Fed.

Chairman CAMPBELL. That is a fascinating concept which deserves more delving into, but, Mr. Pollock?

Mr. POLLOCK. Thank you, Mr. Chairman. The Fed in the beginning was a complicated balancing of a lot of interests—the political board that Woodrow Wilson insisted on, the bankers in the regional banks, and the Secretary of the Treasury who was, under the original Act, ex officio a Member of the Board.

Throughout the history of the Fed, there have been cycles of being more or less independent. During the Second World War, the Fed was completely unindependent. It was entirely the slave of the Treasury, and the purpose was to finance the war. That happens in wars.

William McChesney Martin, the longest-serving Chairman, the one who has the best record on average inflation in the postwar era, used to talk about "independence within the government," by which I guess he meant independent, but not quite. And by the end of his term, he was giving way to the politicians to let inflation rise to finance the combined Johnson social initiatives and war.

So if anything, I think when you look at the Fed, it is a good example of the constant debate between philosopher kings, as in Plato, and checks and balances, as in the theory of republics.

Chairman CAMPBELL. Okay, I need to—

Mr. POLLOCK. We need to address that balance.

Chairman CAMPBELL. Dr. Goodfriend?

Mr. GOODFRIEND. I would concur that the gold standard constrained the Fed early on. And the gold standard is no longer with us. So in that sense, the Fed was less independent, and I think appropriately so.

The 14-year terms for Board of Governors officials meant a lot more in the early days, when the pay meant that people could stay for 14 years. One of the striking things about Federal Reserve Board Members these days is that they stay something like 3 or 4 years. I really don't know the exact number. And that means there are more chances for appointments by politicians. In that sense, I think the Federal Reserve Board has become a lot less independent than it was in the early days.

I would also add a couple of things. The discussion of the Chairman's succession also indicates that the personality of the Chairman has a lot more discretion these days than it used to. In the old days—maybe Allan Meltzer can tell me otherwise—I doubt the whole country would be focused on who became the Fed Chairman. These days, it is indicative to me of the idea that there is a lot of discretionary that has been piled in.

In that sense, the Fed is more independent, but inappropriately so. As I would say, based on my testimony, the Fed's power should be restricted so that it isn't doing—

Chairman CAMPBELL. Okay.

Mr. GOODFRIEND. —fiscal policy of Congress—

Chairman CAMPBELL. Okay. I am going to run a little over, but don't worry, I will give an equal amount of time to you, Mr. Clay, so we keep it even here. But just so Dr. Meltzer can—and we can get all six on this.

Mr. MELTZER. In the best academic tradition, I am going to give you two answers. Politically, the Fed is less independent than it was in 1913–1914. As an example, President Wilson would not invite Board Members to White House parties because he didn't want to influence them. There was really a very close, very distant separation of the board from the political system.

But in another sense, the Fed is completely unrestrained. It has quadrupled the size of its balance sheet. And the failure there is, I believe, as I said in my testimony, a failure by Congress to monitor, control, and limit what the Fed—it is your responsibility under Article I, Section 8, to decide what the monetary policy of the United States is. The Fed is your agent, and you don't have a very effective means of regulating your agent.

Chairman CAMPBELL. Okay—

Mr. MELTZER. And let me just say one last thing. In a year in which the Fed finances 75 percent of the U.S. Government's borrowing, how can we think of the Fed as independent of the political process?

Chairman CAMPBELL. Thank you, Dr. Meltzer.

I now recognize Mr. Kildee. Because we started the hearing early, he wasn't able to get here for his opening statement, so he is going to be recognized for 8 minutes, which gives him the opportunity to give an opening statement and then proceed to ask you all questions and divide that 8 minutes in whatever way he would like.

The gentleman from Michigan is recognized for 8 minutes.

Mr. KILDEE. Thank you, Mr. Chairman, and thank you to Mr. Clay for allowing me to step in and for allowing me to sit here. It is probably not something I am going to experience for quite some time, but I enjoy the chance.

Chairman CAMPBELL. These seats aren't any different, you may have noticed.

Mr. KILDEE. They are not? All right.

Chairman CAMPBELL. They are not that special.

Mr. KILDEE. Well, that one is.

So I will make some opening comments, and I will refer back to the first two instances when I served here, when the Chairman of the Federal Reserve came to address us, and ask you to comment, particularly a couple of you to comment on some questions that I have around the strength of America's municipal governments and their effect on what is a significant part of the Fed's dual mandate, the effect on the economy, particularly on employment.

It is interesting that this hearing, of course, marks 100 years. And when you think back to the period when the Federal Reserve was initiated, I think about America's great cities. I am from Flint, Michigan. Some of you might be familiar with that place, the birthplace of General Motors.

But when I think back to 100 years ago, GM was 5 years old. Many older industrial cities in the United States were really just beginning to get their legs under them and were about to experience an unprecedented period of growth and expansion. We became a highly productive society, and somewhere along the way, most point to around the 1930s, 1940s, we began to see the tremendous productive capacity of our society also begin to deliver pretty significant wages to the workforce, creating a growing and really significant middle class in the United States.

In my own hometown, interestingly enough, about the time that the dual mandate was recognized and initiated by Congress, it was about the peak employment for the auto industry. And you could point to that period roughly for a lot of the larger industrial communities, older industrial communities in our country.

The reason I lay that preface is that when Mr. Bernanke was here—and I would ask some of you to comment on this—I pressed the question of whether or not the sustainability of these old industrial cities has any implications for the mandate of the Fed and whether or not the Fed itself, either through advice or through policy, could address what is, I think, a growing problem of inequality.

And I reference—and, Dr. Meltzer, you mentioned two answers to one question. It is a common theme. What I have seen, what we witnessed in this country for many American cities is that during the periods—particularly recently—of great economic expansion, significant economic expansion, for example, in the 1990s, many older American cities were left behind.

And so we had this situation where much of the country was doing extremely well, with unemployment at relatively low levels, with wages at reasonable levels, with productivity growing, but some significant parts of America, some of which I represent, were not doing well at all and, in fact, didn't participate in any of that growth in economic expansion.

So from an economist's point of view, one might say that some parts of the country were doing very well, a few parts were not doing very well at all, but on average, the country was doing just fine. And so what I want to ask you, first—and if I could start with Mr. Gagnon and Mr. Bivens, but also ask others to comment on

whether or not you think the Federal Reserve has any interest or role in helping municipal governments.

There had been a point in time not too long ago when I know there was some consideration for playing a role in stabilizing municipal governments by offering or considering the development of a credit facility to finance municipal securities, for example. And if you could just—not just so much on that, but comment on whether or not you think somewhere in the charge to the Federal Reserve is an interest in municipal governments.

And I will just preface one more thing. When I asked Mr. Bernanke, he said, well, the Fed historically has not become involved, nor the Federal Government involved in the issue of municipal insolvency. And I just pointed out that there are many things about which we could say the Federal Reserve had not been involved or the Federal Government had not been involved until a need arose to do so.

If I could start with Mr. Bivens, Mr. Gagnon, and then if others would like to comment, I would appreciate it.

Mr. BIVENS. As to whether there is active interest at the Fed in this, I don't know. Whether or not they are—what I guess the Fed would say on this is a couple of things.

I think they would say, one, if you look at distressed municipalities around the United States, the number-one thing that can help them is a better national economy and a lower unemployment rate across-the-board, and they would say they are working hard on that, and I tend to largely agree with that. I think the Fed right now is, indeed, trying to boost the overall economy, and is, indeed, trying to boost employment growth, and presumably that should have some good spillover effects even to specific municipalities.

I would say—and I think they are right on this, as well—that they would say that the problem with a lot of municipalities, say, the ones that are entering financial crises is that there is a real fundamental mismatch between revenues and outlays in those cities. It is not necessarily a malfunctioning financial market. If it was a malfunctioning financial market, the Fed might really have a role in making sure it is well-greased. If you are talking about a fundamental mismatch between revenues and outlays, I think the argument would be, those are much better addressed by fiscal transfers, and I know politically the prospects for that are pretty low these days, but it is the most direct and genuinely helpful way that could be done.

And then last thing I would also say that I think you have to look at other aspects of economic policy, in terms of hitting really distressed municipalities. And I would talk about international trade policy. Detroit specifically has been hammered by the decline in manufacturing employment, which to me, in the 2000s, was overwhelmingly a problem of an overvalued dollar, and I think that gets beyond the Fed's mandate into exchange rate policy.

Mr. KILDEE. Mr. Gagnon?

Mr. GAGNON. Yes, I think—having worked inside the Fed, I think the reluctance you probably heard from Chairman Bernanke reflects a desire to think of Fed policy as only things that affect the entire country as equally as can be, and that if one gets into municipal lending, then one eventually, inevitably, gets into decisions

about who is more creditworthy and how do you make that equal, and that gets to be politically difficult for the Fed.

I think you could say, well, what about the emergency loans to Wall Street firms? Didn't that help New York? And I think the only thing in response I could say is the Fed felt that a breakdown of the financial system would have hurt everybody and they got collateral for those loans. And I don't know what kind of assurance the Fed could get in municipal loans that would be comparable to—the Fed was made whole in those loans in the crisis from the collateral, which I don't know how that would work.

Mr. WHITE. Yes, I would agree with Dr. Bivens. It is a fiscal policy issue. It is not appropriately charged to the Fed. They are—some people think the Fed can just create loanable funds, but if the Fed is directing credit one place, it is necessarily reducing the supply available elsewhere, and that is not the sort of call the Fed should be making.

Chairman CAMPBELL. The gentleman's time has expired. We will now move from one part of Michigan to another part of Michigan, as we will go to the vice chairman, Mr. Huizenga. You are recognized for 5 minutes.

Mr. HUIZENGA. Thank you, Mr. Chairman.

And, yes, it is true, I get the pretty sunset side of the State, not that the east side isn't a great spot. My mother is from Flint, as well, but—it is a great place to be from, the gentleman just said, so, but—no, we are—the pure Michigan ads are true. Come on up. We would love to see everybody up there.

So I want to—before I turn into a total infomercial, I would like to actually return to our policy question here. And, Dr. Gagnon, I would like to—I have a quick question for you. On page seven, there is sort of your discussion about the Fed and the rule and quite a bit of discussion about the Taylor rule and the Svensson rule.

And after one of the recent FOMC meetings, President Bullard from the St. Louis Fed, whom I believe has been in front of our committee, the full Financial Services Committee, argued that the FOMC has not stuck to its intermediate target guidance. As Professor Svensson noted, forecast targeting is meaningless without some sort of mechanism for commitment to an optimal rule.

Obviously, Chairman Bernanke feels a little differently. He has argued that his guidance is "similar" to the Svensson approach. But isn't it really true that Chairman Bernanke isn't following a real meaningful forecast or targeting rule, like the one advocated by even Professor Svensson?

Mr. GAGNON. Yes, I would say the thing about the Svensson rule is that you should set your policy so that you should hit your target. And at a minimum, you should hit your target in your own forecast, but that is obviously a low bar. The Fed isn't even hitting that. The Fed is—

Mr. HUIZENGA. Yes, which I think you point out on page eight. So basically, they are not operating under a rule, as you—

Mr. GAGNON. Under that rule or—yes, that is right. And other forecasters would agree.

Mr. HUIZENGA. Okay. Mr. Bivens, you were nodding your head, as well. Would you care to chime in on that? And I would love to hear from everybody else.

Mr. BIVENS. Yes, from my perspective, I think they are missing any conceivable unemployment target, in terms of unemployment is too high for any reasonable target, and they are missing inflation on the low side. Inflation is too low for their target.

And so that to me says, when you are missing on both sides like that, it definitely says you should not be talking about tapering off support to the economy, because that is just going to make them miss worse on both sides.

Mr. HUIZENGA. I am not trying to argue whether we need more easy money or less easy money. I am trying to get at, are they actually operating under a rule? Because it seems to me, not really.

Mr. BIVENS. I think that is fair to say, yes.

Mr. HUIZENGA. Okay, all right. Would anybody else care to chime in on that quickly?

Mr. MELTZER. I agree with you, that is, they are not operating under a rule—

Mr. HUIZENGA. Dr. Meltzer, if you wouldn't mind just pulling that microphone a little bit closer to you?

Mr. MELTZER. There were only two periods in Federal Reserve history where they came close to operating under a rule. They happened to be the two best periods in Fed history: 1923 to 1928; and 1985 to 2003. In the first case, they operated under some form of the gold standard; in the second, under the Taylor rule, more or less, not slavishly, but more or less. And those were the two, the only two periods in the Fed history that have low inflation, relatively stable growth, small recessions, and quick recoveries.

Mr. HUIZENGA. And so I am assuming, based on that answer, you would advocate that it would be a good idea for the Fed to get a rule? We can talk—

Mr. MELTZER. I believe—

Mr. HUIZENGA. —Svensson rule, Taylor rule, PhD rule, some sort of rule, though, that is predictable and able to hit.

Mr. MELTZER. Any rule that the Congress can agree on and monitor. That is important.

Mr. HUIZENGA. A key element, it seems.

Mr. MELTZER. A key element is not only to bind them to doing sensible, consistent things that everyone can understand, but also to get you, the Congress, to say, look, you told us that we would have this inflation and that unemployment and you haven't done it. That is a statement you can make which is very consistent with your authority and responsibility for monitoring the way the monetary system works.

Mr. HUIZENGA. I am not sure most people would accept "sensible" and "Congress" all in the same sentence, but I appreciate those sentiments. Anybody else, quickly here in the last 30 seconds? Mr. Pollock?

Mr. POLLOCK. Congressman, I might just add that the 1977 rule, which is usually called the dual mandate, which has been referred to, is, in fact, a triple mandate. If you simply read the letter of the law, it was stable prices, which we don't have, maximum unemployment, and moderate long-term interest rates, that third man-

date from Congress. I think it is impossible for the Fed to do all three, but Congress did tell them to do all three.

Mr. HUIZENGA. Okay.

And, Mr. Goodfriend, very quickly?

Mr. GOODFRIEND. Very briefly, if you go back to May 22nd, when Chairman Bernanke hinted, I think somewhere on Capitol Hill, at a Joint Economic Committee meeting, that they would consider a taper, you saw a tremendous surprise in markets, as if it came out of nowhere. The 10-year yield jumped 1 percentage point within a month. That is evidence that the Fed is not following a rule, because—by virtue of the fact that it was a discretionary rhetorical action that Bernanke took that just was not understood by anybody.

Mr. HUIZENGA. So, basically, we need to smooth out the edges and a rule can do that?

Mr. GOODFRIEND. A rule would tend to mitigate surprises and basically give you outcomes for which people could plan.

Mr. HUIZENGA. All right. Thank you, Mr. Chairman.

Chairman CAMPBELL. Thank you.

And now we will get back to regular order, and we will recognize the ranking member, but he gets an extra 2 minutes, because I took an extra 2 minutes, so we will give him 7 minutes. The gentleman from Missouri, Mr. Clay, is now recognized for 7 minutes.

Mr. CLAY. Thank you, Mr. Chairman, especially for your generosity.

This is a panel-wide question. Currently, the U.S. unemployment rate is 7.3 percent, the lowest level in 5 years. Currently, the unemployment rate for African-American citizens stands at 13 percent in August. This is an increase of unemployment rate from 12.6 percent in July. The difference in the U.S. unemployment rate and the African-American unemployment rate is 5.7 percent.

Studies have shown communities with high unemployment rates have a higher crime rate compared to communities with low unemployment rates. Do you believe high unemployment rates are at least a national issue? And what course of action do you believe the Federal Reserve Bank should take to lower the higher than average unemployment rate in African-American communities and in other high unemployment rate communities throughout the United States?

I will start with Dr. Bivens.

Mr. BIVENS. I absolutely think that the excessively high unemployment rate in the U.S. economy right now is our biggest economic challenge. I think from the point of view of the Federal Reserve, the main thing they can do to bring it down, both overall and for groups that have disproportionately high unemployment rates, is to continue what they are doing in terms of asset purchases to boost economic activity and jobs.

That is what they are trying to do with their monthly purchases. They are trying to keep long-term rates low. They are trying to ensure that demand does not fall so low that we see that unemployment rate tick up even further. I would like to see them continue it. I would actually even like to see them be a bit more aggressive on that front. I think they are greatly hampered by the fact that

fiscal policy has gone in absolutely the wrong direction and is dragging on growth.

So, in my view, of all the economic policymaking institutions right now that seem most concerned with keeping that unemployment rate low, the Federal Reserve seems to be the one that is most concerned with that.

Mr. CLAY. And you don't think the banks should raise the interest rates?

Mr. BIVENS. No.

Mr. CLAY. Thank you.

Dr. Gagnon?

Mr. GAGNON. Yes, I would agree with Dr. Bivens. I think, to the extent that the Fed can bring down the total unemployment rate, I suspect the African-American rate will come down proportionately more. And I think that is the right—that, to me, is also job number one for economic policy in this country. And I agree that the Fed does seem to be focused on it more than almost anyone else, but I don't think they are doing enough.

I think they are too concerned about the potential costs of quantitative easing tools, which to me are quite low. Those costs are quite low and the benefits are quite high, so I don't quite—I don't think they are getting the balance right, but at least they are worried about it.

Mr. CLAY. Dr. White?

Mr. WHITE. Yes, we have had a very slow recovery, and so unemployment has not dropped the way it normally does in a recovery. We are many months behind where we would normally be, in terms of unemployment coming down.

And it is not clear that looser monetary policy would help speed the process. I think a large part of the problem is that investment is sitting on the sidelines. There needs to be greater regime certainty, greater tax certainty, greater monetary policy certainty, so that the investment climate becomes more favorable, and that will be helpful to economic growth and, thereby, bring down unemployment.

Mr. CLAY. So you contend that some of the reason is market-driven?

Mr. WHITE. Yes.

Mr. CLAY. Okay. Mr. Pollock?

Mr. POLLOCK. Thank you, Congressman. I think the best thing any central bank can do for employment is a medium- to long-term stability in monetary behavior and stability in prices. I think managing short-term economic consequences, such as the ones you have mentioned, is beyond the competence of a central bank.

Mr. CLAY. And so what effect would raising the interest rates have on it? Do you think it would have any effect?

Mr. POLLOCK. We have extraordinarily low interest rates, of course, negative real interest rates, extremely low long rates. That is due to the current manipulation of the markets by the Fed. At some point, those rates have to return to normal. That would be healthy, again, in a medium- to long-term basis.

What gets the Fed or any central bank in trouble, in my opinion, is trying to react all the time to short-term conditions, which it can't know enough about or influence enough to do successfully.

Mr. CLAY. Thank you for that response.

And Dr. Goodfriend?

Mr. GOODFRIEND. What I would add to these comments is that the Federal Reserve doesn't really control the interest rates that matter, which are the long-term interest rates. I get back to the comment I said before. What is happening is, markets are looking forward 10 years to figure out what is likely to happen. So it is kind of, I think, a little bit of an illusion to think that the Fed is having a big effect on long rates.

It was able to appear that the Fed had an effect on long rates when the recession started. Now that we are moving toward the exit, when we look out 2 or 3 years, the market is already projecting what is likely to happen. So I think this is largely superfluous, unless you want to argue that the Fed should continue to keep short rates so low as to create some sort of inflation problem in which long rates would go up even more.

In other words, the Fed does not, I believe, have a lot of leeway to have much effect either way, except being excessively inflationary. What it is doing now is basically treading water.

Mr. CLAY. And, Dr. Goodfriend, why has the economy had such a difficult time in growing jobs?

Mr. GOODFRIEND. Job growth is based in part on two things: people need to spend; and then people need to invest. And it is clear that the spending—people's willingness to spend in the future, among those people who have the money to spend, is they are not willing to really gear it up. Why? Because the people who have the money to spend are worried about higher future taxes, and they are basically keeping their powder dry.

So one thing we need to do on the spending side is put—I believe simplify the tax code so that people who have the money are not going to be penalized for having more money in the future. And then they might begin to spend some of it. And on the other side, they might be willing to invest to increase jobs, and you get both job growth and spending going in tandem, and then you have a good recovery.

What is impeding that is that there is an open-ended question about how high taxes might stay or even go higher in the future.

Mr. CLAY. Thank you. And my time is up.

Chairman CAMPBELL. Thank you, Mr. Clay.

We will move now to the gentleman from South Carolina, Mr. Mulvaney. You are recognized for 5 minutes.

Mr. MULVANEY. Thank you, Mr. Chairman.

And thank you, gentlemen. I am going to go down a line of questions that I didn't anticipate doing before the gentleman from Michigan, Mr. Kildee, asked his questions, because I think he was asking the questions around the fringes of an issue that I want to explore.

His questions pertain to the advisability, perhaps, of the Federal Reserve getting involved in helping some of America's financially struggling cities. It is something I know that is certainly near and dear to his heart, and perhaps rightly so, but let me ask it a different way. Does the Federal Reserve have the authority to do that? Do they have the authority to bail out cities, to bail out States? Dr. Gagnon is saying yes. Why is that?

Mr. GAGNON. I am not recommending it. I am just saying the powers—

Mr. MULVANEY. I am not interested in recommendations. I am interested in whether or not the Fed actually has the legal authority to do that and, if so, what would it look like?

Mr. GAGNON. The Fed has the legal authority to buy municipal debt up to 6 months' maturity.

Mr. MULVANEY. And that would be directly or that would be on the secondary market?

Mr. GAGNON. Oh, in secondary markets, but that would presumably help conditions in the primary market.

Mr. MULVANEY. All right. Now, when I asked that question of Dr. Bernanke at a previous hearing, he said that he didn't have the authority to bail out cities, and then he mentioned the exact same thing, that he could only buy 6-month debt. So help me reconcile those two statements, gentlemen. Don't everybody jump up at once.

Dr. Meltzer?

Mr. MELTZER. Yes, it has to be debt which is not in default, which is highly rated. It is just the opposite. He can buy short-term debt from cities as part of his open-market operations, but he can't finance cities which are on the verge of bankruptcy.

Mr. MULVANEY. Because it wouldn't meet the credit requirements?

Mr. MELTZER. Because he would be taking a market risk that was not intended to be taken by the Federal Reserve. He has to—as some of the witnesses here have said, he was very careful about seeing that what he did when he was lending was always collateralized safely, protecting the taxpayers from losses. If he starts buying up bad debt or debt which is about to go bad, he is not doing that.

Mr. MULVANEY. And I am not a conspiracy theorist—or at least I am trying hard not to be after 3 years here—but if I imagine a circumstance in which the Federal Government has issued a guarantee of that municipal debt, that would get around your restrictions, wouldn't it, Dr. Meltzer?

Mr. MELTZER. Yes, but that would not be a Federal Reserve action. That would be something which you in the Congress have to do.

Mr. MULVANEY. True, but then he would be able to buy that debt and issue that credit.

Mr. MELTZER. Yes. But, of course, once you gave it a guarantee, he wouldn't need to do that.

Mr. MULVANEY. Okay. Dr. Bivens, you looked like you were agreeing or—you had some thoughts on that?

Mr. BIVENS. I actually disagree with that last statement. If there was a guarantee, he could buy it, but he wouldn't have to.

Mr. MULVANEY. Okay. Are there any other methods other than buying municipal debt that the Federal Reserve has the authority to bail out—for lack of a better term; and I don't mean that term to be used in a narrow sense, but a broad sense—a city or a State? Is municipal debt the only tool available to it? Dr. White?

Mr. WHITE. It is certainly not part of the Federal Reserve's mandate in terms of monetary policy. It doesn't fall under their bank—

Mr. MULVANEY. You just heard Mr. Kildee make the argument that will be made at some point in the future—perhaps not with Detroit, but with the State of Illinois or the State of California, which is that if California tanks, it will drive up unemployment nationwide and, therefore, it will call on the Federal Reserve or some will call on the Federal Reserve to get involved under that part of its dual mandate.

Mr. WHITE. The Fed can certainly offset any effects that California has on the banking system and on the money supply without bailing out California.

Mr. MULVANEY. Okay. Dr. Goodfriend?

Mr. GOODFRIEND. I want to make a point by analogy to the mortgage-backed security purchases by the Fed.

Mr. MULVANEY. Okay.

Mr. GOODFRIEND. These mortgage-backed securities have a guarantee of sorts, and the Fed is buying them. You might think that the Fed doesn't need to buy them, so you can imagine, why doesn't the Fed swap out the mortgage-backed securities to somewhere else in the government and take on Treasuries on its balance sheet? The Fed won't do that, and the government won't agree to that, because mortgage-backed securities, while they have a guarantee, they don't have as much of a guarantee, what we like to call full faith and credit, that U.S. Treasuries have. And therefore, there is a spread on these.

So there would still be pressure, perhaps—I don't know whether—we just don't know—for the Fed to finance these—whatever you want to call them, the municipals, even if the municipals got a credit enhancement from the government, just because they might trade at a higher rate than Treasuries.

And so, there might be pressure on the Fed to finance these things, rather than have the private sector finance at a higher rate or to have the U.S. Treasury borrow on behalf of municipals to fund them.

In other words, the guarantee to municipals is not going to be as good as the full faith and credit of Treasuries. And therefore, there will be pressure for the Fed to buy these at a lower rate or—

Mr. MULVANEY. Thank you, gentlemen. It is an interesting topic that I think bears additional consideration, but I am out of time. Thank you, Mr. Chairman.

Chairman CAMPBELL. Yes, I think all of the questions and answers have been interesting, and I am sure that will continue with the gentleman from Illinois, Mr. Foster, who is now recognized for 5 minutes.

Mr. FOSTER. At the risk of drifting a little bit further off-topic, I think almost everyone present in the room or who has been present in the room comes from States that are huge losers in the redistribution of wealth that is happening due to the Federal Government. I know that about $20 billion a year flows out of Illinois, I think about $5 billion a year out of Michigan, and I think some number north of $10 billion a year flows out simply because of the imbalance between Federal taxes and money spent by the Federal Government, which is more than enough to bail out Detroit and others. And so, I think that is something which has to creep into our thinking, if not the Fed's directly.

And actually, in the opposite direction, it strikes me in a lot of the political debate that we are having over things like monetary policy that we don't—we have this single compartment model in our minds of the economy that is insufficiently globalized. When you talk about trying to pressurize the whole system with money to support asset values in the United States, what Mr. Bernanke will pressurize the U.S. economy and then see it pop out as an asset bubble in foreign countries.

And that this really changes the calculus. It means that any of these simple rule-based things don't have a chance of working unless the rule is so complex that it includes all the major economies in some manner. I spent a little while to see if these sort of macro—international macro models even exist and they are woefully simplified, by necessity. But I think this is a major problem in, really, the thinking of both parties, because it generates unsolvable problems.

And I was wondering generally if you have any comments, anyone, on the Fed's role or the central bank's role in fighting asset bubbles, which—if I step back from the financial crisis, by several years now, if I had my choice of getting rid of the banking crisis or the housing bubble, it is not even close. I would prefer to get rid of the housing bubble. The damage that has done to the net worth of the middle class is incomparably larger than the banking crisis, which, by and large, we fixed within a couple of years.

And so I was wondering if you have any words of wisdom on how the Fed should balance its duties of keeping the banking system solvent and keeping the—and stabilizing, particularly housing bubbles, which I think are the big dog and the pain that we are still living through.

Mr. MELTZER. Think of how the problem arises of a bubble. Take the housing market. Returns to investment in housing are 20 percent, 30 percent at the instant. You raise the interest rate by 1 percentage point, 2 percentage points, 3 percentage points, that is enough to kill the rest of the economy, perhaps. It is not going to have a big effect on the 30 percent. That is the basic problem. That was the problem in 1929. It was the problem in 1968. And—

Mr. FOSTER. Right. And so in other countries, then, they have independently controlled, for example, the downpayment on housing from the interest rates. And one of the fundamental problems with—you had mentioned like triple mandates. And it is a fundamental theorem of control theory—I am a physicist, so forgive me—is that you cannot control three variables with one actuator, all right?

And so that if—is the problem that the Fed actually has to consciously manipulate both the leverage allowable in the housing market and other asset markets with the interest rates? And—

Mr. MELTZER. The housing bubble occurred at least in largest part because of the desire, the understandable desire on the part of the Congress and the Administration to spread housing ownership down the income distribution. So it gave the opportunity for Fannie Mae and Freddie Mac to make loans, no-downpayment loans, in which the owner didn't own anything except an option to perhaps benefit if the housing prices continued to rise at 20 percent or 30 percent a year, which is not a likely event.

Now, people like Angelo Mozilo saw an opportunity to package these loans and sell them to Fannie Mae and Freddie Mac, and he walked away—

Mr. FOSTER. No, I understand that narrative. Let's say, if I could—yes, Alex, do you have a—

Mr. POLLOCK. Yes, I agree, the international dimensions are central and make the problems much harder. Yes, with multiple mandates—in my testimony, I suggest the Fed has six—and you can't possibly do them all. Yes, the housing bubble was much worse than other financial bubbles. Yes, we should attack it through controlling leverage, which in housing is also equally controlling down payments or loan-to-value ratios. And likewise, in other markets, it is how much margin you allow that sector to run on. That is a key control variable which I think should be used.

Mr. FOSTER. Any other comments on—

Chairman CAMPBELL. One more quick comment, and then we will—

Mr. GAGNON. Yes, just ask yourself why the equity bubble crash in 2000 had much—it was billions of dollars—smaller effects than the housing bubble crashing in 2008. And I think the difference is leverage. You want to reduce leverage.

Chairman CAMPBELL. Okay. I'm sorry, Mr. Goodfriend. I will just—and perhaps if Mr. Pittenger would like to hear that answer—the gentleman from North Carolina is recognized for 5 minutes.

Mr. PITTENGER. You are welcome to respond for 30 seconds, if you can.

Mr. GOODFRIEND. Just 30 seconds. I think leverage matters mainly because of access to money market short-term financing of illiquid housing mortgage products. That was an important component to remember about this. It is always advantageous to finance in the money market where interest rates are low, because people expect to get liquidity out of it. The problem was, there was too much liquid money market finance of this stuff via leverage that caused the system to be fragile. That is my own addition.

Mr. PITTENGER. Thank you, Mr. Chairman. I will proceed.

Chairman CAMPBELL. Yes. Yes, please, go ahead.

Mr. PITTENGER. Dr. Meltzer, you have argued that the Fed is at its best when it follows clear monetary policy rules. Do you believe that this applies even in emergency situations?

Mr. MELTZER. No. In an emergency situation—no rule is going to work under—in a world of uncertainty, under all conditions. It is just not in our ability to write such a rule. So, no, there have to be—the way in which I would run that rule is to say they should come to you and say, we have to deviate, and this is why we are deviating, and then it is the public interest served by your saying okay.

Mr. PITTENGER. So there is some accountability. Mr. Pollock, in your view, has the Federal Reserve adequately planned and modeled for interest rate risk?

Mr. POLLOCK. In my view, the Federal Reserve has, in current times, through its huge bond market manipulation, created a massive amount of interest rate risk, and we will see how it all works

out. Nobody knows enough to know how it will, but it will certainly be coming home to roost as we go forward.

Mr. PITTENGER. Sure. As a follow up, I would like to ask—earlier this year, you described the Fed as meeting its own criteria for classifying an institution as too-big-to-fail. What monetary policy decisions in your view have led to the Fed becoming too-big-to-fail?

Mr. POLLOCK. That was an article I was having a lot of fun with, Congressman, but I think it is true, that if you apply their criteria, they are exactly a too-big-to-fail bank themselves. And, of course, what has caused that is the massive bond investments which they have undertaken. The Fed at the moment owns about $2 trillion of long Treasury bonds—not Treasury bills, but Treasury bonds of long duration, and $1.3 trillion of long-term mortgages. This is a risk position which, if any of their bank charges had it, they would be all over them, firing the management and making them unwind it.

Mr. PITTENGER. Sure, thank you.

Professor Meltzer, you have described a number of mistakes that seem to be repeated by the Fed over the course of its history, from the inability to consider the effect of policy over the intermediate or long term to its lack of independence from its fiscal policy decisions by the Treasury. Why do you think these mistakes are continually repeated? And what can we do to help ensure that they are not repeated over the next 100 years of the Fed?

Mr. MELTZER. Thank you. I think that is the critical question, that is, the successful policies were periods where policies—Mr. Volcker is a wonderful example. When he took on the inflation problem, he knew he wasn't going to solve that in a month or 6 months. He knew it was going to take a while. It took a couple of years, right?

But he had a consistent policy of trying to lower the inflation rate. He deviated at times because events required him to, but he always went back to doing that. That is what the Fed does not do.

Take the current example. It has over $2 trillion of excess reserves. It is not going to get rid of those in a a week or a month. It is going to get rid of them over several years, if then. So it needs to have a long-term strategy. Does it have a long-term strategy? No. It says it depends upon the next unemployment rate and whether it is this or that. What earthly reason could there be for thinking that the next unemployment rate is going to have very much to do with whether they successfully manage to bring down $2 trillion? They need a long-term strategy. They don't have it.

Mr. PITTENGER. Yes, sir, Mr. Pollock?

Mr. POLLOCK. Thank you, Congressman. May I just comment that the well-deserved plaudits Mr. Volcker gets for bringing down inflation was bringing down an inflation created by the Federal Reserve itself.

Mr. PITTENGER. Yes, sir, Mr. Gagnon?

Mr. GAGNON. Just one point. I don't think the Fed needs to bring down the reserves. It will pay interest on them, and that will make people happy to hold them. I think that is its plan.

Mr. MELTZER. Maybe.

Mr. PITTENGER. Thank you very much. I yield back my time.

Chairman CAMPBELL. Thank you. Gee, and I thought it was—was it Carter or Ford who had those little buttons, "Whip Inflation Now?" It was Ford. That is what I thought, yes. So I thought that is what did it. Yes, WIN, whip inflation now, oh, boy. Okay.

The gentleman from New Mexico, Mr. Pearce, is recognized for 5 minutes.

Mr. PEARCE. Thank you, Mr. Chairman. I appreciate the presentation that you each made.

I was looking at an article from Forbes earlier this year and talking about looking at the stock market, it is just booming. The housing market is bouncing back. CPI, it is not even moving the needle. Gold, we have crushed it. Everything is great. Move forward, Mr. Gagnon—that would be you—move forward, print more money, more QE.

But then they go on and say, but Spain, hopelessly bankrupt, can borrow money at 5 percent, 60 percent of the home purchases in the major markets are being made by cash, by hedge funds, and inside groups. The Dow and S&P are hitting highest—record highs, while 47 million people are on food stamps. Official unemployment rate is going down, while the number of people not working is going up, CPI less than 2 percent.

This is what I find in my district. We are 47th in per capita income. Mr. Gagnon, do you have a rebuttal to this idea that it is just an insider's game, that is the conclusion here, that what we have done is we have made this economy so complex that only the insiders are going to do okay, and everybody else is going to suffer and suffer pretty badly? You are one who is saying, print more money. Would you like to address the positions in this article?

Mr. GAGNON. I haven't read the article. I am worried about inequality of income. It seems to me, though, that what the Federal Reserve is doing benefits probably the lower end of the income distribution more than anything, because buying the MBS has helped keep mortgage rates low, which rich people usually don't need to borrow as much as poor people do to get a mortgage—

Mr. PEARCE. If I could address that piece—

Mr. GAGNON. —to get a house—

Mr. PEARCE. —that it is somehow helping the people on the low end of the spectrum, let me tell you what I hear at my town halls. I hear people say, "We lived our life correctly. We put money into savings accounts. We have 401(k)s. We paid for our house. Now, the house is worth half what we paid for it. We get zero, 0.25 percent, interest on our money."

Seniors are more likely to use cash and cash equivalents than any other segment of society. What the printing of money is doing is driving everyone to these speculative, higher rates of return that threaten our seniors more than ever. And so, I don't find that the seniors are sitting here applauding the strategies.

You also make the comment in your paper that—in your statement that Bear Stearns—or that Lehman didn't have enough resources to bail them out. When I look at a list, I see that Bear Stearns had 34 to 1 asset to equity ratio, Morgan Stanley 33 to 1, Merrill Lynch 32 to 1, Lehman 31 to 1. It was the best of those four. Why do you say that they didn't have enough assets and the others did? Bear Stearns did.

Mr. GAGNON. Actually, I am about to release a paper that looks at the balance sheets of all those institutions you named. And what is really striking is that even though it had a little bit less leverage, as you say, the value of the assets were vastly inflated for Lehman. Lehman was just overstating the value of its assets to a degree that was much higher than the other institutions. And so—

Mr. PEARCE. Okay.

Mr. GAGNON. —in hindsight, it has lost a lot more.

Mr. PEARCE. So you think there is a relationship between debt and asset value? What do you think about the United States' off-balance-sheet accounting?

Mr. GAGNON. The United States—

Mr. PEARCE. In other words, we have about $202 trillion that we don't consider as debt. That is Medicare, Medicaid, and Social Security. So you declare that Lehman had off-balance-sheet assets that were stated incorrectly. Do you have a position on the U.S. Government's off-balance-sheet nonassets, loans that are stated incorrectly?

Mr. GAGNON. One thing I would say is that a lot of these obligations are not legal liabilities like bonds. They can be changed legally over time, and we can find ways to save money on health care, for example, and so that can affect them in a way that you can't do to a bondholder.

Mr. PEARCE. Yes, so you are saying that they are not really—that we really don't owe that money. I would challenge you to come out to one of my town halls and sit and listen to seniors who, by God, will tell you that you are going to pay their Social Security. They are going to be there with pitchforks. I will tell you, this—the anger in the American people is neck-deep.

The anger at the insider game that is going on here and the way that this economy is being manipulated, it is not understood by the unsophisticated. They just know they have been had. And the printing of money is one of the biggest ways they have been had, and this Federal Reserve is the key to that. I yield back.

Chairman CAMPBELL. Thank you. We are going to go one more round. I know Dr. Meltzer has to leave at 4:00, so—but we will make one more quick round. There are 4 Members here, so we need 20 minutes, and then we will be all set.

So I will yield myself another 5 minutes, and this time I will start with Dr. Meltzer, because you have to leave soon, I know. And my question this time is, in the 100 years of the Fed, what is the best action they have taken, the best thing they have done? And what is the worst action they have taken, the worst thing that has been done?

Mr. MELTZER. As a policy, the best action they have taken was ending the inflation and more or less following the Taylor rule, because that gave us the longest period of any period in Fed history with low inflation, stable growth, and small recessions, just what we wanted.

And since—if I looked at the current period, I would say, after providing $2 trillion or more of QE reserves, I would look around and say, why are we getting so little effect? And the answer is, maybe we have the wrong strategy. Maybe, as Mr. Gagnon sort of

suggested at one point, it is not a monetary problem. Those are not his words; those are my words. It is not a monetary problem.

But as he said, it is a tax problem. You tell people who are investors, if you invest more, I am going to want to tax you more. There is nothing in economics which says that is the correct strategy. In fact, there is everything in economics which says that is a silly strategy. You may want to tax more at some point, but you certainly don't want to get out of a recession by taxing people more.

And regulating them? Regulating them to death. When you go around and talk to businessmen, they talk about the costs of regulation, so they don't invest in labor. And we have—we all know that—of the employment benefits that we see going up, most of them are part-time jobs. Part-time jobs. Why? Well, we know why. It is because of the silly parts—

Chairman CAMPBELL. Okay.

Mr. MELTZER. —of the Obamacare law.

Chairman CAMPBELL. Okay. Thanks, Dr. Meltzer.

Dr. Goodfriend?

Mr. GOODFRIEND. For the best, I would say Paul Volcker's moment. When the Fed restrained inflation, that was very tough to do. It was a huge success.

For the worst, I want to set aside the Great Depression, because that is obviously the worst mistake, but there is another mistake that I want to emphasize. In the early stages of the Great Inflation, there was a mistake that the Fed made analytically that it thought the Phillips curve, the tradeoff between inflation and unemployment, was stable. So the Fed thought it could create a reduction in unemployment by creating higher inflation.

That collapsed, because the so-called correlation—Phillips curve correlation proved to collapse as soon as the Fed tried to exploit it. That is a very famous analytical mistake which everybody teaches—

Chairman CAMPBELL. I remember. I was at UCLA in economics then. I remember that stuff.

Mr. GOODFRIEND. Yes, but there is another mistake, which is really the same mistake. Now, I was at the Federal Open Market Committee as a back-bencher until 2005. And I remember, in the run-up to the housing—the credit turmoil, people at the Fed would say, there has never been a nationwide house price collapse. In other words, it looked like, if you diversified your mortgages across the United States, you were safe.

But that correlation—or the lack of that correlation collapsed when the markets tried to exploit it. House prices became highly correlated in the end, and they all collapsed together. But that is an analytical mistake which is equivalent to the Phillips curve mistake, in the sense that you look back at history and you see, in this case, a lack of correlation that is a safe bet that we won't have a housing crisis.

It was exactly the same analytical mistake in a slightly different context made by our policymakers, only this time it was in the credit markets and it caused a boom and bust in housing.

Chairman CAMPBELL. Okay. Mr. Pollock?

Mr. POLLOCK. Mr. Chairman, I would say the best thing the Fed has done is actually create a working elastic currency, which was

the principal assignment they got in the Federal Reserve Act of 1913, and that has been done and fully achieved.

The worst thing they did, I think, was the Great Inflation of the 1970s, which set up the amazing and horrible financial catastrophes of the 1980s.

If I may nominate a second worst thing, it was making the market believe in the Greenspan put in the 1990s and the early 2000s.

Chairman CAMPBELL. Dr. White?

Mr. WHITE. Rather than look for—I agree with what has been said about high points and low points, of course. But if we look at the 100 years of the Fed and sort of come back to the theme of this hearing, if you compare the Federal Reserve track record on inflation and on inflation unpredictability, price level unpredictability, and on stability in the real economy, it hasn't done better than the far-from-perfect system that preceded it.

Inflation has been much higher. The predictability of the price level has been much lower under the Fed, which is why you don't have 50-year railroad bonds anymore—besides not having railroads. You don't have 50-year corporate bonds anymore. And in terms of business cycles, the Fed has not succeeded in ironing out business cycles, with some rare exceptional periods that have been mentioned. So—

Chairman CAMPBELL. Okay, if I can catch—I am going to be strict with time because we have to give up this room.

Mr. Foster, if you want to continue on that line of questioning, you may, or whatever you like. You are recognized for 5 minutes.

Mr. FOSTER. Yes, sure. Does anybody want to finish up on my last question? Then I will go on to—just, first, to make a comment actually on what has been happening in our economy. When people ask me to report in a simple way, I go to household net worth. And in the last 18 months prior to March of 2009, households and families in America lost $16 trillion. Then, we passed the stimulus and a number of very aggressive interventions into our economy. And since then, households in America have regained more than $18 trillion. So we have more than made up. And so the—this government intervention in an emergency is one of the crucial—it would be nice if we didn't have emergencies, but there are times when it is necessary.

And one of the things I would like to—back to the unemployment thing is, there used to be this thing that was called the Okun rule, which you are probably all familiar with, that says when the economy gets better, that unemployment goes down, a correlation between the rate of GDP growth, I think, and the drop in unemployment.

And so what we have seen during this time, the $18 trillion rebound of household net worth, we have also seen a V-shaped rebound in business profitability, in GDP, and just everything you can name, but the unemployment has been much slower. This is called by some, that Okun's rule broke.

And I was wondering if you have any comments on this. Is this really just a structure change, the triumph of capital over labor, the fact that machine thought is now up to the point where you can actually replace a lot of human brains with automation? Or is it—is there something else going on here?

Mr. BIVENS. My view is that Okun's rule is actually holding up pretty well over this recovery. What we really have is a very slow growth recovery. We don't have a particularly slow employment growth contingent on GDP growth.

If you look at productivity, which should be the wedge between how fast GDP is growing and how fast employment is growing, it has actually been slower in this recovery than previous ones. We still are just far too below potential. We still have far too deficient demand in the economy. And so to the degree to which employment growth is disappointing, it is because GDP growth is disappointing.

We did a lot of good things in the wake of the first housing bubble burst, but I think we withdrew lots of them too soon. The Fed is one thing that was not withdrawn too soon, but all the talk of the taper makes me worried that the one engine that is still pushing the economy forward may soon be sputtering, as well.

Mr. GAGNON. There is a secular decline in sort of how much of GDP goes to workers versus capital, which I don't fully understand myself, but it is—

Mr. FOSTER. It was first observed by Senator Paul Douglas, whom my mother worked for in the 1950s, the famous economist from the University of Chicago. Anyway, just a side point. But do you have any deep thoughts on this or—and it is outside the realm of anything the Fed can do? This is just a secular shift and—

Mr. GAGNON. I don't see—I worry about this, but I don't make it my special area of study, because I don't see what the Fed can do. I think it is a huge issue, and I think a Member over there raised it, too. And I wish I knew what the Fed could do about it. It seems more of a micro, regulatory, education, structural issue, not a macro, monetary issue.

Mr. POLLOCK. Congressman, Goodhart's paradox in economics and monetary policy is that whenever you find a statistical relationship that looks reliable and you then try to make it into a tool to manage the economy, it breaks down.

Mr. GOODFRIEND. On the point about the rising so-called labor share of national—on falling labor share of national income, that has to be related to the globalization of labor markets in a way that is hurting—it actually has a bifurcating effect on countries around the world. Those people positioned to benefit from globalization and what they do are getting benefits, but most people are having their real income constrained by competition from other parts of the world.

And this is happening in countries all around the world. It is a global phenomenon. There is very little an independent central bank can do in a country about it.

But on a note of optimism, I would say, it is going to take years for this to end, but it is already beginning to end in China. In other words, China's benefits over the last 20 years have been because they have been able to sell goods by exploiting their own labor. They are coming to the end of the line with that policy, as workers from the interior moving to the cities are becoming more scarce, and so wages have had to be paid up. And so wages—

Mr. FOSTER. Yes, but there is also the flattening of corporate structures. Middle management can be smaller with good software. A lot of it is internal. It is not all foreign wage pressure.

Mr. GOODFRIEND. That is true, but my feeling is that—

Mr. FOSTER. That is the domino effect?

Mr. GOODFRIEND. —this is being driven by global trade, which is going to come to an end, if we can be optimistic about that.

Chairman CAMPBELL. Okay, the gentleman's time has expired.

I now recognize the gentleman from Michigan, Mr. Huizenga, for 5 minutes.

Mr. HUIZENGA. Thank you, Mr. Chairman. I appreciate that. And I wish that Dr. Meltzer was still here. He was giving us that classic economist two-sided answer about whether the Fed was more constrained or less constrained or less independent.

And it seemed to me, as he was going through that, it struck me, as he was talking about the expansiveness that the Fed has taken on, that it hasn't just been on their own volition, that there has been some direction, and certainly they have been allowed and have not had much push-back, maybe, on this committee, led by our Chairman Hensarling and a few others, but I want to talk a little more specifically about QE and quantitative easing and reading Dr. Gagnon's piece that he had submitted to us in arguing that it should have been more aggressive and earlier.

I want to delve into that a little bit more and maybe get somebody else's—Dr. Goodfriend or Dr. White, somebody else, because it seems to me that what we have done is we have artificially lowered interest rates. It seems to me that—I know that the chairman takes a bit of umbrage at that description, but I don't know how you describe it any other way.

The reverse of that is, my kid set up a lemonade stand at the end of the driveway, and they are curious why Mom is the only one who bought the $2 glass of lemonade. It is because everybody else is waiting for the 50 cent cup of lemonade.

And we have done the exact opposite. We have gone in and said, hey, who wants to buy? Not many hands have gone up, except for Treasury. Or the Fed. And so suddenly we are finding ourselves in this era that we are trying to call it as a free-market decision, but it really isn't. Isn't that the case? Dr. Goodfriend or Dr. White?

Mr. GOODFRIEND. I will start briefly. I think you are referring to the mortgage-backed securities that the Fed is financing. Essentially, the Fed is financing 75 percent to 80 percent of new mortgages in the United States. And in doing so, it impairs the free market's ability to do that, because by virtue of the fact what the Fed is trying to do, it's cutting the spread, the mortgage-backed spread relative to Treasuries so low that it is not profitable for private markets to go in and resume funding of mortgages. It is a problem.

And my view is, the Fed should set a strategy by which it intends to exit that market so that people can—so that businesses can plan to resume their financing of mortgages in America, and the Fed has not done that. This is an example of what Allan Meltzer was saying and what I said earlier.

The Fed needs to give guidance to markets about its strategy so markets can then plan for their re-entry into this mortgage market. Not giving guidance is just making it impossible for markets—private people to resume and plan for re-entry into the mortgage market in America. It should have started already, and I hope it starts

as soon as possible. The Fed needs to provide a plan for its own exit from the mortgage market.

Mr. HUIZENGA. Mr. Pollock, do you care to try to—we will see how far down I will go.

Mr. POLLOCK. Congressman, I will comment on the very low interest rate strategy, if I may. As was pointed out before, short-term rates are extremely low. In fact, in real terms they are negative. For a long time, rates on 10-year Treasuries were negative in real terms, in inflation-adjusted terms. This has crushed savers, as the Congressman pointed out. I think one way to think about this—

Mr. HUIZENGA. Can I add a little something in there?

Mr. POLLOCK. Yes.

Mr. HUIZENGA. Has that benefit, I think, as Dr. Gagnon was arguing, about the lower-income homeowner purchaser, does that outweigh what my friend from New Mexico is hearing in his town hall meetings and what I am hearing from my own elderly parents and from other constituents?

Mr. POLLOCK. In my opinion, no, because the other set of regulatory overreactions has cut out a lot of those borrowers. But it is a trade-off. Of course, the point has been to favor borrowers at the expense of savers. That is a political decision made by the Fed.

Once you have a bubble, if I can just finish this thought, there is no easy, pleasant outcome. There are only bad outcomes and painful outcomes. The losses have occurred, the losses have to be taken by someone. The Fed's strategy has put a large amount of those losses on savers, just as a matter of fact.

Mr. HUIZENGA. Dr. White?

Mr. WHITE. Yes, I share your concern about artificially low interest rates. One of the big contributors to the housing bubble was the Fed holding interest rates too low for too long, from 2002 to 2005, and we don't want to repeat that episode. So as the recovery proceeds, the Fed should be ready to let interest rates rise.

Chairman CAMPBELL. Okay. The gentleman's time has expired, so thank you.

Next, we will move to the gentleman from South Carolina, Mr. Mulvaney.

Mr. MULVANEY. Thank you, Mr. Chairman.

Chairman CAMPBELL. You are recognized for 5 minutes.

Mr. MULVANEY. Thank you, Mr. Chairman. Of course, the purpose of the hearing today on the 100th anniversary of the Fed is to sort of look back over the last 100 years and maybe look forward to the next 100 years. And it strikes me that one of the things that may be very, very different, at least for the next several years, was referred to by Mr. Pollock in one of his earlier answers about interest rate risk and what—the interest rate risk the Fed has currently exposed itself to over the—as a result of the immense growth in its balance sheet.

I want to talk a little bit about the combined earnings of the Fed and about how the Fed funds itself. My understanding is that the Fed earns money in a couple of different ways. They provide a couple of services, but they also earn interest on their balance sheet. I would consider those in my old line of work to be sources of cash or earnings. They also have expenses. They have to pay for them-

selves, and they also have to pay interest on the reserves that various financial institutions hold at the Federal Reserve.

It strikes me—and I could be wrong about this—that ordinarily, that that was a positive number over the course of the last 100 years. Again, I wish Dr. Meltzer was here, because he knows more about it off the top of his head than I think everybody else put together, but my understanding is that generally speaking, that number has been positive, and the Fed has made enough money off of its combined earnings to fund itself.

I think it is very easy to anticipate a circumstance in the near future where that number will turn negative, that as you start unwinding, if you start tapering, not only will there be a tremendous balance sheet loss, in terms of the value of the assets on the balance sheet—but, of course, that is not earnings—but also in the amount of money that the Federal Reserve has to pay out on the reserves on which it pays interest that the financial institutions are holding with it.

So I ask you the question, gentlemen, that if we go into this—in this hypothetical situation, I suppose, where the Federal Reserve is not—does not enough combined earnings to fund itself, where will its money come from?

We will start with Dr. Goodfriend and then go Mr. Pollock, and to anybody else who wants to respond.

Mr. GOODFRIEND. Okay, you are absolutely right. There is a situation in our future where it is doubtful the Fed will be able to withdraw reserves and shrink its balance sheet back before it has to pay interest on reserves to get overall interest rates in the economy higher to act against inflation.

And so what will happen is—the possibility of what we call a negative cash flow problem may very well occur, and the Fed should prepare for it, talk about it to you all, because it is going to be a fiscal policy drain. It becomes a matter of the Congress about how the Fed plans for this. So the Congress needs to ask the Fed, how do you plan for this?

Mr. MULVANEY. I asked that question, and he said he was going to create—is it a deferred asset? I forget the name of the term. He would create that, and I didn't really understand what that meant, because it is a term I think that in accounting only makes sense at the Fed.

Mr. GOODFRIEND. If I may, let me describe something which is interesting. The Fed a few years ago put out a warning for commercial banks, "Please take care of the interest rate risk on your balance sheet." The Fed is worried about whether the commercial bank system will prepare for the day when long-term rates rise, and the commercial banks will have to pay higher rates on their deposits.

And the Fed said, "You should hold more surplus capital, build up now against those losses which you will certainly have to deal with as the economy normalizes." But the Federal Reserve has never built up its surplus capital. It has never taken its own advice that it gives to the commercial banks to prepare for the day in which it is going to need that kind of residual financial tinder.

Mr. MULVANEY. And when it does need that financial tinder, where is it going to come from?

Mr. GOODFRIEND. That is the point. Banks build up—the Fed should withhold—

Mr. MULVANEY. But they haven't done that.

Dr. Gagnon, it looked like he had the answer—an answer or—help me understand.

Mr. GAGNON. Yes, because I was at the Fed when we were planning for this. And you are right that the Fed can book an asset which will make it look as if it is solvent, and that is what you were talking about, but what really matters is the cash flows. And you are right. The Fed, I believe, will have negative cash flows at some point in the future, and it will pay that just by creating more reserves to pay the interest on the existing reserves, and it can do that without limit if it wants.

This situation won't last forever. It is unfortunate, but, Marvin, I—it is my understanding is that the Fed isn't allowed to keep capital. It has to hand over its profits to Treasury every year, according to a formula. It would have liked to have kept reserves, because it has been earning a lot of money lately, and it would like—

Mr. MULVANEY. And those are the remittances—

Mr. GOODFRIEND. That is not actually true.

Mr. GAGNON. What?

Mr. GOODFRIEND. There is a gentleman's agreement between Congress and the Fed that was established in the period before, or right after World War II, and it is a gentleman's agreement, to my understanding. It is an understanding. The Fed, if it wanted to, could retain surplus capital against interest rate risk.

Mr. MULVANEY. Mr. Pollock is actually saying no. And this is what I love about this discussion.

Mr. POLLOCK. I think it is true that it could, but if it did, it would increase the budget deficit. The Fed makes a lot of money. The Federal Reserve banks are almost always, measured by return on equity, the most profitable banks in the country, and the money goes to the Treasury, by and large, after a small dividend and small expenses.

If it comes to the point that payment on reserve balances exceeds the yields on the assets or assets are sold at a loss, generating negative cash, then those payments to the Treasury will disappear. That will make the deficit go up.

But you raised an accounting point. There is a debit there when that happens. Normal people would think the debit would go to net worth, but, in fact, under the Federal Reserve accounting, it goes to a "deferred payment to the Treasury"—

Mr. MULVANEY. Okay, I have to—

Mr. POLLOCK. —intangible asset.

Mr. MULVANEY. I have to give back. I hear—because we have to give up the room. So—

Chairman CAMPBELL. Thank you.

Mr. MULVANEY. —thank you, gentlemen. Thank you, Mr. Chairman.

Chairman CAMPBELL. Thank you. So the gentleman from New Mexico, Mr. Pearce, is recognized for the final 5 minutes.

Mr. PEARCE. Okay, thank you, Mr. Chairman.

Mr. Pollock, you had addressed the idea of an elastic currency, and so I will ask—first of all, to make an observation, I had my

dad carry me to where I was born, and it was a dirt floor chicken place. They ran the chickens out. And so I was—Dad got a raise, and he started working for $2.62 an hour, raised 6 kids on $2.60 an hour.

So I was—I have been contemplating that. How could Dad do that? How could he raise so many on $2.62? So the staff—I had them digging around on it—so we want to consider 100-year periods, because the Federal Reserve has been in operation 100 years. So the first 100 years of our country's operation, we were on a gold standard. And what you could buy for $1 in George Washington's day, 100 years later, cost you 50 cents. There were economies of scale, transportation, competition came in. So you basically had a double—your wage doubled because the money was worth more.

But then if we look at the last 100 years, what $1 would buy 100 years ago takes $24 today, so my dad was actually making about 12 times, half—it was about 50 years ago, so half that time. So he was working for the equivalent of about 242 at $2.62—or $24 an hour at $2.62. So, again, I see what the Federal Reserve is doing is waging a war on the poor with this elasticity.

And I would appreciate your evaluation, your observation of that critical nature I have of the Federal Reserve. If it is incorrect, I would appreciate you telling me.

Mr. POLLOCK. Thank you, Congressman. I haven't checked your math, but something like that is certainly right. Elastic currency I think is a good thing, because it is very useful in crises, which is why it was created.

If you look at the long-term inflation rates, they are basically flat, and then, starting in the 1930s, they go up for the next 80 years. We always forget about the power of compound interest. As you are pointing out, a 2 percent inflation, 2 percent compound interest, extended over many years, creates a tremendous change. I point out in my testimony, 2 percent inflation, the Fed's stated target, will quintuple prices in a normal lifetime. So my answer is yes.

Mr. PEARCE. Okay. Mr. Bivens, you seem to think that the idea of lenders of last resort, bailouts, whatever you want to call it, is an adequate task. Now, the firms that we bailed out made hundreds of billions of dollars in very risky assets, so you feel like that a taxpayer, say in New Mexico, who makes an average of $31,000—I have one county where it is closer to $14,000—the taxpayer who is making $14,000 a year should bail out somebody who is getting $1 million bonuses on Wall Street from making crazy, crazy risks where they were leveraged 33 to 1, 40 to 1. Do you think that is an appropriate assignment of risk for taxpayers in New Mexico to have to bail that out?

Mr. BIVENS. No, not at all. I would—

Mr. PEARCE. And so you think, then, that the lender of last resort, if they take the risk, if they take risks that do not pan out—for instance, maybe it is going to pan out okay on Fannie and Freddie, but I remember Mr. Paulson coming downstairs at the Capitol saying, if you will guarantee the whole thing on Fannie Mae and Freddie Mac, you won't have to pay a thing. He was about $200 billion wrong on that assessment. But so you think that is an appropriate use of taxpayer dollars?

Mr. BIVENS. If you could more specific on what—

Mr. PEARCE. Fannie and Freddie. To bail Fannie and Freddie out at $200 billion.

Mr. BIVENS. Yes, I—

Mr. PEARCE. Okay, that is fine. When does the stuff hit the fan here? We have been printing money. Mr. Gagnon, maybe—it doesn't work in Argentina. When is it going to stop working here?

Mr. GAGNON. You want a middle-of-the-road, you want a moderate target. Countries who have chosen inflation targets that are too low, like New Zealand and Japan, have changed their mind and decided to raise them. I think 2 percent seems like a moderate level.

Mr. PEARCE. Let me go ahead and reclaim my time. I have 14 seconds. The reason that it works, I think, is because we can export inflation. We are the world's reserve currency. In the last year, the BRIC nations have said they are no longer going to trade in our currency. I feel like that we are going to get all that inflation back inside our country at one fell swoop. I think that there is a major problem looking at us in the face when those BRIC nations actually begin to trade in something other than dollars.

Again, maybe the scheme won't work out, but right now it looks like it is on thin ice. I yield back my time, Mr. Chairman.

Chairman CAMPBELL. Thank you, Mr. Pearce.

And I thank all of you on the panel, very much. I don't know about you, but I think this is pretty fascinating. I thought there was some very interesting discussion, and it is all helpful, and I appreciate all six of you and Dr. Meltzer in absentia that—for your contributions to the beginning of this, as I hope you can see, very wide-ranging and open discussion about how did we get here, what does it look like now, and what should it look like going forward.

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 5 legislative days for Members to submit written questions to these witnesses and to place their responses in the record. Also, without objection, Members will have 5 legislative days to submit extraneous materials to the Chair for inclusion in the record.

With that, and without objection, this hearing is now adjourned.

[Whereupon, at 4:27 p.m., the hearing was adjourned.]

A P P E N D I X

September 11, 2013

Testimony prepared for the Subcommittee on Monetary Policy and Trade, Financial Services Committee, U.S. House of Representatives, for a hearing on "The Fed Turns 100: Lessons Learned from a Century of Central Banking"

Josh Bivens, Ph.D.
Research and Policy Director, Economic Policy Institute

The Federal Reserve is the primary economic policymaking institution tasked with insuring macroeconomic stability. How it came to have this role, and whether or not it bears too little or too much of the overall responsibility for this task are interesting questions in their own right, but this is no doubt at all that *this is its role*. Given this, it seems useful to provide an assessment of the appropriateness of Federal Reserve policies in the recent past and near future, as well as of lessons that should have been learned over the last decade of American economic experience. In my testimony today, I will make the following arguments:

-The U.S. economy remains far from fully recovered from the Great Recession (much further than would be thought by looking, for example, at the overall unemployment rate), and the barrier to a full recovery remains deficient aggregate demand for goods and services

-*Fiscal* policy in recent years has severely aggravated this aggregate demand shortfall, particularly compared with previous business cycles. Specifically, if government (federal, state and local) spending had followed the normal course seen in previous business cycle recoveries, it would be roughly 20 percent higher today, and the U.S. economy would have roughly 5 million more jobs (the majority of which would be private-sector jobs) than it currently has.

-This aggregate demand shortfall argues that the Fed should continue (or even expand) its asset purchases to keep interest rates low and to keep inflationary expectations anchored.

-This aggregate demand shortfall also argues that accelerating inflation is not a serious short or even medium-term risk

-There are several important lessons that can be taken from the Great Recession and its aftermath for monetary policymakers. Among these, the Fed should be far more vigilant in insuring that financial sector imbalances do not inflate to levels that can threaten the macroeconomy, and it should be far less confident that monetary policy tools can by themselves neutralize negative demand shocks stemming from burst asset bubbles.

-Lastly, as the Fed has been given the primary role for financial regulation in the post Dodd-Frank era, it should balance its necessary role as a lender of last resort and guarantor of *systemic* financial stability with vigorous efforts to insure that the problem of moral hazard in the behavior of large, complex financial institutions is addressed. Specifically, this means that adequate capital buffers for these institutions should be maintained, that new resolution authority for insolvent institutions passed in Dodd-Frank is used appropriately, and that it is financial system *functions* and not incumbent financial *institutions*, that the Fed intervenes to support during crises.

The U.S. economy remains far from fully recovered from the Great Recession

As of the middle of 2013, the U.S. economy remained far from fully recovered from the Great Recession. The "output gap" between actual GDP and potential GDP – how much could have been produced had unemployment and capacity utilization not been depressed due to insufficient aggregate demand – stood at 5.8 percent of potential GDP, or roughly $900 billion. This was, by far, the largest output gap remaining this far from either the previous business cycle peak or the trough of the recession, and the cumulative lost output since the beginning of the Great Recession is nearly double the amount lost during any other recession since the Great Depression (and will in coming years surely rise to more than double any other previous losses). Perhaps worst of all, this gap had barely budged in the previous two years – shrinking by only 0.5 percent of GDP since the beginning of 2011.

This stubbornly high output gap is mirrored by an agonizingly slow recovery in the employment to population ratio of those aged 25 to 54. This group of "prime-age" workers tends to have very strong labor force attachments during normal economic times. Yet this ratio

fell by 5.3 percentage points during the Great Recession, and as of June 2013 was essentially exactly where it was in four years earlier, when official recovery from the Great Recession began.

<Figure A here>

The stubbornly slow progress of recovery has consistently surprised policymakers. The figure below shows the projected course of recovery as forecast by successive iterations of the Congressional Budget Office's (CBO) Budget and Economic Outlooks. As can be seen, the return to full economic potential has consistently been moved back in time in successive CBO releases.

<Figure B here>

However, the roots of this slow recovery are far from mysterious: the very large negative shock to aggregate demand provided by the bursting housing bubble (starting in 2007) has never been fully neutralized by policy measures to boost demand. Worse, the decades before the Great Recession convinced far too many policymakers that efforts to fight aggregate demand shortages could consist entirely of reductions in the short-term "policy" interest rates controlled by the Federal Reserve. However, these short-term rates have been set at essentially zero since the end of 2008, and yet the economy remains far below potential. This state of the world – economic weakness persisting even as short-term policy rates are at zero – has often been called a "liquidity trap", or characteristic of an economy stuck "at the zero lower bound (ZLB) of interest rates".

Macroeconomic policy in a liquidity trap: monetary and fiscal

Liquidity trap conditions argue for two primary responses. First, the Federal Reserve should undertake unconventional measures to force down interest rates besides the short-term policy rates they control directly. Second, fiscal policy stabilization should take center-stage. The first response has happened – the Fed has indeed begun buying longer-term assets directly

in an effort to keep these interest rates low. This has clearly been to the economy's benefit. While it is very hard to make precise empirical estimates as to how much the Fed's asset purchases have boosted the economy, it is important to note that essentially none of these estimates indicate that they have done anything but push the economy closer to full-employment. Further, some estimates of the asset purchase's effect are non-trivial – with Chung et al. (2012) estimating that the purchases undertaken before November 2012 (ie, QEs 1 and 2) could have lowered the overall unemployment rate by well over a full percentage point. This represents more than a million Americans who found work because of the effect of these programs.[1]

The second response (increased fiscal support) has, however, largely not happened. During the recessionary phase of the Great Recession, as job-losses reached a staggering 750,000 *per month*, passage of the American Recovery and Reinvestment Act (ARRA) did significantly boost growth in real federal government expenditures.

This fiscal support broke the downward spiral and halted the economy's free-fall by mid-2009, and even provided rates of growth sufficient to reliably push down measured unemployment by late 2010. However, the fiscal boost provided by ARRA was both temporary and left the economy well short of full-employment. Since the official end of the Great Recession (in June 2009), overall fiscal policy has been sharply contractionary when compared with historical averages, particularly once one factors in state and local expenditures. **Figure C** below shows real (inflation-adjusted) government spending (federal, state, and local) during recessions and subsequent recoveries.

<Figure C here>

The most striking comparison is with the recovery following the steep recession of the early 1980s. The output gap at the trough of the early 1980s recession was actually larger than that at the trough of the Great Recession, yet two years following the trough, 80 percent of the

[1] Chung, Hess, Jean-Philippe Laforte, David Reifschneider, and John C. Williams (2011). "Have We Underestimated the Probability of Hitting the Zero Lower Bound? (568 KB PDF) " Working Paper 2011-01. San Francisco: Federal Reserve Bank of San Francisco, January.

output gap had been erased. Yet four years following the trough of the Great Recession, less than 20 percent of the output gap has been erased. Even more striking, the scope for monetary policy boosting recovery in the wake of the early 1980s recession was much larger –the federal funds rate was dropped by almost 10 percentage points following the onset of recession.

Given the similar size of output gaps at the trough of these recessions, and given as well that subsequent recovery was likely to be aided much more by monetary policy going forward from 1982, it seems axiomatic that a larger fiscal expansion was needed after the end of the Great Recession to spur full recovery. Yet real government spending four years into recovery is essentially 20 percent below what it would have been had it matched typical growth during recoveries. Had this degree of fiscal impulse been replicated in the current recovery, then roughly 90 percent today's output gap would be closed.[2]

This is an important lesson. Calls to address the jobs-crisis with a fiscal boost commensurate to the scale of the problem are often greeted by implicit claims that this would constitute a wild and historically unprecedented degree of public spending. It's not so—we've had this amount of fiscal support for recoveries before, in the not-so-recent past. There is nothing either economically or historically "unrealistic" about the prospects of ending the jobs-crisis by ending austerity.

Balancing monetary policy risks going forward

Given that the economy remains severely demand-constrained, and given as well that the current trajectory of fiscal policy looks extremely contractionary, the clearest current risk facing monetary policymakers is that unemployment will remain elevated for a significantly long time.

This argues strongly that talk of "tapering" – reducing the pace of asset purchases under the quantitative easing programs – is premature. There is, in fact, strong reason to believe that an even greater break from conventional monetary policy interventions is needed (see, for

[22] For more context on this comparison, see http://www.epi.org/blog/years-recovery-austeritys-toll-3-million/

example, Romer (2013), who speaks of the need for a "regime-shift" in monetary policymaking).[3]

The persistent demand shortfall and contractionary fiscal policy stance also make clear that worries about incipient runway inflation are severely misplaced. Measures of core inflation since the Great Recession began have actually declined (see **Figure D** below).

<Figure D here >

Further, there is little sign that financial market participants expect a rise in inflation anytime soon. The spread between ten-year inflation protected Treasury securities and traditional Treasuries indicates that inflation expectations remain low (and are just now recovering a bit after a long decline).

<Figure E here >

Finally, a key determinant of inflation is unit labor costs (see the ULC and core inflation relationship since 1959 in **Figure F** below). Unit labor costs have remained extraordinarily low since the recovery from the Great Recession began, rising, for example, by well under 2 percent in 2012.

<Figure F here >

In fact, in the non-financial corporate sector, if *only* unit labor costs mattered, prices would have *declined* since the recovery's beginning. However, because profit margins have risen by 55 percent over that period (from 9.7 percent to 15 percent), prices for non-financial corporate sector output have risen even in the face of falling unit labor costs. A clear implication of this is that future increases in wages and economic activity will not necessarily

[3] See Romer, Christina (2013), "It Takes a Regime Shift: Recent Developments in Japanese Monetary Policy Through the Lens of the Great Depression", Working Paper http://elsa.berkeley.edu/~cromer/It%20Takes%20a%20Regime%20Shift%20Written%20(Second%20Revision).pdf

translate one-for-one into higher prices, as historically high profit margins can provide a buffer (as they traditionally have).

Lessons from the 2000s

Currently, all risks facing the economy point to excessive unemployment, not excess demand, high interest rates, or inflation. But this is, of course, not always the case. In 2006, for example, when unemployment reached 4.3 percent, driven in large part by an unsustainable bubble in housing markets, it would been bad Federal Reserve policy indeed to undertaken hundreds of billions of dollars of long-term asset purchases to lower long-term interest rates. And in fact, the Fed had by 2006 been steadily *raising* its policy interest rates.

However, it is true that the Fed (and other policymakers) were too slow in recognizing the grave macroeconomic damage posed by the housing bubble. Part of this may have been a function of what has too often been described as the "mild" 2001 recession following the burst stock market bubble. This episode perhaps led to excess confidence on the part of macroeconomic policymakers that the negative demand shock from burst asset market bubbles could always be neutralized by loose monetary policy. But, employment growth following the 2001 recession was extraordinarily slow, and the unemployment rate and employment to population ratios reached at the peak of the late 1990s/early 2000s business cycle were never reached during the recovery and expansion of 2001 to 2007, even with the benefit of a long period of loose monetary policy and an extraordinarily large (if inefficient) fiscal impulse provided by the Bush-era tax cuts and spending increases.

Given that modest short-term policy rate *increases* were insufficient to stop the incipient housing bubble from inflating and rate *declines* were insufficient to inoculate against the negative demand shock when the bubble burst, it seems clear that the Federal Reserve should expand its tool-kit to find policy levers that keep asset bubbles from inflating to such damaging levels in the first place. While a range of policy tools have been identified by a number of researchers (including increased margin requirements for stock buying, asset-based reserve requirements, guidelines for mortgage issuance, and restrictions on destabilizing international capital flows), it is also important to note that the Federal Reserve has enormous

power even when just making public comments. If the Federal Reserve had issued reports and had governors make speeches that presented the huge evidence on overvaluation of home prices in the early 2000s, it is hard to imagine that the bubble could have inflated to the heights it did.

An instructive, if unfortunate, example of this "power of speech" could be seen in recent months as long-term interest rates rose following some perceived ambiguity about how long the current pace of asset purchases would continue. Even though no actual change in purchases happened, just the communication (or failure of communication, in this case) was able to move financial markets. Given this episode, it is hard indeed to imagine that an organized, sustained campaign of communication about the Fed's professional diagnosis that a particular asset market was characterized by a speculative bubble would have been ignored by these same financial markets.

It should be reiterated that the stakes to failing to rein in bubbles in real-time now look potentially enormous. The cumulative output losses inflicted by the Great Recession and failure to fully recover since already total over 80% of one year's GDP and look set to continue rising in coming years.

Lessons from 2008 and after

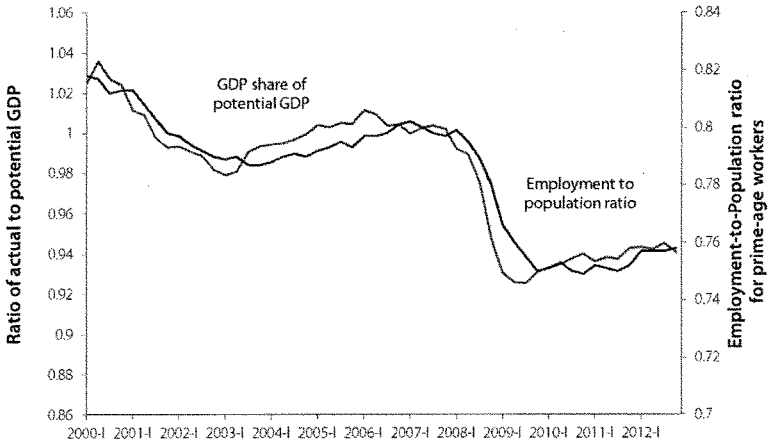
It became clear by the end of 2008 that large, complex financial institutions not only allowed financial sector imbalances to grow to dangerous levels, but that these same institutions suffered badly from a moral hazard problem, knowing that after the panic following the collapse of Lehman brothers that policymakers were extremely unlikely to allow them to fall into bankruptcy. This "too big to fail" problem is not just unfair, it is economically inefficient (among other things, too big to fail banks have a competitive advantage over competitors in raising funds, as creditors factor in the reduced likelihood that policymakers will allow them to go bankrupt).

One of the most promising (if still largely untested) changes made to American finance by the Dodd-Frank was improved resolution authority for financial regulators, including the Federal Reserve. The "living will" provisions of Dodd-Frank take away the excuse that insolvent

financial firms cannot be allowed to fail during financial crises. This is a key regulatory improvement.

The key lender of last resort role that the Federal Reserve needs to fulfill during financial crises – and which it clearly did fulfill in the Great Recession – remains vital. Advice to central bankers during crises has actually not improved much since the Bagehot Rule that the central bank should lend freely, at a penalty rate, on collateral that is valuable during non-crisis periods, but only to fundamentally solvent institutions. The ability of the Federal Reserve to backstop entire markets – like its backstop of the commercial paper market in November 2008 – indicates clearly that they can keep financial intermediation services intact without providing a blanket guarantee to all incumbent financial institutions.

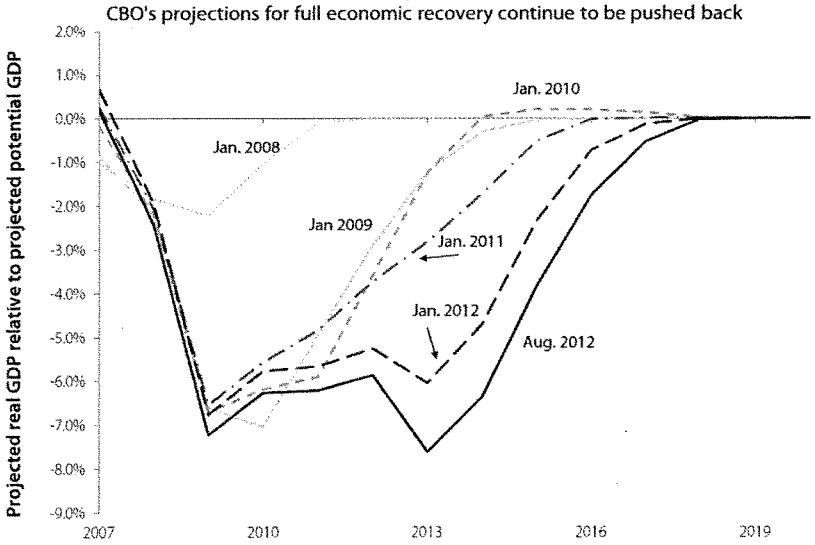
Figure A
Ratio of actual to potential gross domestic product, and the employment-to-population ratio for prime-age workers, 2000-2012



Note: Prime-age workers are workers ages 25-54.
Source: Author's analysis of Bureau of Economic Analysis *National Income and Product* Accounts (Table 1.1.6), Congressional Budget Office (2012) and Current Population Survey public data series

Figure B

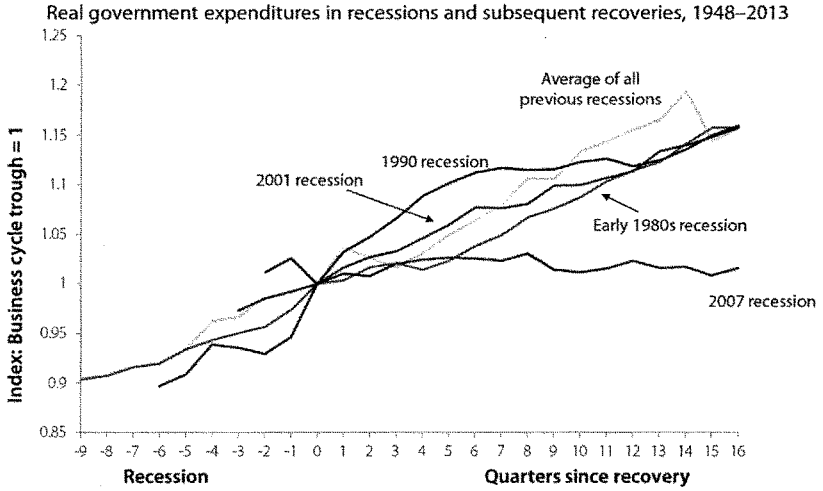
CBO's projections for full economic recovery continue to be pushed back



Source: Author's analysis of Congressional Budget Office data

Figure C

Real government expenditures in recessions and subsequent recoveries, 1948–2013

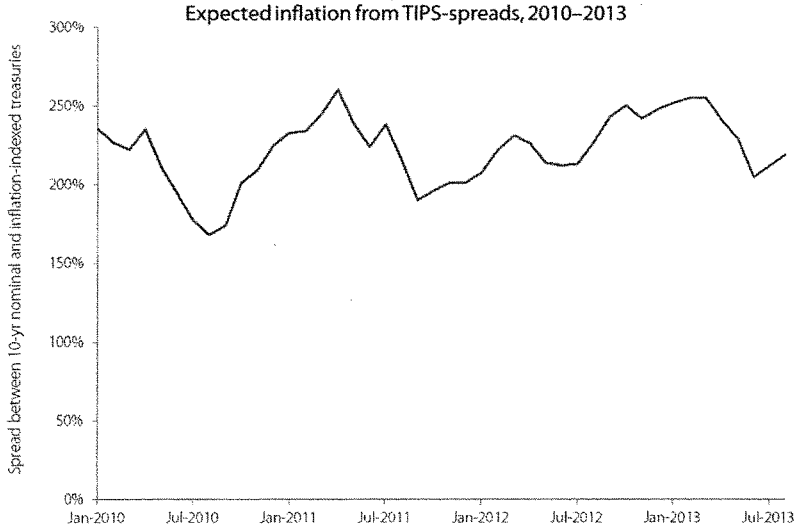


Note: The average of all previous recessions is the average of government expenditures for the six recessions and subsequent recoveries between 1948-1980. The early 1980's recession begins in 1980Q1 and spans through 1982Q4 to cover the recession from 1980Q1-1980Q3 and the subsequent recession from 1981Q3 through 1982Q4.. The start of the recovery begins in 1982 Q4.
Source: Author's analysis of Bureau of Economic Analysis *National Income and Product Accounts* (Table 3.1)

Figure D
Measure of core inflation: personal consumption expenditures, 1989–2013

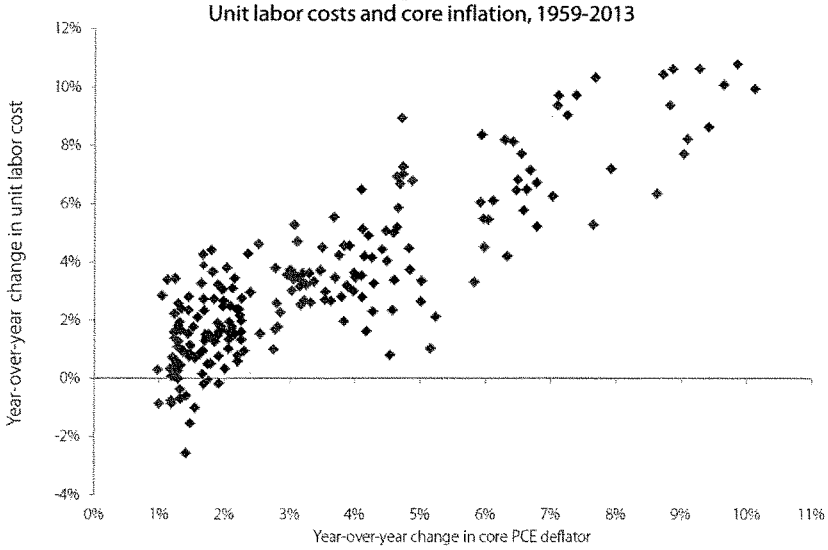
Note: Market-based PCE excludes food and energy.
Source: Author's analysis of Federal Reserve Bank St. Louis (2013)

Figure E
Expected inflation from TIPS-spreads, 2010–2013



Source: Author's analysis of Federal Reserve Bank Economic Database ,Federal Reserve Bank, St. Louis

Figure F
Unit labor costs and core inflation, 1959-2013



Note: Red points indicate the most recent quarters, 2012 Q3 through 2013 Q2.
Source: Bureau of Labor Statistics and Bureau of Economic Analysis

What Have We Learned from 100 Years of Federal Reserve History?
Joseph E. Gagnon, Peterson Institute for International Economics
Testimony before the House Subcommittee on Monetary Policy and Trade
September 11, 2013

In my view, the Fed has performed at least as well over its first 100 years as could have been expected given the limits of, and evolution in, our understanding of how the economy operates and given the Fed's institutional structure and political environment. The key to improving performance in the future is to give the Fed the tools it needs to do its job, to allow the Fed free rein in using those tools as it sees fit, to demand that the Fed explain its actions to the public contemporaneously, and to hold the Fed accountable for any failure to achieve its objectives that could reasonably have been prevented. My biggest worry is that the Fed faces more restrictions on its powers than any of the world's other major central banks, raising the risk that it may be unable to achieve its objectives at some time in the future.

Objectives of the Federal Reserve

Congress created the Federal Reserve System in 1913 "to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes." I'm not sure what other purposes Congress had in mind, but the rest of the preamble strikes me as eminently sensible and still relevant 100 years later. The creation of the Fed was in large measure a response to the banking panic of 1907. There was a strong desire for a more stable economy and the path to a more stable economy was a more stable financial system.

In the 1970s Congress added an explicit monetary policy objective "to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates." This new language brought the concept of an elastic currency into the modern age, while retaining the objectives related to the financial system. Basically one can summarize the Fed's

objectives as to encourage the flow of credit in a sound and stable financial system in order to have a strong and stable economy with low inflation.

Many students of central banking, including my colleague Adam Posen, have made the case for central bank independence in the context of democratic institutions. In their view, which I share, central bank objectives should be set by political leaders; central banks should have operational independence and the tools to achieve those objectives; and central banks should be transparent and accountable to political leaders for their performance (Posen 2013).

Successes and Failures

1914-39

I pass over the first few years of the Fed's existence as it may have been too soon to for it to have had a systematic economic effect and those years were disrupted by the first world war. The 1920s were a period of rapid growth with low inflation, an apparent success of Fed policy. However, late in the decade, a leverage-fueled bubble emerged in the stock market. Given the tools it had, it is not clear what, if anything, the Fed could or should have done to minimize the bubble. Afterwards, the Banking Act of 1933 gave the Fed authority to determine margin requirements on stock loans. I believe that strict enforcement of these requirements (currently 50 percent) has been hugely beneficial, a point to which I will return later.

The aftermath of the 1929 stock market crash gave rise to the Fed's greatest failure—the Great Depression. The work of Milton Friedman, Anna Schwartz, Ben Bernanke, Allan Meltzer and others has led to widespread agreement that the Fed turned a recession into a depression by allowing the money supply to contract and allowing prices to fall by 25 percent from 1929 through 1933 (Friedman and Schwartz 1963, Bernanke 2002, and Meltzer 2003). Recovery began with the loosening of the gold standard, the devaluation of the dollar, and the bank holiday

of 1933 (Romer and Romer 2013). But it is important to recognize that very few people at the time understood the Fed's role in enabling the Great Depression, so perhaps we should not expect the leaders of the Fed to have known any better.

1940-65

World War II and the decades immediately afterward were a golden era for the US economy, with rapid growth and generally low inflation. To some extent, this may reflect a certain amount of good luck. Perhaps also, it may reflect that the heavily regulated financial system of the era was not allowed to run amok.

1966-1979

In light of the concerns expressed by many about the consequences of recent Fed policies for future inflation, it is important for us to understand how and why inflation got out of control in the 1960s and 1970s. The Fed's good luck began to run out in the late 1960s when the Vietnam War and the Great Society caused the US economy to overheat. The rise of inflation was not a single event and not a consequence of a single Fed error. Rather, as shown in the attached chart, inflation rose in three separate waves. During each wave, the Fed was initially reluctant to fight inflation, but it eventually tightened policy enough to reverse the upward drift in inflation. After the first two waves, the Fed eased policy before inflation was truly defeated. It was only under the tenure of Paul Volcker that high inflation was conquered for good.

When one reviews the statements of Fed officials and the FOMC during the period of escalating inflation, what is apparent is a denial of responsibility and a blaming of other forces for rising inflation. Also, as described by Christina and David Romer (2013), the Fed at times argued that it had little power to counteract the inflationary forces at work. Over time, this abdication of responsibility caused expectations of future inflation to become unanchored. When

the oil shocks of 1974 and 1979 hit, firms and workers rushed to raise prices and wages because they thought, in part correctly, that the Fed would allow inflation to ratchet up once again.

The upward drift of inflation and inflation expectations did not happen all at once. The Fed had many opportunities to fight inflation and regain credibility. And when Paul Volcker was appointed chairman, it finally did. The lesson for today is that inflation is not baked in the cake years in advance. It responds to Fed policy with a lag of a year or two. The key is a firm and predictable Fed tightening whenever inflation threatens to rise above a narrow range around its target.

1980-2003

The Great Moderation, as it is sometimes called, reflected a combination of good luck and good policies. Economists still do not fully agree on the balance between luck and policy. In my view, good policy was important. After Paul Volcker, the Fed learned the lessons of its previous errors and did not allow inflation to drift upwards. I note, however, that during the 1980s, inflation stabilized around 4 percent and this was viewed as a great success. In a shift that has come to be known as "opportunistic disinflation," targeted inflation dropped to 2 percent after the recession of 1990-91, where it has remained (Orphanides and Wilcox 2002).

2004-13

This is the period of the housing bubble and the Great Recession. Some observers say that the Fed kept interest rates too low in 2003-05 and that this was the most important cause of the housing bubble (Taylor 2007). I agree that policy was too easy in 2004 and 2005, but the overheating this caused was minor by historical standards. Moreover, as my colleague Adam Posen (2011) has written, there is no systematic evidence connecting loose monetary policy with financial bubbles. Rather, I and many others blame the Fed for lax regulation of the mortgage

market and for turning a blind eye to off-balance-sheet risks at commercial banks. Other regulatory agencies also share considerable blame. The main lessons I draw are that leverage and debt burdens of borrowers were too high, capital at banks and other financial institutions was too low, and the complexity of structured financial products proved to be a huge vulnerability when the system was tested.

During and after the financial crisis, the Fed eased policy quickly and made extraordinary efforts to stabilize the financial system. I agree with Chairman Bernanke (2012) that the size of the 2008 shock—in terms of loss of wealth, bankruptcy, forced deleveraging, and global reach—was probably greater than that of 1929. The only reason we are not in the midst of a second Great Depression is that policymakers in the United States and elsewhere responded much better in the current episode.

But better is not necessarily best. As I argued back in 2009, the Fed should have engaged in much more quantitative easing (QE) at an early stage (Gagnon 2009). Doing so would have put the US economy on a stronger growth path, keeping millions more employed and reducing the federal budget deficit. Paradoxically, more aggressive monetary ease in 2009 and 2010 would have pulled forward the time we return to more normal interest rates and probably prevented the need to launch QE2, Operation Twist, and QE3. Given the unprecedented nature of, and controversy surrounding, QE, it is perhaps unfair to criticize the Fed for not doing more sooner. But the current episode demonstrates that being too timid can be just as risky as being too bold.

Lessons Learned

Objectives

Would the Fed's objectives be improved by making them broader or narrower or numerically

specific? With respect to financial stability I don't see any useful modification. With respect to macroeconomic stability, the discussion centers around whether the Fed should be given a single target or a dual target and whether the target or targets should be specified numerically. Experience shows that successful central banks do not focus solely on inflation even if that is their sole legislated objective (Posen 2013). Stabilizing employment is a socially valuable objective in itself and it helps to stabilize inflation. Making the dual mandate explicit is an acknowledgment of reality that has benefits for credibility, transparency, and accountability.

It is widely agreed that central banks should not be given a numerical goal for employment, but many believe that political leaders should specify a numerical goal for inflation. We are all aware of the dangers of inflation that is too high and the evidence is accumulating of the harm from inflation that is too low. The target should not be set below 2 percent, and some believe that a slightly higher target would be beneficial, perhaps as high as 4 percent (Blanchard et al. 2010 and Ball 2013). I don't have a strong view on that, but I note that an average inflation rate of 4 percent in the late 1980s was widely viewed as a huge success. If the simplicity of a single target has strong appeal, then one might consider targeting growth of total spending, or nominal GDP, at 5 percent.[1]

Rules versus Discretion

A policy rule is a mathematical relationship between the value of an economic policy indicator and underlying economic variables. The most famous monetary example is the Taylor rule, which relates the short-term interest rate to the inflation rate and the gap between actual and potential output (Taylor 1993).

[1] Nominal GDP is the product of output, or real GDP, and the price of output. Because employment is tightly linked to output, nominal GDP combines both elements of the dual mandate. Growth of nominal GDP at 5 percent would yield average inflation of 2 percent if output grows at 3 percent on average or inflation of 3 percent if output grows at 2 percent. The Fed has little control over the long-run average growth rate of output, but any outcome for inflation in this range would be acceptable.

The chief economic arguments for strict observance of a policy rule are that it provides greater certainty to market participants and that it eliminates the temptation of a policymaker with a short-term outlook to boost output and employment now at the expense of higher inflation later. Experience has shown, however, that it is possible to eliminate the problem of the short-sighted policymaker by appropriate structuring of the policymaker's mandate and accountability.

The chief arguments against strict observance of a policy rule are that there is no agreement on the optimal policy rule and that it is probably impossible to design a policy rule that can allow for all possible contingencies. John Taylor showed that his rule provided a reasonably good characterization of Fed policy during a part of the Great Moderation and thus it may have distilled an important principle of good monetary policy. But the period Taylor examined was short and we don't know whether some other rule might have been even better, especially if other shocks had been hitting the economy. A number of researchers have written papers arguing that Taylor's rule can be improved in important ways, but there is no agreement on any one rule.

The best strategy is for the Fed to continue to study policy rules and to use various rules in assessing the appropriate stance of policy. Whenever it sets policy far from the dictates of historical rules, the Fed should have a good reason and should communicate that reason clearly to the public to avoid confusion and uncertainty.

If one is searching for a guiding principle for formulating and communicating policy, the optimal forecast approach of Lars Svensson (2003) has much to commend it. Variants of this approach are implemented by some foreign central banks. Under this approach, the Fed would set its policy to minimize forecasted deviations from its objectives in the future, with deviations in the distant future discounted more than those in the near term. If the Fed were to provide the

market with its own forecast of monetary policy, it might learn whether private forecasters agree with its forecasts of how closely it will achieve its objectives. Any disagreements could lead to a dialogue between the Fed and market participants that would help each to understand the different views of the other and to reduce uncertainty.

In recent years, the Fed has undershot both its employment and inflation objectives repeatedly, despite setting policy, via QE, lower than the original Taylor rule would imply. Other versions of the Taylor rule, however, called for large negative policy rates, which might be interpreted as calling for even more QE. Depending on whose policy rule you like, Fed policy was either too loose or too tight. My own call for more QE back in 2009 was based on the fact that the Fed itself did not forecast a return to full employment and target inflation within three years. According to the Svensson approach I just described, this was a clear example of a policy error. Looking forward over the next three years, there still seems to be room for easier Fed policy, but the case is less strong than it was back in 2009.[2]

Policy Tools

The resort to QE in recent years highlights an important issue. Of the world's major central banks, the Fed has the most restrictions on its powers. It can buy only government-issued or government-guaranteed debt, including that of government agencies. Other central banks can buy corporate debt, equities, and even real estate.

As long as the Fed has a clear mandate, with sufficient transparency and accountability, there is no reason to restrict its ability to achieve that mandate. Indeed, arbitrarily restricting the Fed's powers could have serious consequences, particularly if the housing agencies are wound down and the pool of agency-backed debt diminishes. Restricting the Fed's operations to

[2] In my testimony on March 5, 2013, I noted that there are potential costs to QE but that the benefits currently appear to be greater than the costs (Gagnon 2013).

Treasury securities might dangerously reduce its capacity to influence the economy, especially if at some future time Treasury securities in private hands are scarce.

In order to avoid the appearance or reality of favoritism and corruption, Fed operations in private securities should be ordinarily conducted in broad-based baskets, preferably as wide as possible and using weights based on market capitalizations. The Bank of Japan is buying Japanese equity and real estate on this basis as part of its fight against deflation.

Another important tool is the ability to impose loan-to-value limits and/or debt-to-income limits on consumer and business loans. Strict margin requirements kept the equity bubble of the 1990s from causing excessive damage when it burst in 2000. We need similar limits on leverage in real estate.[3] Also needed are higher capital standards for banks and plans for orderly resolution of systemically important financial institutions. It remains to be seen how effective the new Dodd-Frank regulations will prove in achieving these goals.

Lender of Last Resort

During the recent crisis the Fed made a number of emergency loans to specific institutions, which attracted considerable criticism. In research I hope to release soon, my colleague Bill Cline and I show that the Fed was scrupulous in requiring sufficient collateral on its loans, as evidenced by the fact that all of its loans were repaid with interest and profits that exceeded the Fed's own cost of funds. The one prominent case of a loan that was denied was that of Lehman Brothers. My research supports Chairman Bernanke's statement that the Fed was not able to lend to Lehman because Lehman lacked sufficient collateral for a loan. It is arguable whether, on balance, the taxpayers might have been better off if the Fed had prevented a disorderly bankruptcy by Lehman even at the cost of significant loan losses. Personally, I think the

[3] To some extent, the Fed and other financial supervisors have this tool, but the inter-agency process of using it is cumbersome. Moreover, supervisors fear the political backlash that would result from significantly increasing down-payments on home mortgages or tightening terms on other forms of credit.

recession would have been essentially the same if Lehman had not failed. But others may take a different view. In any event, what is clear is that the Fed took both its mandate for financial stability and the legal limits on achieving that mandate seriously.

The new limits on the Fed's ability to make emergency loans do raise the risk of disorderly failures in the future, and it is not clear how much this risk is ameliorated by the advance resolution plans that are now required of large-scale financial institutions.

References

Ball, Lawrence. 2013. The Case for Four Percent Inflation. *Central Bank Review* (Central Bank of the Republic of Turkey) May.

Bernanke, Ben. 2002. On Milton Friedman's Ninetieth Birthday. Remarks at the Conference to Honor Milton Friedman, University of Chicago, November 8.

Bernanke, Ben. 2012. The Federal Reserve's Response to the Financial Crisis. Lecture at George Washington University, Washington, March 27.

Blanchard, Olivier, Giovanni Dell'Ariccia, and Paolo Mauro. 2010. Rethinking Macroeconomic Policy. IMF Staff Position Note 10/03. Washington: International Monetary Fund.

Friedman, Milton, and Anna Schwartz. 1963. *A Monetary History of the United States, 1863-1960*. Princeton, NJ: Princeton University Press.

Gagnon, Joseph. 2009. The World Needs Further Monetary Ease, Not an Early Exit. Policy Brief 9-22. Washington: Peterson Institute for International Economics.

Gagnon, Joseph. 2013. America Needs More Expansionary Monetary Policy. Testimony before the House Subcommittee on Monetary Policy and Trade. www.piie.com. March 5.

Meltzer, Allan. 2003. *A History of the Federal Reserve. Volume 1: 1913-1951*. Chicago: University of Chicago Press.

Orphanides, Athanasios, and David Wilcox. 2002. The Opportunistic Approach to Disinflation. *International Finance* 5 (1): 47-71.

Posen, Adam. 2011. Monetary Policy, Bubbles, and the Knowledge Problem. *Cato Journal* 31 (3), Fall.

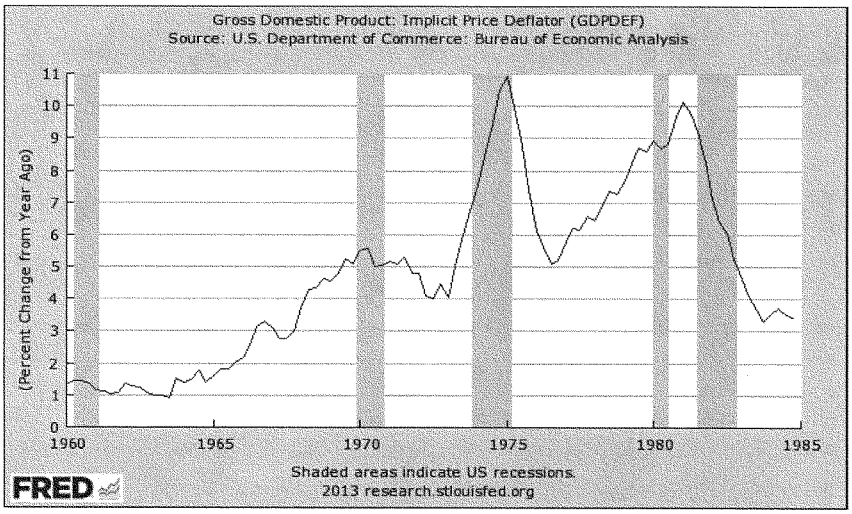
Posen, Adam. 2013. Testimony before the Joint Economic Committee. www.piie.com. April 18.

Romer, Christina, and David Romer. 2013. The Most Dangerous Idea in Federal Reserve History: Monetary Policy Doesn't Matter. *American Economic Review* 103 (May).

Svensson, Lars. 2003. What Is Wrong with Taylor Rules? Using Judgment in Monetary Policy through Targeting Rules. *Journal of Economic Literature* 41 (2): 426-77.

Taylor, John. 1993. Discretion versus Policy Rules in Practice. *Carnegie-Rochester Conference Series on Public Policy* 39: 195-214.

Taylor, John. 2007. Housing and Monetary Policy. *In Housing, Housing Finance, and Monetary Policy: A Symposium Sponsored by the Federal Reserve Bank of Kansas City*. Kansas City, MO: Federal Reserve Bank of Kansas City.


Gross Domestic Product: Implicit Price Deflator (GDPDEF)
Source: U.S. Department of Commerce: Bureau of Economic Analysis
(Percent Change from Year Ago)
11
10
9
8
7
6
5
4
3
2
1
0
1960
1965
1970
1975
1980
1985
Shaded areas indicate US recessions.
2013 research.stlouisfed.org
FRED

Lessons Learned from a Century of Federal Reserve Last Resort Lending

Testimony before the

Subcommittee on Monetary Policy and Trade

Committee on Financial Services

U.S. House of Representatives

Washington, D.C.

Marvin Goodfriend[1]

Friends of Allan Meltzer Professor of Economics

Tepper School of Business

Carnegie Mellon University

and

Research Associate

National Bureau of Economic Reserach

September 11, 2013

[1] Former Senior Vice President and Policy Advisor, Federal Reserve Bank of Richmond, 1993-2005.

I am pleased to be invited to testify before the Subcommittee on Monetary Policy and Trade of the House Committee on Financial Services on "The Fed Turns 100: Lessons Learned from a Century of Central Banking." I will emphasize the following five points in my testimony "Lessons Learned from a Century of Federal Reserve Last Resort Lending."

i) The Federal Reserve's last resort lending powers were gradually and vastly expanded during the last century.

ii) Federal Reserve last resort lending is insufficiently disciplined by Walter Bagehot's (1873) advice to the 19th century Bank of England—to lend freely at a high rate against good collateral in a banking crisis.

iii) The reason is that the Bank of England's shareholders earned the profit and bore the losses, while the fiscal authorities receive net Fed income and taxpayers bear any Fed losses.

iv) As the Fed expanded its lending reach in scale and scope, markets expanded the use of inexpensive but fragile short-term finance counting on the protection of last resort lending.

v) Federal Reserve last resort lending should be carefully circumscribed to put a stop to these destabilizing banking and money market dynamics.

A CENTURY OF LAST RESORT LENDING

The constraints on the Federal Reserve's lending powers were loosened gradually over time.[2] The original Federal Reserve Act of 1913 authorized the Fed to extend credit only to member banks of the Federal Reserve System. Lending to other entities was not permitted at all until 1932, when Section 13 (3) gave the Fed the authority to lend to "individuals, partnerships, and corporations" in "unusual and exigent circumstances" as determined by the vote of at least five members of the Board of Governors. However, Fed credit extended to nonbanks in the 1930s was

[2] Hackley (1973).

relatively insignificant because collateral requirements in 13 (3) were highly restrictive even after being relaxed by a 1935 amendment. Instead, Congress established the Reconstruction Finance Corporation to allocate credit widely to nonbank entities.[3] Apparently, Congress was uncomfortable expanding the credit policy powers of the independent central bank.

Nevertheless, the Fed exhibited a tendency on its own to expand the scope of last resort lending to depositories beyond short-term liquidity assistance, especially whenever it worried that not doing so threatened a systemic financial crisis. For instance, the Fed encouraged depositories in 1970 to borrow from the Fed discount window to support the commercial paper market in the wake of the Penn Central bankruptcy. In 1974, Fed lending supported the insolvent Franklin National Bank until it could be purchased by a group of investors. Similarly, Fed lending from May 1984 to February 1985 supported the undeclared insolvency of Continental Illinois Bank until it was resolved.[4]

The Federal Reserve's lending reach was expanded significantly when the Depository Institutions Deregulation and Monetary Control Act of 1980 gave all depositories access to the Fed discount window, whether or not they were members of the Federal Reserve System. By the end of the decade Schwartz (1992, p. 68) observed:

> "...By the 1980s hundreds of banks rated by regulators as having a high probability of failure in the near term and which ultimately failed were receiving extended accommodation at the discount window...[t]he change in discount window practices, by delaying closure of failed institutions, increased the losses the FDIC and ultimately taxpayers bore."

Motivated by the above record, in the aftermath of the Savings and Loan crisis the 1991 Federal Deposit Insurance Corporation Improvement Act (FDICIA) contained provisions intended to limit

[3] See Jones and Angly (1951).
[4] Schwartz (1992), pp. 62-4.

Fed lending to undercapitalized banks. Unfortunately, the effectiveness of the law would be compromised where capitalization was measured largely on book rather than market valuation.[5]

The Fed made few loans to non-depositories under 13 (3) after the 1935 amendment took effect in 1936. But following the 1987 stock market crash policymakers were persuaded to relax restrictions on Fed lending to nonbank financial firms. And Section 473 of FDICIA amended the Federal Reserve Act so that the only collateral test remaining under 13 (3) was "satisfactory security," the same test that applied to borrowings of depository institutions.[6] Alan Greenspan (2010, p. 17) has written that in 1991

> "...at the urging of the Federal Reserve Board of Governors, Section 13 (3) of the Federal Reserve Act was considered, and amended by Congress. The section grant[ed] virtually unlimited authority to the Board to lend in "unusual and exigent circumstances."

Ironically, although FDICIA is better known for a compromised attempt to restrict Fed lending to insolvent depositories, FDICIA actually expanded the Fed's lending powers well beyond depositories.

Since then, financial innovation and regulatory arbitrage of minimum capital requirements have fueled a huge expansion of securitization and structured finance of longer-term illiquid cash flows for funding in money markets via shadow banking.[7] By 2007, money markets accounted for a share of financial intermediation that rivaled depository intermediation in scale. Importantly, potential Fed lending in support of money markets was not accompanied by Fed supervision and regulation as it was for depositories with access to the Fed discount window. The fact that money markets could expect support from expansive Fed credit policy in a crisis directly, or indirectly via lending to depositories, probably encouraged the vast expansion of money market finance.

---

[5] The Fed's lending to insolvent banks is discussed in Clouse (1994) and Schwartz (1992). Goodfriend (1994), p. 574 proposes a Fed-Treasury "Accord" so that Fed lending does not keep insolvent banks open at taxpayer expense.
[6] Todd (1993), p. 20.
[7] Goodfriend (2011b).

In the 2007-8 credit turmoil the Fed was put in an untenable position given its wide powers to lend—disappoint expectations of accommodation and risk a systemic financial collapse, or lend expansively and feed expectations of even more expansive lending. Fed last resort lending again exhibited the tendency evident earlier to expand its lending reach in time of crisis, this time in an unprecedented enormous increase in reach, scale, maturity, and eligible collateral.[8] Unbridled last resort lending drew the Fed into a massive expansion of credit "with the implied promise of similar actions in times of future turmoil."[9]

The problem confronting independent Fed credit policy is this: last resort lending has the capacity to create ever-greater boom and bust cycles in banking and money markets while simultaneously undermining the Fed's independent legitimacy within government. The nature of the problem is explored and a solution is proposed below.

BAGEHOT'S RULE, THE BANK OF ENGLAND, AND THE FEDERAL RESERVE

Federal Reserve last resort lending is widely regarded as a natural extension of 19th century last resort lending by the Bank of England famously encouraged by Walter Bagehot (1873). However, the Federal Reserve and the 19th century Bank of England have pursued their last resort lending powers very differently as a result of their governance. When Bagehot urged the Bank of England to lend in a banking crisis against good collateral at a penalty rate, he needn't say more. Bagehot's problem was to encourage the Bank to pre-announce the lending policy that it would follow in a banking crisis once the U.K. Treasury temporarily suspended the gold reserve requirement against its paper banknotes. Bagehot could be sure that the Bank would lend at a profitable penalty rate, since the Bank was a private, profit-maximizing institution whose shareholders earned the profit and bore the risk of loss. Likewise, Bagehot could be sure that the

[8] See Goodfriend (2011a), and Goodfriend and Lacker (1999), pp. 14-15.
[9] The quote is from Volcker (2008), page 2.

Bank would lend against good collateral so as not to take on credit risk. Bagehot needn't be concerned that last resort lending could subsidize and distort credit flows. There was no need, since it was the monetary features of last resort lending (the elastic provision of banknotes) at a modestly elevated interest rate ceiling that mattered for stabilizing banking and financial markets.

The problem with regard to Federal Reserve last resort lending today is just the opposite—it is to limit the Fed's lending reach. The independent Fed is inclined to lend rather than risk a panic by not lending, even if forced to take relatively poor collateral at inordinately low interest, because its own funds are not at stake—the fiscal authorities receive net Fed income after operating expenses and taxpayers bear any Fed losses. Moreover, the Fed puts taxpayers at risk even if it protects itself by taking good collateral. The reason is this: If the entity to which the Fed lends fails with a Fed loan outstanding, the Fed takes collateral at the expense of taxpayers exposed to losses from backstopping the deposit insurance fund, or from other financial guarantees that the government may have put in place. The set-up facilitates lending laxity and moral hazard.

Since the credit turmoil of 2007-8, the Fed has employed expansive credit policy initiatives for purposes beyond boundaries ordinarily regarded as legitimate for an independent central bank. Whether justified by the need to act in a timely manner, or by the need to act in lieu of paralyzed fiscal authorities, expansive credit policy initiatives that reach beyond such boundaries rightly draw scrutiny, in part because they necessarily favor one sector or another. Expansive credit initiatives undermine the Fed's legitimacy and potentially its capacity to pursue stabilization policy effectively. Moreover, expansive independent credit policy that bypasses the legislative process for whatever reason creates complexity and opacity that favors insiders and weakens the public's confidence in government and the rule of law.

HOW FED CREDIT POLICY WORKS AND HOW IT SHOULD BE CIRCUMSCRIBED[10]

Fed credit policy works by interposing the government's creditworthiness—the power to borrow credibly against future taxes—between private borrowers and lenders to facilitate credit flows to distressed borrowers. Specifically, Fed credit policy involves lending to private institutions (or acquiring non-Treasury securities) with freshly created bank reserves or proceeds from the sale of Treasuries from the Fed's portfolio. To prevent future inflation, the Fed must reverse the reserve creation eventually by selling Treasuries from its portfolio, or else the Fed will have to pay a market interest rate on the reserves. Either way, Fed credit policy involves the lending of public funds to particular borrowers financed by interest-bearing liabilities issued against future taxes. The Fed returns the interest on its credit assets to the Treasury, but all such assets carry credit risk and involve the Fed in potentially controversial disputes regarding credit allocation.

Occasional Fed lending to solvent, supervised depositories on short term, against good collateral is protected against ex post loss and ex ante distortion. Such circumscribed lending deserves a degree of operational independence. However, credit initiatives that extend the Fed's credit reach in scale, maturity, and eligible collateral to unsupervised, or potentially insolvent institutions, or the purchase of non-Treasury securities, inevitably carry credit risk, excite questions of fairness, and threaten the legitimacy of both the Fed and the fiscal authorities. Hence, Congress in its oversight role should clarify the boundary of the Fed's responsibilities for taking expansive credit actions and correspondingly restrict its independence in doing so. Congress should insist that the Fed adhere to a "Treasuries only" asset acquisition policy, except for occasional last resort lending to depositories.[11]

[10] This section draws on themes developed extensively in Goodfriend (2011a).
[11] Goodfriend and King (1988) and Schwartz (1992) explain that the Fed can usually exercise its lender of last resort responsibilities solely through open market operations without the need to lend to individual institutions through the discount window.

The 2010 Dodd-Frank Act recognizes the problem and requires Fed lending extended beyond depositories to be approved by the Treasury Secretary and to be part of a broad program not directed to any particular borrower. The Dodd-Frank requirements do not address the problem adequately, however, because the Administration is no more authorized to commit taxpayer resources than the independent central bank--only Congress can do so. And the Treasury is as likely as the Fed has been to favor expansive last resort lending in a financial crisis rather than risk an immediate financial collapse.

To deal effectively with the potential for an expanding and ultimately self-destructive Fed lending reach, taxpayer representatives should be involved more prominently in the oversight of expansive Fed credit policy. Expansive lending should be authorized before the fact by Congress in its oversight role, and only as a "bridge loan" accompanied by a "take out" arranged and guaranteed in advance by Congress. The authorization process should include a clear, explicit, public discussion of the fiscal risks alerting taxpayers in a clear and explicit way to the potential cost of expansive Fed credit initiatives. An expectation of taxpayer reluctance to bear the cost of expansive Fed credit policy could then credibly bend down market expectations of the Fed's lending reach so that banking and money markets would better insure themselves against liquidity risk. Strong legislative action would defuse the implied promise of expansive Fed credit policy actions in the future, help prevent a repetition of the boom and bust cycle in money market finance, and preserve an important limited role for Fed credit policy.

REFERENCES

Bagehot, W. 1873. *Lombard Street: A Description of the Money Market*. London: Kegan, Paul and Co. [Reprinted 14th edition, 1927 by John Murray, Albermarle Street, W.]

Clouse, J. 1994. "Recent Developments in Discount Window Policy." *Federal Reserve Bulletin* 80, no. 11, November, pp. 965-77.

Goodfirend, M. 1994. "Why We Need an "Accord" for Federal Reserve Credit Policy: A Note," *Journal of Money, Credit, and Banking*, vol. 26, no. 3, part 2 (August), pp. 572-80; reprinted in Federal Reserve Bank of Richmond *Economic Quarterly*, Winter 2001, pp. 23-32.

_____. 2011a. "Central Banking in the Credit Turmoil: An Assessment of Federal Reserve Practice," *Journal of Monetary Economics*, January, pp. 1-12.

_____. 2011b. "Money Markets," *Annual Review of Financial Economics*, vol. 3, R. Merton and A. Lo, eds. pp. 119-37.

Goodfriend, M. and J. Lacker. 1999. "Limited Commitment and Central Bank Lending," Federal Reserve Bank of Richmond *Economic Quarterly*, Volume 85, no. 4, Fall, pp. 1-27.

Goodfriend, M. and R. G. King. 1988. "Financial Deregulation, Monetary Policy, and Central Banking," in *Restructuring Banking and Financial Services in America*, W. Haraf and R. Kushmeider, eds. American Enterprise Institute, pp. 216-53; reprinted in Federal Reserve Bank of Richmond *Economic Review*, May/June 1988, pp. 3-22.

Greenspan, A. 2010. "The Crisis." Greenspan Associates mimeo, second draft, March 9

Hackley, H. H. 1973. *The Lending Functions of the Federal Reserve Banks: A History*. Washington, DC: Board of Governors of the Federal Reserve System, Washington, DC.

Jones, J. H. and E. Angly. 1951. *Fifty Billion Dollars: My Thirteen Years with the RFC (1932-1945)*, New York: The Macmillan Company.

Schwartz, A. 1992. "The Misuse of the Fed's Discount Window," Federal Reserve Bank of St. Louis *Economic Review* (September/October), pp. 58-69.

Todd, W. 1993. "FDICIA's Emergency Liquidity Provisions." Federal Reserve Bank of Cleveland *Economic Review* 29, no. 3, Quarter 3, pp. 16-23.

Volcker, P. 2008. "Remarks by Paul Volcker at a Luncheon of the Economic Club of New York," April 8.

Title Page

Reforming the Federal Reserve for the 21st Century

By Allan H. Meltzer

Gailliot and Scaife University Professor of Political Economy
Carnegie Mellon University and
Distinguished Visiting Fellow, the Hoover Institution

Testimony
House Financial Services Committee
Washington, DC

September 11, 2013

Evolution at the Federal Reserve

The 1913 Federal Reserve Act created an institution with very limited powers. President Wilson's compromise resolved the main political obstacle to passing the act. The Reserve banks became semi-autonomous, controlled by their managements and directors. Boards of directors had the power to reject portfolio decisions. The Board in Washington had (undefined) supervisory responsibility.

The United States was on the gold standard, limiting Federal Reserve actions to the requirements of that rule. In addition, the new system authorized Reserve banks to discount commercial paper, banker's acceptances, and the like. The discounting operation was always at the initiative of the borrower. Also, the act prohibited any direct purchases of Treasury debt.

All of these restrictions ended long ago. The gold standard limped to an end in the 1930s. Discounting became an unimportant part of the Federal Reserve's activities, and a limited volume of direct loans to the Treasury replaced the prohibition. Far more important, reliance on open market operations circumvented the prohibition on direct purchases of Treasuries. Currently, and for many ears, the Federal Reserve has bought or sold unlimited amounts of Treasury securities in the market at the time of the offering or at any subsequent time.

This transformation occurred in steps, many of them in response to major crises especially the Great Depression, the Great Inflation, and the current prolonged recession and slow recovery.

The Reserve banks won the initial struggle for control. Under the leadership of Benjamin Strong, Governor of the New York bank, they dominated policy decisions in the 1920s until Strong's retirement in 1928. The Board did not have a vote at meetings of the Federal Open Market Committee. Although Board members attended at times, they were not committee members.

Within months of Strong's departure, Board members gained influence. Later, the Banking Acts of 1933 and especially 1935 shifted power toward the Board by giving the Board a majority on the new Federal Open Market Committee and eliminating the power of Reserve bank directors to decide on their bank's participation in open market purchases or sales.

During the Great Inflation, Congress amended the Federal Reserve Act by adding the so-called dual mandate. After the recent housing and financial crisis of 2007-09, Congress approved the Dodd-Frank bill containing hundreds of regulations on banks. The act farther reduced the much diminished role of Reserve bank directors.

Among the many new regulations is the use of Federal Reserve earnings to allocate credit toward consumers. The Fed had previously resisted credit allocation, but it will henceforth finance it out of its earnings without any right to decide on the allocation. The right is reserved to the director of the consumer agency now embedded into the Federal Reserve Act. The director does not report to the chairman, the Congress or anyone else. And although the earnings that the director uses would otherwise return to the Treasury as receipts, Congress does not vote on the allocation. Political decision-making is now unavoidable.

This change is a startling reduction in the mandated independence of the Federal Reserve. Federal Reserve independence has often been compromised but never before by act of Congress. Earlier examples, discussed in my *History of the Federal Reserve* (2003, 2009) include financing wartime deficits, acceding to pressure from Secretary Morgenthau in the 1930s, maintaining pegged interest rates after World War II until the 1951 Accord, financing 1960s and 1970s budget deficits and recent decisions to purchase mortgage-backed securities, a fiscal operation, and to manage the debt.

Once Congress understood the importance of monetary expansion for employment, it took extraordinary effort and a strong chairman to remain independent. Paul Volcker was an independent Chairman. Alan Greenspan also remained relatively independent. Others were willing to compromise. The current Federal Reserve has engaged in such non-monetary functions as fiscal policy, debt management, and credit allocation.

To sum up the evolution, I conclude that the Federal Reserve evolved under pressure of events and political responses to crises from an independent agency with constrained powers to become the world's major central bank with nearly unrestricted ability to expand. It retains a vestige of its independence, but it pays the price of much reduced independence for its greatly expanded authority. Within the system, power has shifted from the Reserve banks to the Board of Governors, and the Reserve bank directors have a greatly diminished role.

From the start of the system, the popular view saw the Reserve banks as representatives of business and the Board as reflecting political influence. Increased power of the Board shows

increased political influence that rose with diminished independence. No one familiar with political Washington should be surprised to find that increasing Board power greatly increased political influence and much reduced independence. Looking across the Atlantic, we find that the tightly constrained European Central Bank according to its original charter has become much more responsive to political pressure also.

Among the notable failures of recent years is the failure of Congressional oversight. As noted, Dodd-Frank creates a virtually unconstrained consumer credit agency. The Federal Reserve has doubled and redoubled its balance sheet in the recovery from recession without any vote of approval by members of Congress. This violates the principle of checks and balances and Congressional oversight of spending that is fundamental in our federal system.

I believe that Congress has the urgent task of asserting that the Constitution gives Congress control of money creation. To reclaim its responsibility to control its agent, the Federal Reserve, it must impose a rule that the Federal Reserve must follow. One such rule that embodies the dual mandate is known as the Taylor rule. The Federal Reserve should be required to follow that rule and should inform the Congress and the public of what it expects unemployment and inflation to be two or three years in the future. If it fails to meet its pre-announced targets, it must offer an explanation and resignations. Congress or the administration would be empowered to accept the explanation or demand resignations. That closes the large gap between Federal Reserve authority and political responsibility. In the years since 1985 when I proposed this control to the New Zealand Reserve Bank, more than 20 countries have adopted some form of the rule. The Congress should do so to maintain its constitutional responsibility under Article 1, Section 8.

Why Independence Declined

The principal reason for central bank independence is to separate money creation from the financing of government. It has long been understood that financing government by creating money causes inflation. Enforcing and maintaining independence is often difficult. Wartime is one example. Society's main interest is winning the war, so concern about inflation diminishes. Inflation rose during most wars followed by deflation or disinflation after peace returned.

After World War II governments proposed systematic monetary actions to manage unemployment and economic activity. They agreed also to maintain fixed but adjustable

exchange rates. When the United States' domestic policy came into conflict with its obligations to reduce balance of payments deficits (or a declining surplus), policy actions supported employment. In the 1960s, as inflation rose, the Kennedy and Johnson administrations adopted controls to manage the payments problem temporarily. The Federal Reserve considered the balance-of-payments to be a Treasury problem. It cooperated with the administration by lending money to the Treasury to finance so called swap arrangements that financed U.S. borrowing of foreign exchange. These direct loans to the Treasury's Exchange Stabilization Fund were called "warehousing" to hide the violation of direct lending to the Treasury. Bordo, Humpage, and Schwartz (2011), has a full account of the swap operations. (See also Meltzer 2003)

The fixed exchange rate system ended in 1971 when President Nixon stopped further gold sales. Attempts to revive the system failed; in 1973 these efforts ended. The Federal Reserve continued to intervene in the exchange market at times. The Treasury requested some of the intervention.

One of the major mistakes made by the Federal Reserve in the 1960s became known as policy coordination. The main idea was to keep interest rates from rising during periods of fiscal expansion. Coordinating policy actions meant that the Federal Reserve financed large parts of a fiscal deficit by issuing money. In principle, but not in practice, the Federal Reserve would raise interest rates when the Treasury ran a surplus to slow or stop inflation. Policy coordination in the recent recovery took the form of financing large parts of the government deficit at very low interest rates. The unwinding of that massive operation is a major economic challenge of the rest of this decade.

Two major flaws soon appeared when policy coordination occurred in the 1960s. The Treasury did not achieve surpluses and did not coordinate with the Federal Reserve to reduce inflation. The Federal Reserve sacrificed its responsibility for an independent monetary policy. And it could not, or did not, prevent inflation from rising during the 1960s and 1970s. In part, Federal Reserve failures in the 1960s reflected Chairman Martin's belief that since the Federal Reserve was part of government, it should not refuse to finance large parts of a budget deficit that Congress approved and the president signed. But it also reflected the political decisions of the Burns era.

The policy failure ended in 1979-80 when Paul Volcker, as Federal Reserve chairman, set out to reduce inflation. To succeed, he abandoned policy coordination, dismissed the Phillips

Curve relating unemployment and inflation, reduced control of short-term market interest rates, announced the Federal Reserve's intention to control bank reserves and monetary aggregates, and he adopted a medium-term strategy to reduce inflation. Like his predecessors, he had one main objective. Theirs was lower unemployment; his was lower inflation.

Volcker rejected the idea that inflation rose as a trade-off for lower unemployment. He emphasized, correctly, that the two measures both rose in the 1970s and he predicted they would decline together under his policy. He was right. The anti-inflation policy that he managed reduced both inflation and unemployment in the 1980s.

Volcker gave many speeches and much testimony in Congress claiming that the way to lower unemployment was to lower inflation. This is the anti-Phillips Curve policy. It worked very well from 1985 to about 2003. The current Federal Reserve restored the Phillips Curve, a repeat of the mistakes of the 1970s.

There is much more that can be said about Federal Reserve errors that are costly to the public. Let me turn instead to the periods of greatest success. In its 100 year history, there are only two periods in which the Federal Reserve achieved both relatively stable growth and low inflation. In both periods, the Federal Reserve followed a rule, not precisely but consistently.

The first period is 1923-28, when the Fed was on a gold exchange standard and several major countries Germany, Britain, and in 1928 France restored a fixed gold price rule. Other countries joined also.

The Federal Reserve's commitment to the rule was not complete. The principal exception was that it would not inflate, so it sterilized most gold inflows. This led to the breakdown of the rule; countries losing gold had to deflate, but the principal countries receiving gold – France and the United States – chose to sterilize the inflow.

Britain was the main country required to deflate. France and the United States were the principal recipients. Nevertheless, when the rule was generally observed, from 1923 to 1928, the United States had growth, a mild recession in 1926, and low inflation.

The second rule-based period is 1985 to 2003, during which the economy had a long period of relatively stable growth, mild recessions and low inflation. The dates are not known precisely. The rule is the Taylor (1993) rule or a variant that weights unemployment and the expected inflation rate. The choice of variables are the same as in the dual mandate that

Congress adopted. Inflation has a large weight to assure that inflation raises nominal interest rates.

Discretionary policy never produced comparable results. Its best period is probably 1953-57 before the recession of the later year. I exclude wartime years from the comparison because the Federal Reserve's actions, like those taken by the other institutions, concentrated on actions that helped to finance the war.

Economic theory, following Kydland and Prescott's (1977) paper shows that central banks must follow a rule to achieve an optimum outcome. The evidence from Federal Reserve history shows that evidence supports theory. Rules help the country to achieve economic stability; but we live in an uncertain world, so I must add that surprises and disappointments will occur under rules or rule-based policy. Of course, the same is true of discretionary policies.

The Federal Reserve recently sacrificed independence by engaging in fiscal policy actions, debt management, credit allocation, and by supplying hundreds of billions of dollars of bank reserves. I believe the only way to restore independence would be to adopt a rule that the Congress accepts. Then the Federal Reserve must make rule-based policy credible by following it. If events compel departure, announce the departure and offer its analysis of the decision along with offers to resign.

The Fed's Principal Errors

Any organization that must repeatedly make judgments about future events will, at times, make errors. In an uncertain world, we expect errors of forecast and errors in the action based on those forecasts. In my history of the Fed, I compare quarterly forecast errors in real GDP and inflation to the data revisions. For the period I studied, the 1970s and 1980s, forecasting errors are substantially larger than data revisions. (Meltzer, 2009) For other years, I compared the Fed's forecast errors to forecasts by others. On average, the Fed forecast errors were about the same as others. (Meltzer, 1987)

In my 1987 presidential address to the Western Economic Association, I summarized errors reported by forecasters for quarterly values of real and nominal GNP growth rates and for inflation. Federal Reserve errors are not very different. To compare these data to a benchmark, I report the mean growth rates of the variables for 1970-85. Average real GNP growth rate was 2.7 percent, average inflation was 6.7 percent, and the growth rate of nominal GNP was 9.5

percent for 1967-82 and 9.9 percent for 1970-83.[1] Comparison of these data to the average growth rates shows that the reported root mean square errors (RMSE) are a sizeable fraction of the actual growth rates for real and nominal growth. Using twice the value of the RMSE as the range within which real GNP growth can fall during the quarter covers the range from deep recession to strong boom. As one example, the median RMSE reported by Zarnowitz for 1970 to 1983, 3 percent exceeds the 2.4 percent average growth for the period. On average forecasters do not distinguish between booms and recessions beginning in the same quarter.

Table 1 here

The Federal Reserve history shows many examples of forecast errors leading to mistaken actions. When Congress in 1967 at last approved the tax surcharge that President Johnson had finally requested, the Federal Reserve and the administration forecast a recession. The Federal Reserve reduced interest rates. The temporary surcharge did not slow spending growth. Inflation rose instead of falling as forecast.

From the mid-1970s to the early 1980s, the Federal Reserve inflation forecast was below actual inflation for 16 consecutive quarters. The staff used a Phillips Curve to forecast inflation. There is considerable research showing that Phillips Curve forecasts of inflation are unreliable.[2]

When Paul Volcker became chairman of the Board of Governors, he told the staff that its inflation forecasts were inaccurate. He repeated the message publicly and in Congressional testimony. As chairman, Alan Greenspan told the staff that he did not find the inflation forecasts useful. Like Volcker, he explicitly rejected the Phillips Curve. Under chairman Bernanke, Phillips Curve forecasts have been restored.

Paul Volcker not only rejected use of the Phillips Curve, he developed and promoted what I call the anti-Phillips Curve. Unlike the staff approach relying on quarterly data, Volcker emphasized longer-term responses. His approach, based on empirical observation, was that during the 1970s, inflation and real growth or the unemployment rate rose and fell together. There was no tradeoff in the longer period. In a television program as early as 1979, shortly after announcing his new policy procedure of targeting reserve growth and allowing interest rates to be set in the market, he was asked what he would do when unemployment rose and his policy

[1] The percentages are computed from data reported at the time. Subsequent data version may change the growth rates.
[2] One reason is that the data Phillips used are mainly for the years in which Britain was on the gold standard. The gold standard restricted expected inflation.

reduced inflation. His reply cited the co-movement for the 1970s when unemployment rates and inflation rates rose together. He predicted that they would fall together under his policy. They did. His prediction was correct.

One result of his successful policy of lowering the inflation and unemployment rates was widespread acceptance of his anti-Phillips Curve analysis: the way to get a low unemployment rate was to follow policies that yielded low inflation rates. Such policies encouraged investment and growth. Reliance on the Taylor rule to guide policy from the late 1980s to the early 2000s reinforced this good result.

Unfortunately, reliance on a policy rule to guide actions ended when officials and market participants incorrectly forecast deflation after 2003. Policy shifted to discretionary action that helped to finance a housing boom. By keeping interest rates low, the Federal Reserve financed much of the housing boom. Federal Reserve policy was not the main cause of the housing boom and collapse. Housing policy by both political parties endorsed no down payment mortgages for buyers with no credit rating. Government agencies bought a large share of the risky mortgages and offered bankers and mortgage broker's large profits for supplying mortgages to the government mortgage companies.

Volcker knew that policy would not lower the inflation rate quickly. He adopted a longer-term strategy. He did not ignore current data, but he continued to also act to achieve his longer-term goal.

When reading transcripts of open market meetings through 1986, I was surprised to find little attention or discussion of expectations of medium-term results of the actions decided at the meeting. No statements are found such as "if we take this action today, I expect growth and inflation to be in the following range next year." Members see Board staff forecasts of future events made before policy action is selected. Most have their own staff forecasts. Rarely do the members explore differences. Members submit quarterly forecasts of future economic conditions, but these also do not appear to be influenced by the action taken at the meeting.

The result is that current events, market and administration or Congressional pressures drive decisions to focus heavily on near-term events over which monetary actions have little effect and too little on achieving medium-term stability with low inflation and relatively stable growth. As I have emphasized here and elsewhere, in the two periods when the Fed more or less followed rules, policy was more successful than under discretion. A main reason, I believe, is

that following rules stabilizes policy actions by forcing more attention on achieving medium- and longer-term outcomes based on the rule. The very successful Deutsches Bundesbank combined short-term market information and medium-term objectives by choosing a monetary growth rate to indicate that policy actions tightened or eased too much or too little to maintain medium-term price stability or low inflation.

Adopting and following a rule would induce the policymakers to give more weight to medium- and longer-term objectives. An explicit rule provides information to markets, investors and consumers that they use to make their plans. In the absence of a rule markets are more volatile. They have less information about the path to be followed, so they interpret statements by the chairman and other members. The excess variability generated is costly and wasteful.

A problem closely related is the excessive attention given to short-term data. Standard economic theory distinguishes between temporary or transitory and permanent or persistent changes. To gain confidence that policy distinguishes between persistent and transitory events, policy actions must of necessity allow enough time to pass to avoid over-response to transitory changes. Many economic variables of interest are noisy. Real GDP growth and unemployment rates are examples of particular interest.

The Federal Reserve responds to temporary changes in reported inflation rates by removing volatile changes in the prices of food and fuel. All such changes are not transitory, so this procedure is flawed. A better way to separate temporary price changes would use the procedures developed in Muth (1960).

Some Federal Reserve officials deny my claim that their actions overweight relevance of current and near-term data. It is true that the chairmen and many others talk about medium- or longer-term objectives. Statements about future inflation, emphasizing determination to prevent it, are familiar. But statements differ from actions.

Minutes or transcripts during the period of rising inflation in the 1970s contain many statements about the importance of acting to reduce rising inflation. When unemployment rose, anti-inflation policy ended, replaced by actions to lower interest rates in response to higher unemployment. A main result was that both inflation and the unemployment rate rose. Market participants and the public learned that reducing unemployment had priority. Expected inflation did not decline as it had in 1966.

In the summer of 2010, many traders reported slowing growth, warning that the economy faced renewed recession and deflation. The Federal Reserve promptly responded by announcing an additional $600 billion of purchases of long-term securities. Within a few months, it became clear that the country did not face renewed recession and deflation. The forecast error cannot be explained by the additional stimulus. Stimulus had not started or been approved; and when adopted had little if any effect. $500 billion of the additional $600 billion of new reserves went to idle excess reserves.

Alarmed by reports of low job growth and a failure of unemployment rates to decline, Chairman Bernanke and other members of FOMC called for additional stimulus in the summer of 2012. Initial reports of job growth for July and August 2012 showed 141,000 new jobs in July and 96,000 in August. These data heavily influenced a decision to begin a large scale expansion of reserves to lower interest rates, especially mortgage rates.

Shortly after the Federal Reserve announced the stimulus, job growth data changed. The revisions added 86,000 jobs, 40,000 for July and 46,000 for August. No one can be certain that the revised numbers are correct. Muth's (1960) model does not ignore current data. To separate permanent from transitory changes, it applies weights based on the relative variance of permanent and transitory changes.

Higher future inflation is a likely cost of the Fed's over-reaction to noisy employment data. Staff and officials dismiss this problem saying that they have only to raise interest rates enough to stop inflation. This response is extremely misleading for several reasons.

One reason is that banks have more than $2 trillion of excess reserves, so they can ignore small changes in interest rates. Interest rates are lower than at any time in history, so small increases will not be sufficient. And larger changes will put pressure on the Federal Reserve. Members of Congress, the administration, business groups, labor unions, and many of the public will object that after a long recession and years of slow growth, urging the Federal Reserve should not permit a new recession.

Further, the U.S. Treasury debt held by the public outside government sector (including the Federal Reserve) reached more than $12 trillion dollars at the end of July 2013, and it continues to rise rapidly. Average maturity is about 5 years, but 40 percent has less than 2 years to maturity. Each one percent increase in interest rates increases interest payments within two years by at least $36 billion for each percentage point of interest rate increase, so a 3 percentage

point rise in bond rates adds more than $100 billion to government spending. Using the average share held by foreigners at this maturity, about 1/3, implies that the balance of payment deficit rises by almost $50 billion a year. This is a conservative estimate because it neglects guaranteed debt that adds to both deficits and privately issued debt partly owned by foreigners.

In its 100 year history, the Federal Reserve never agreed on the model of the economy. I do not find much evidence that they try to reconcile differences about how the economy works. The Board staff has a model of the economy, but Reserve banks use different models. When members of the Federal Open Market Committee offer forecasts, the forecasts are based on different models often modified by judgments. I have not found any serious effort to reconcile differences or to explain their source. There is nothing that can properly be called the Federal Reserve forecast.

In the past, the Federal Reserve used several different models or paradigms. It has a history of mistakes. At first, the Board relied on the real bills doctrine and the gold standard. Later, free reserves and tone and feel guided actions, then a simple Keynesian model with an unconstrained Phillips Curve that accepted a permanent trade-off of higher inflation for reduced unemployment rate. None of these guided actions to achieve low inflation and relatively stable output growth. Guidance based on the Taylor rule substantially improved performance.

Recently, the Board staff and principal members used a model based on Woodford's (2003) elegant modeling. This, too, is deficient. In the model, money and credit do not matter for monetary policy. And prices of assets are not part of the transmission mechanism. Only short-term interest rates and rational expectations are relevant. How could we have a credit crisis? Could anyone believe that the decline in housing prices was a rationally expected response to policy?

I find it incredible that a central bank ignores changes in money and credit. Simply put, that is a mistake that not only ignores much that economist have learned about monetary economics from analysis and history. No less surprising is the total neglect of the role of asset prices in the transmission of monetary impulses. Earlier work by Brunner and Meltzer (1993) and by Tobin (1969) did not neglect asset prices or credit.

A perennial issue in many countries is the choice between domestic price stability and exchange rate stability. No country acting alone can achieve both domestic price stability and stability of its currency. International agreement must supplement domestic policy.

For many years I have proposed an international arrangement that achieves both ends for countries that choose to participate. The arrangement is voluntary and requires no meetings to coordinate policy. Countries that participate achieve low inflation and greater stability of exchange rates.

Major countries agree to follow domestic policies to hold their inflation rates between zero and two percent. The United States, the European Central Bank, and the Bank of Japan have accepted this policy objective. If China removes exchange controls, it could choose to be a fourth member by adopting the common inflation rate. The three or four main currencies would float to adjust to changes in relative productivity and demand.

All other countries that chose to peg to one or more of the major countries would import price stability and maintain a fixed exchange rate. Their decision to peg their exchange rate permits major countries to trade with them at a fixed exchange rate. The world gains a public benefit.

There is no organized coordination arrangement. Like the gold standard discipline is enforced by markets. If one of the major countries runs large budget deficits, markets will depreciate the currency. As Bordo and Schwartz (1984) showed, the system will not work without error or deviations, but it will increase staility.

If major countries adopt and announce a rule for monetary policy, such as the Taylor rule, market monitoring will be more effective and uncertainty about monetary policy will be reduced. Further, of major importance, a monetary rule that limits central bank financing of government deficits requires increased fiscal discipline.

Discretionary policy produced the Great Depression the Great Inflation and many periods of inflation and recession. Exchange rates have varied over a wide range. Rule-based policy will not be perfect. The future is uncertain and unanticipated changes occur. But uncertainty about policy will be lessened.

I have often proposed that the Federal Reserve announce its provisional targets for two or three years ahead. If it fails to achieve its targets, it would offer an explanation and resignations. The political authorities could choose. This proposal reduces the gap between authority for policy decisions and outcomes and responsibility to the public when policy errors occur. The Federal Reserve has authority to act, but elected officials are punished when the economy falters.

Finally, following the recent financial crisis and in its aftermath the Federal Reserve has engaged in fiscal actions, debt management, and has quadrupled the size of its balance sheet. I believe no agency of government should have as much independent authority. We profess to have a limited government. The Federal Reserve has acquired unlimited authority. Congress should not permit that power to continue without oversight and prior agreement.

Financial Stability

The 2007-09 financial crisis concentrated attention on financial stability. Here, again the Fed failed to prevent the crisis, then responded appropriately to prevent collapse of the economy.

In the United States, the Dodd-Frank law brought nearly 400 new regulations according to one count. The law is a poor substitute for a program that increases financial stability by providing proper incentives.

The Dodd-Frank law and Federal Reserve regulation is unlikely to achieve its stated objectives. Skepticism is warranted because the law shifts responsibility from bankers to policy agencies. We know that regulators had agents in all the major banks prior to the 2008 crisis. The agents observed all transactions; they did not reject any.

Further, regulators permitted financial institutions to increase leverage and ignore capital requirements. Regulatory capture is well-known and ever present.

In its first 100 years, the Federal Reserve has never announced a rule governing its role as lender-of-last-resort. The absence of a rule prevents banks from anticipating policy action and preparing portfolios to prevent failure. The proper way to increase stability is to increase banks incentive to avoid excessive risk-taking. To do that the law should require banks to hold considerably more equity capital.

A major mistake in regulatory policy is the decision to protect bank failures. A proper policy would protect the public by preventing collapse of the payment mechanism. The threat to the economy comes from the collapse of the payments system and the spread of panic from one lender to others.

In its first 100 years, the Federal Reserve has never announced a lender-of-last-resort policy. Every banking crisis brings some actions, but there is never an announced rule. Bagehot's famous criticism of the Bank of England's policy did not fault its actions. Bagehot's

(1873) criticism was that the Bank did not announce its policy in advance. My proposals for financial stability remove the nearly 400 regulations in the Dodd-Frank law and adopt four rules.

1. A clearly stated rule governing the lender-of-last-resort. Bagehot's rule, lend freely against good collateral at a penalty rate remains appropriate.
2. Protect the payments system, not the bank, banks, or bankers.
3. Implementing the first two rules, prevents the problem from spreading to other banks and financial institutions.
4. Require regulated large banks to hold at least 15 percent equity capital against all assets.

When these rules were in force, they prevented bank crises.

Bagehot's criticism of the Bank of England applies to the Federal Reserve. By announcing and following a policy rule, the Federal Reserve would notify banks about what it will and will not do. It gives them an incentive to hold collateral acceptable for discount at the Reserve Banks. It reduces uncertainty, surely a gain during crises. It also reduces the expected gain from failing banks asking Congress to press the Federal Reserve or others for bailouts. And if banks follow the rule by holding collateral and larger equity reserves, fewer fail.

A policy rule for too-big-to-fail should not be the main way to prevent failures. Far more important is a rule that prevents most failures. Congress should enact equity capital standards for banks. I propose that beyond some minimum size, equity capital requirements should increase with asset size up to a maximum of 20 percent of assets. Losses would be borne by stockholders. The Federal Reserve and other regulators would monitor capital requirements. Outside auditors would certify that the requirements are met. Equity capital of 15 to 20 percent would restore capital for large banks to where it was in the 1920s. (Meltzer, 2012)

As the Federal Reserve reaches its one hundredth anniversary, it seems appropriate to consider its strengths that should be maintained and its weaknesses that should be corrected. Its greatest strength are its strong esprit de corps and the fact that it has adapted from the very restricted agency created in 1913 to the world's most powerful central bank. And to its great credit, it has not had a major scandal or impropriety. A few examples of "leaks" ended when the Fed started to announce its decisions.

Several of the Fed's failures are well-known. The Great Depression and the Great Inflation are part of its record. The Fed has many other flaws. One of its major mistakes is the

excessive attention it gives to current data about which it can do little. It rarely acts to change the medium and longer-term over which it has much more influence. When writing Fed history, I was surprised, and dismayed, that one hardly ever sees statements about what the members expect to happen a year from now as a result of the actions taken at its meeting. True, the staff provides forecasts about the future, but these are made before policy action is decided. I did not find much useful discussion of the forecasts. Both Paul Volcker and Alan Greenspan told the staff several times that its inflation forecasts based on the Phillips Curve were not useful. But the Phillips Curve is still central to the inflation forecasts that Chairmen Volcker and Greenspan found useless.

Two main reasons explain why the Fed should give more attention to the medium- and longer-term. First, many changes are transitory. The economic data in the 2012 winter are one of many examples. Data do not tell us immediately whether the reported improvement was temporary or would persist. We didn't learn the answer until weaker data returned in the spring.

Yes, the high, current unemployment rate is a serious human and economic problem. But the Fed can permanently reduce unemployment only if the problem is monetary. The very expansive monetary policies of the past four years helped during the crisis of 2008-9, but not currently. Our problems are mainly, real- and long-term. With mortgage rates lower than ever before and housing showing very sluggish recovery until recently, what can be gained by dropping the mortgage rate another small fraction? Business investment is held back by massive uncertainty. No one can reliably calculate the tax rates, health care costs and regulatory burden. How can corporate officers calculate expected return when they cannot know these future costs? That's a REAL problem, not a monetary problem. More Fed stimulus cannot permanently reduce real problems.

From about 1985 to 2003 the Fed achieved relatively stable growth, short, mild recessions and low inflation by more or less following a Taylor rule. That's the only long period in postwar economic history when it achieved the dual mandate ordered by Congress. Rule-based policy brought much better outcomes than discretionary ups and downs. The Fed should commit to that quasi-rule and follow it.

Again, the United States has serious long-term problems. Instead of more short-term stimulus, we need a government that puts us on a path toward a balanced budget over time, mainly by reducing spending, and gets the Fed to start gradually reducing the massive pile of

excess reserves. Instead of denigrating and then ignoring Paul Ryan's courageous efforts, the administration should put a program on the table to control our funded and unfunded deficits.

Evidence is growing that many think higher inflation is in our future. One sign is the premium that investors pay to hold index-linked Treasury bonds that protect against inflation. Another is the amount of borrowing to buy agricultural land. A third is the shift by asset owners from holding money to holding equities and real assets. What many call "bubbles" cannot occur without a shift from holding money to owning real assets or claims to such assets.

One of the many costs of the Fed's excessive attention to the near-term is that it will wait until after the inflation is upon us before they do anything to stop it. Their view is that by raising interest rates enough, they can stop any inflation. True, but not entirely relevant. Will the politicians, the public, business and labor accept the necessary level of interest rates? Much past history says: "Don't count on it." Better to adopt a 21st century rule and begin gradually reducing excess reserves now. And for the first time announce and follow a rule for the lender-of-last-resort.

You, the members of this committee can play a more effective role. Adopt a rule that the Federal Reserve must follow. Require the chair to explain why they departed from the rule. Enforce the rule by requiring offers of resignation along with statements explaining departures from the rule. That will make oversight meaningful and will help you to fulfill the responsibility the Constitution assigned to the Congress.

Following announced rules is the best way to restore Federal Reserve independence.

Table 1

Quarterly Root Mean Square Forecast Errors, United States

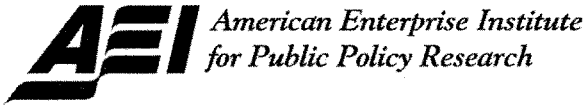
Per cent Per annum

Variable	Time Period	Range	Median or Actual	Source
Real GNP Growth	1980/2-1985/1	3.1 – 4.4	3.8	McNees (1986)[a]
	1970 – 73		2.1	Lombra and Moran (1983)
	1970/4-1983/4	2.8 – 3.6	3.0	Zarnowitz (1986)
	1970/1-1984/4	4.4 – 5.4	4.7	Webb (1985)
Inflation	1980/2-1985/1	1.4 – 2.2	1.6	McNees (1986)[a]
	1970/4-1983/4	2.0 – 2.6	2.2	Zarnowitz (1986)
	1970/1-1984/4	1.8 – 2.1	1.9	Webb (1985)
Nominal GNP growth	1967-82 1973/82		5.5 6.2	Federal Reserve[b]
	1970/4-1983/4	3.5 – 4.3	3.8	Zarnowitz (1986)

[a]12 forecasts early in the quarter. Median values for 3 late quarter forecasts: real GNP, 2.4, inflation, 1.4.

[b]Federal Reserve "green" books, various issues.

1.Forecasts for other data that we have reviewed include interest rates, money growth, investment, trade balance and balance of payments. Forecast errors are usually larger for these variables relative to mean values.



Statement before the Committee on Financial Services
Subcommittee on Monetary Policy and Trade
On "The Fed Turns 100: Lessons Learned over a Century of Central Banking"

The Fed Is as Poor at Knowing the Future as Everybody Else

Alex J. Pollock
Resident Fellow
American Enterprise Institute

Wednesday, September 11, 2013

The views expressed in this testimony are those of the author alone and do not necessarily represent those of the American Enterprise Institute.

Testimony of

Alex J. Pollock
Resident Fellow
American Enterprise Institute

To the Subcommittee on Monetary Policy and Trade
Of the Committee on Financial Services
U.S. House of Representatives

Hearing on "The Fed Turns 100: Lessons Learned from a Century of Central Banking"

September 11, 2013

The Fed Is as Poor at Knowing the Future as Everybody Else

Mr. Chairman, Ranking Member Clay, and Members of the Subcommittee, thank you for the opportunity to be here today. I am Alex Pollock, a resident fellow at the American Enterprise Institute, and these are my personal views. Before joining AEI, I was President and CEO of the Federal Home Loan Bank of Chicago from 1991 to 2004. I have published numerous articles on banking and financial systems, including the role of the Federal Reserve and central banks in general.

A striking lesson of the 100-year history of the Federal Reserve is how it has been able from its beginning to now to inspire entirely unjustified optimism about what it can know and what it can accomplish.

Upon the occasion of the Federal Reserve Act in 1913, an *American Banker* writer opined, "The financial disorders which have marked the history of the past generation will pass away forever." Needless to say, the Fed has not made financial disorders disappear, and not for lack of trying, while it has often enough contributed to them.

In 1914, the then-Comptroller of the Currency expressed the view that with the creation of the Fed, "financial and commercial crises, or panics...seem to be mathematically impossible." They weren't.

The unrealistic hopes continued. As a forthcoming history says, "The bankers at the Federal Reserve kept the money flowing in to the American economy at a pitch that held interest rates low and kept expanding business and consumer credit... [but] there was no rise in prices. The business cycle...had finally been tamed—or so it seemed. Economists around the world praised the Federal Reserve. Some even predicted that a 'new era' in economics had begun." This passage sounds like it is describing the central bank optimism of the early 2000s with the so-called "Great Moderation," but in fact it is describing the 1920s. We know what came next, and the Fed is widely blamed for its deflationary blunders in the crisis of the early 1930s, and again in 1937.

In the 1940s, the Fed was the willing servant of the Treasury Department in order to finance the war and hold down the interest rates on government debt, thus doing in great scale exactly what the fathers of the Federal Reserve Act had tried to prevent: monetizing government debt. (The Fed had also lent its full efforts to finance the government during the American participation in the First World War.)

After enjoying the American global economic hegemony of the 1950s, the 1960s brought a new high point in optimism about what discretionary manipulation of interest rates and financial markets could achieve. Otherwise intelligent and certainly well-educated economists actually came to believe in what they called "fine tuning": that the Fed and government policy "could keep the economy more or less perfectly on course," as discussed by Fed Chairman Bernanke in his new book, *The Federal Reserve and the Financial Crisis*. Some economists even held a conference in 1967 to discuss "Is the Business Cycle Obsolete?" It wasn't.

The fine tuning notion "turned out to be too optimistic, too hubristic, as we collectively learned during the 1970s," Bernanke writes, "so one of the themes here is that—and this probably applies in any complex endeavor—a little humility never hurts." Very true.

Indeed, the performance of the Federal Reserve at economic and financial forecasting in the last decade, including missing the extent of the Housing Bubble, missing the huge impact of its collapse, and failing to foresee the ensuing sharp recession, certainly strengthens the case for humility on the Fed's part, especially when it attempts to forecast financial market dynamics. The poor record of economic forecasting is notorious, and the Fed is no exception to the rule.

If only the Chairman, the Governors, the Presidents and the scores of economists of the Federal Reserve could really know the future! Then they could carry out their discretionary actions without the many mistakes, both deflationary and inflationary, which have marked the history of the Fed. These mistakes should not surprise us. As Arthur Burns, Fed Chairman in the 1970s and architect of the utterly disastrous Great Inflation of that decade, said: "In a rapidly changing world, the opportunities for making mistakes are legion."

In a 1996 speech otherwise famous for raising the issue of "irrational exuberance," then-Fed Chairman Alan Greenspan sensibly discussed the limits of the Fed's knowledge. "There is, regrettably, no simple model of the American economy that can effectively explain the levels of output, employment and inflation," he said. (Since it is effectively the world's central bank embedded in globalized financial markets, the Fed would need not merely a model of the American economy, but one of the world economy.)

"In principle," Chairman Greenspan continued," there may be some unbelievably complex set of equations that does that. But we [the Fed] have not been able to find them, and do not believe anyone else has either." They certainly have not, as subsequent history has amply demonstrated. Moreover, in my view, not even in principle can any model successfully predict the complex, recursive financial and economic future—so the Fed cannot know with certainty what the results of its own actions will be.

Nonetheless, the 21st century Federal Reserve and its economists again became optimistic, and perhaps hubristic, about the central bank's abilities when Chairman Greenspan had been dubbed "The Maestro" by the media and knighted by the Queen of England. It is now hard to remember the faith he and the Fed then inspired and the confidence financial markets had in the support of what was called the "Greenspan put."

Queen Elizabeth would later quite reasonably ask why the economists and central banks failed to see the crisis coming. One lesson we can draw from this failure is that a group of limited human beings, none of whom is blessed with knowledge of the future, with all the estimates, guesses, and fundamental

uncertainty involved, by being formed into a committee, cannot rationally be expected to fulfill the mystical notion that they can guarantee financial and economic stability.

In the early 2000s, of particular pride to the Fed was that the central bankers thought they were observing a durable "Great Moderation" of macro-economic behavior, a promising "new era," and gave their own monetary policies an important share of the credit. With an eye on a hoped-for "wealth effect" from rising house prices, the Fed pushed interest rates exceptionally low as the housing bubble was rapidly inflating, which many observers, including me, view as a critical mistake. Chairman Bernanke has since insisted that the Great Moderation was "very real and striking." Yet, since it is apparent that the Great Moderation led to the Great Bubble and then to the Great Collapse, how could it have been so real?

Economic historian Bernard Shull has explored the paradox that throughout its 100 years, no matter how many mistakes the Fed makes, or how big such mistakes are, it nonetheless keeps gaining more power and prestige. In 2005, he made the following insightful prediction: "We might expect, on the basis of the paradoxical historical record, still further enhancements of Federal Reserve authority." Indeed, in the wake of the bubble and collapse, the political and regulatory overreaction came, as it always does each cycle. The Dodd-Frank Act gave the Fed much expanded regulatory authority over financial firms deemed "systemically important financial institutions" or "SIFIs," and a prime role in trying to control "systemic risk."

But the lessons of history make it readily apparent that the greatest SIFI of them all is the Federal Reserve itself. It is unsurpassed in its ability to create systemic risk for everybody else through its unlimited command of the principal global fiat money, the paper dollar. As former-Senator Bunning reportedly asked Chairman Bernanke, "How can you regulate systemic risk when you *are* the systemic risk?" A good question! Who will guard these guardians?

A memorable example of systemic risk is how the Fed's Great Inflation of the 1970s destroyed most of the savings and loan industry by driving interest rates to levels previously thought impossible. In the 1980s, the Fed under then-Chairman Paul Volcker, set out to "fight inflation"—the inflation the Fed had itself created. In this it was successful, but the high interest rates, deep recession and sky-high dollar exchange rate which resulted, then created often-fatal systemic risk for heartland industries and led to a new popular term, "the rust belt." A truly painful outcome of some kind was unavoidable, given the earlier inflationary blunders.

A half-century before that, in 1927, the then-dominant personality in the Federal Reserve, Benjamin Strong, famously decided to give the stock market a "little coup de whiskey." In our times, the Fed has decided to give the bond market and the mortgage market a barrel or so of whiskey in the form of so-called "quantitative easing." This would undoubtedly have astonished previous generations of Federal Reserve Governors, and have been utterly unimaginable to the authors of the Federal Reserve Act.

How will this massive manipulation of the government debt and mortgage markets turn out? Will it make the current Fed into a great success or become another historic blunder? In my opinion, neither the Fed nor anybody else knows—about this all of us can only guess. It is a huge and fascinating gamble, which has without doubt induced a lot of new systemic interest rate risk into the economy and remarkable concentration of interest rate risk into the balance sheet of the Federal Reserve itself.

In the psychology of risky situations, actions seem less risky if other people are doing the same thing. That is why, to paraphrase a celebrated line of John Maynard Keynes, a "prudent banker" is one who goes broke when everybody else goes broke. That other central banks are also practicing versions of "quantitative easing" may induce the same subjective comfort. A decade ago, bankers felt a similar effect when they all were expanding mortgage debt together.

Robert Solow recently claimed that "Central banking is not rocket science." Indeed, it isn't: discretionary central banking is a lot harder than rocket science. This is because it is not and cannot be a science at all, because it cannot operate with determinative mathematical laws, because it cannot make reliable predictions, because it must cope with ineluctable uncertainty and an unknowable future. We should have no illusions, in sharp contrast to the 100 years of illusions we have entertained, about the probability of success of such a difficult attempt, no matter how intellectually brilliant and personally impressive its practitioners may be.

It is often debated whether the Fed can successfully achieve two objectives, the so-called "dual mandate," rather than one. It does seem doubtful that it can, but the question oversimplifies the problem, for the Fed has not two mandates, but six.

The precise provision of the Federal Reserve Reform Act of 1977, which gives rise to the discussion of the "dual mandate," is almost always mischaracterized, for that provision assigns the Fed three mandates, not two. The Fed shall, it says, "promote effectively the goals of maximum employment, stable prices, and *moderate long-term interest rates*." This is a "triple mandate," at least. The third statutorily assigned goal is almost always forgotten. It is doubtful indeed that the Fed can simultaneously do all three.

But in addition to these, the Fed has three more mandates. These are: to furnish an elastic currency, the historically first mandate and the principal reason for the existence of the Fed in the first place; to act as the manager of the risks and profits of the banking club, now expanded to include other "SIFIs"; and finally, to provide ready financing for the deficits of the government of which it is a part, as needed.

Let us do a quick review of how the Fed is doing at each of its six mandates.

To begin with "stable prices": this goal was in fact dropped long ago. The Fed's goal is not and has not been for decades stable prices, but instead permanent inflation—with a relatively stable rate of increase in prices. In other words, the Fed's express intention is a steady depreciation of the currency it issues, another idea which would have greatly surprised the authors of the Federal Reserve Act. At its "target" of 2% inflation a year, average prices will quintuple in a normal lifetime. Economists can debate whether a stable rate of price increases rather than a stable price level is a good idea, but you cannot term perpetual inflation "price stability" with a straight face.

Turning to "maximum employment": Nobody believes any more, as many people believed when this goal was added to the governing statute in 1977, that there is a simple trade-off between inflation and sustained employment. It was still believed when the Humphrey-Hawkins Act of 1978 was passed, although it was already being falsified by the great stagflation of the late 1970s. Humphrey-Hawkins added a wordy provision requiring the Fed to report to and discuss with Congress its plans and progress on the triple mandate. Did these sessions succeed? They obviously did not avoid the financial disasters of the 1980s and 2000s, or the inflation of giant bubbles in tech stocks and housing.

On "moderate long-term interest rates": As the Treasury's servant in the 1940s, the Fed kept the yield on long-term government bonds at 2 ½%. After this practice was ended by the "Treasury-Fed Accord" of 1951, a 30-year bear bond market ensued, which ultimately took long-term interest rates to 15% in the early 1980s—this was not a "moderate" interest rate, to be sure. With the Fed's current massive bond buying, rates on long-term government bonds got to 1½%-2%, which was zero or negative in real terms—also not a "moderate" interest rate.

The fourth mandate stood right at the beginning of the original Federal Reserve Act in 1913. The authors of the Act told us clearly what they wanted to achieve:

"An Act to provide for the establishment of Federal reserve banks, *to furnish an elastic currency....*"

An elastic currency is most definitely what we have got, not only in the U.S., but given the global role of the dollar, in the world. Indeed, we have one much more elastic than originally intended. This is very handy during financial panics when the Fed is acting as the lender of last resort. The unanswered question is: given a pure paper currency (not originally intended, of course) with unlimited elastic powers, what limits should there be other than the demonstrably fallible beliefs and judgments of the members of the Federal Reserve?

Charles Goodhart's monograph, *The Evolution of Central Banks*, makes a strong argument that it helps to understand central banks, including the Fed, by thinking of them as the manager of the banking club, which tries to preserve and protect the banking industry. This becomes most evident in banking crises. It was explicitly expressed in an early Fed plaque: "The foundation of the Federal Reserve System is the co-operation and community of interest of the nation's banks." Such candor is not currently in fashion—the fifth mandate is now called "financial stability." As discussed, this mandate has been expanded by Dodd-Frank beyond banks to make the Fed the head of an even bigger financial club.

Sixth is the most basic central bank function, and Fed mandate, of all: financing the government, a core role of central banks for over three centuries. As economist Elga Bartsch has correctly written, "The feature that sets sovereign debt apart from other forms of debt is the unlimited recourse to the central bank." Thus for governments that wish to finance long-term deficits with debt, like the United States, central banks are exceptionally useful, which is one reason virtually all governments have one-- no matter how disappointing the central bank's performance at stable prices, maximum employment, moderate long-term interest rates, and financial stability may be. Needless to say, the power of financing the government is also dangerous.

Allan Meltzer, an eminent scholar of the Federal Reserve and our colleague on this panel, near the end of his magisterial *A History of the Federal Reserve*, quotes the classic wisdom of monetary thinker Henry Thornton from 1802-- 211 years ago, who proposed:

"to limit the total amount of paper issued, and to resort for this purpose, whenever the temptation to borrow is strong, to some effectual principle of restriction: in no case, however, materially to diminish the sum in circulation, but to let it vibrate only within certain limits; to allow a slow and cautious extension of it, as the general trade of the kingdom enlarges itself.... To suffer the solicitations of the merchants, or the wishes of the government, to determine the measure of bank issues, is unquestionably to adopt a very false principle of conduct."

These are sensible guidelines, as my friend Allan suggests. But another lesson of 100 years of Federal Reserve history is that we have still not figured out how to implement them.

Thank you again for the opportunity to share these views.

MERCATUS CENTER
George Mason University
Bridging the gap between academic ideas and real-world problems

TESTIMONY

THE FEDERAL RESERVE AND THE RULE OF LAW

BY LAWRENCE H. WHITE

Subcommittee on Monetary Policy and Trade
House Committee on Financial Services

September 11, 2013

Chairman Campbell, Ranking Member Clay, and members of the Subcommittee, thank you for inviting me to testify. Much of what I am going to say today draws on my previous research, which is cited below.[1]

The principle of *the rule of law*—as opposed to the arbitrary rule of those in authority—would have helped us to properly resolve the financial crisis of 2007–10, and can help us to avoid future financial crises. As David Hume said more than two hundred years ago, the benefits of consistently adhering to rule of law greatly outweigh any short-term convenience from ad hoc measures.

The approach of Federal Reserve and Treasury officials during the crisis, unfortunately, was to consider every possible remedy but following the rule of law. Fed chairman Ben Bernanke was quoted by the *New York Times* as declaring in 2008, at a strategy meeting with other Fed and Treasury officials, "There are no atheists in foxholes and no ideologues in financial crises."[2] The implication was that anything goes in a crisis: the Fed can ignore durable principles and its own statutory limits.

Most notoriously, the Fed at its own initiative

1. Created an unprecedented special-purpose vehicle (called "Maiden Lane LLC") to protect the bondholders of the failed investment house Bear Stearns by taking $30 billion of the firm's most doubtful assets off of its books, thereby sweetening an acquisition deal for JP Morgan Chase to take over the remainder of the firm's assets and liabilities;

2. Declined to do the same for the investment house Lehman Brothers; and

3. Created two other vehicles—Maiden Lane II and Maiden Lane III—to buy and hold bad assets from the failed insurance company AIG.

There was no precedent, and no apparent legal authority in the Federal Reserve Act, for such special-purpose funding operations. The Fed abandoned the rule of law, which requires those in authority to execute the law as written, predictably, and in accordance with established precedent.

The Fed's established monetary policy role as "lender of last resort" directs it to inject cash into the system to keep the

1. Much of what follows draws on Lawrence H. White, "The Rule of Law or the Rule of Central Bankers?" *Cato Journal* 30 (Fall 2010), and White, "Federal Reserve Policy and the Housing Bubble," *Cato Journal* 29 (Winter 2009).
2. Peter Baker, "A Professor and a Banker Bury Old Dogma on Markets." *New York Times*, 20 September 2008.

For more information or to meet with the scholar, contact
Chad Reese, (703) 993-8921, creese@mercatus.gmu.edu
Mercatus Center at George Mason University, 3351 Fairfax Drive, 4th Floor, Arlington, VA 22201

The ideas presented in this document do not represent official positions of the Mercatus Center or George Mason University.

broader money stock from shrinking, *not* to inject capital into failing firms by overpaying for assets or lending at subsidized rates, actions that put taxpayers at risk. The Fed's statutory authority to lend is limited and was never meant to encompass the sort of capital injections that the Fed undertook in 2008 through the special purpose vehicles. While the Dodd-Frank Act of 2010 properly places new limits on the Fed's discretion to conduct such bailout operations, it unfortunately ratifies the Fed's discretion in other respects. Dodd-Frank also enshrines the "too big to fail" doctrine, the application of which inherently requires arbitrary judgments. It thereby erodes the rule of law, increases the probability of future taxpayer-funded bailouts, and weakens market discipline between risk and reward.

THE RULE OF LAW

At the core of the rule of law concept is the constitutional principle of *nondiscretionary* governance, in contrast to *arbitrary* or *discretionary* governance by those currently in executive positions. In common parlance, either we have the rule of law or we have the *rule of authorities*. Under the rule of law, government agencies faithfully enforce statutes already on the books, and only such statutes.[3] Under the rule of authorities, those in positions of executive authority can make up substantive new decrees as they go along and forgo enforcing statutes on the books.

It is of course true that laws must be executed by people in authority. We also know that the referees in a football match will be people. But they can either be referees who impartially enforce the rules of the sport as they were known at the outset of the match—that is, referees who follow the rule of law—or they can be pseudo-referees who arbitrarily enforce rules against one team but not the other, or (even worse) who penalize or favor one team with novel interventions that they have improvised mid-contest.

The rule of law concept has deep historical roots. David Hume's classic *History of England*, written more than two centuries ago, famously emphasizes the value of establishing the rule of law in place of the unconstrained discretion of government officials. Hume acknowledges that it is not always *convenient* in the short run to forgo ad hoc measures. He writes that "some inconveniences arise from the maxim of adhering strictly to law," but Hume affirms the lesson of history that in the long run we are better off from adhering to the rule of law. According to Hume, "It has been found that . . . the advantages so much overbalance" the inconveniences that we should salute our ancestors who established the principle.

Consistent adherence to the rule of law has the great advantage, as the economics Nobel laureate F. A. Hayek has noted, that "government in all its actions is bound by rules fixed and announced beforehand—rules which make it possible to foresee with fair certainty how the authority will use its coercive powers in given circumstances and to plan one's individual affairs on the basis of this knowledge."[4]

In this way, the rule of law allows a society to combine freedom, justice, and a thriving economic order.[5] To the extent that they can predict the actions of their government's executive branch, Americans can confidently plan their lives and businesses, and they can coordinate their plans with one another through the market economy. Taxpayers need not fear being burdened (by being arbitrarily placed on the hook for bailing out failed businesses, for example) by executive branch agencies acting without authorization by their representatives in Congress.

THE FEDERAL RESERVE'S TRADITIONAL "LENDER OF LAST RESORT" ROLE

As a historian of antiquarian monetary institutions, let me take you back to what now seems like the distant past: the five decades from 1958 to 2008. In 1958, Congress finally repealed a 1934 Depression-era amendment to the Federal Reserve Act ("Section 13(b)") that had authorized the Fed to make loans to non-banking businesses under certain circumstances. The praiseworthy idea behind the repeal, as economist Marvin Goodfriend has put it, was that "credit policies should not be carried out by an independent central bank because credit allocation is inherently political and has the potential to degrade the central bank's independence."[6] Then-Federal Reserve Chairman William McChesney Martin, when a bill

3. If a statute authorizes an agency to fix and announce specific rules toward a general end, and the agency does so according to public procedures called for in the statute, we may consider enforcement of such rules as enforcement of the statute.
4. Friedrich A. Hayek, *The Road to Serfdom: The Definitive Edition*, vol. 2 of *The Collected Works of F. A. Hayek*, ed. Bruce Caldwell (Chicago: University of Chicago Press, 2007), 112.
5. See Randy Barnett, *The Structure of Liberty: Justice and the Rule of Law* (Oxford: Clarendon Press, 1998).
6. Marvin Goodfriend, "The Elusive Promise of Independent Central Banking" (IMES Discussion Paper Series 2012-E-9, Bank of Japan Monetary and Economic Studies, Tokyo, 2012), 40.

before Congress in 1957 proposed that the Fed contribute financing to regional development corporations, thoughtfully commented, "It is good government as well as good central banking for the Federal Reserve to devote itself primarily to the objectives set for it by Congress, namely, guiding monetary and credit policy so as to exert its influence toward maintaining the value of the dollar and fostering orderly economic progress." Therefore "it is undesirable for the Federal Reserve to provide the capital and participate in management functions" of lending institutions.[7]

The Federal Reserve System thereafter largely returned to playing the traditional central banking roles of conducting monetary policy and (on very rare occasions, like the day after 9/11) acting as a "lender of last resort." Monetary policy means controlling the quantity of money in pursuit of economic objectives. Acting as a lender of last resort is, in modern economic understanding, an aspect of monetary policy. It means injecting cash into the commercial banking system to prevent the broader quantity of money from shrinking—and thereby to protect the economy's income and payment flows from disruption—when there is an unusual hoarding of cash by banks or the public.[8]

The "lender" part of "lender of last resort" has long been an anachronism. Although the Federal Reserve *can* inject cash by making a loan to a particular bank, it need not do so. As it discovered many decades ago, the Fed can better provide cash to the market as a whole *without* lending, namely, by purchasing securities in the open market. By purchasing securities from bond dealers at the going market price, the Fed supports the broader money stock while avoiding the danger of favoritism associated with making loans to specific banks on non-market terms.[9] By purchasing only US Treasury securities, as the Fed typically did before 2008, it avoids the potential for favoritism in purchasing some private-sector securities over others. At the end of 2007, the amount of loans that the Fed had outstanding to commercial banks through its "discount window" was trivial: less than $0.5 billion on a balance sheet of $800 billion.

Loans to *nonbank* institutions were, appropriately, zero at the end of 2007. There had been occasions after 1958 when the Fed was asked to lend to nonbanks. Fortunately, because such an action is properly understood as *fiscal* policy outside the Fed's remit, the Fed consistently directed the requests to Congress. In 1970, as a chronology by David Fettig of the Federal Reserve Bank of Minneapolis relates, "The Nixon administration asked for [Fed] discount window assistance in response to the financial problems of Penn Central Railroad. This request stalled in Congress."[10] In 1975 the Fed properly declined to provide "emergency credit" to New York City, and Congress took up the matter. In 1991, when the FDIC sought a loan from the Fed to replenish its depleted insurance fund, the Fed directed the head of the FDIC to go to Congress, which properly made the Treasury, and not the Fed, the provider of a credit line. In 2001, with the airline industry reeling following the 9/11 attacks, emergency loans from the Federal Reserve were suggested, but the Fed refrained.

Less fortunately, the Fed was not consistent in following prudent guidelines for its loans to banking institutions. As noted, the modern understanding of the Fed's lender of last resort role is that of preventing shrinkage in the broad money supply. This is sometimes described less clearly as providing the market with adequate "liquidity." Lending liquidity does not mean subsidizing, papering over inadequate net worth, or delaying the resolution of an insolvent institution. The lender of last resort role has nothing to do with providing insolvent firms with capital injections or loans at below-market rates. The Fed in the 1958–2008 period unfortunately did not consistently avoid lending to insolvent banks. Two especially egregious cases stand out.

- In 1974 the Federal Reserve lent $1.75 billion to the Franklin National Bank. Later that year, the bank was recognized to be insolvent and the FDIC placed it in liquidation.

---

7. "Statement of William McChesney Martin, Jr., Chairman, Board of Governors of the Federal Reserve System, before the Subcommittee on Small Business of the Senate Banking and Currency Committee, June 20, 1957," *Federal Reserve Bulletin* 43 (July 1957): 767–9.
8. By "cash," I mean what economists call the monetary base of M0, the Federal Reserve's monetary liabilities, equal to the sum of currency held by the public plus bank reserves. By "the broader quantity of money," I mean an aggregate like M1 or M2 that includes currency plus bank deposits held by the public.
9. Marvin Goodfriend and Robert G. King, "Financial Deregulation, Monetary Policy, and Central Banking," in William S. Haraf and Rose Kushmeider, eds., *Restructuring Banking and Financial Services in America* (Washington: American Enterprise Institute, 1988).
10. David Fettig, "The History of a Powerful Paragraph," *Banking and Policy Issues Magazine* (June 2008): 33–34, http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=3485.

- In 1984 the Fed joined with the FDIC to nationalize (rather than liquidate) the failed Continental Illinois Bank. The bank was later re-privatized at a loss to taxpayers of about $1.1 billion.

More broadly, the well-known monetary economist Anna Schwartz found that the Federal Reserve lent frequently to small-to-medium-sized failing banks. Between January 1985 and May 1991, 530 banks failed within three years of first borrowing funds from the Fed. Of those, 437 had the worst CAMEL (soundness) rating given by the Fed's own examiners, and 51 had the second worst rating; 60 percent of them failed while still owing money to the Fed.[11] The Fed discount window managers knew these ratings, so it is clear that the Fed chose to ignore the traditional central banking rule of lending only to illiquid and not to insolvent banks.

The FDIC Improvement Act of 1991 (FDICIA) aimed to avoid a repeat of the FDIC's insurance fund becoming depleted. But it also, in Fettig's words, "amended Section 13 [of the Federal Reserve Act] to allow the Fed to lend, in essence, directly to securities firms during financial emergencies."[12] As amended in 1991, and before it was re-amended by Dodd-Frank in 2010, the language of section 13(3) authorized the Fed's Board of Governors, "in unusual and exigent circumstances," which prevail "during such periods as the said board may determine," to "discount . . . notes, drafts, and bills of exchange" for "any individual, partnership, or corporation" it chooses (not just for commercial banks, as before 1991).

Critics of the amendment worried that such authority, expanded beyond traditional lender-of-last-resort powers, would foster favoritism and moral hazard. Schwartz warned that "the provision in the FDIC Improvement Act of 1991 portends expanded misuse of the discount window," that is, use of the Fed's lending authority for bailouts rather than for monetary policy objectives. Walker F. Todd, an attorney then with the Federal Reserve Bank of Cleveland, wrote, "Ironically, while the principal thrust of FDICIA was to limit or reduce the size and scope of the federal financial safety net, this provision effectively *expanded* the safety net," and with it moral hazard.[13] These criticisms were prescient.

THE FEDERAL RESERVE'S LIMITED STATUTORY AUTHORITY UNDER SECTION 13(3) OF THE FEDERAL RESERVE ACT

In 2008 the Fed gave itself the new role of selectively channeling credit in directions it favored. It began to lend funds to, and purchase assets from, an array of financial institutions it deemed worthy, no longer limited to commercial banks or participants in the payment system, including investment banks, primary dealers, and broker-dealers. These funds were not allocated to it by Congress, but created by the Fed itself out of thin air and in amounts it decided. The total of new Fed credits outstanding (the Federal Reserve's self-financed credit programs) stood by the end of 2008 at $1.7 trillion, more than double the size of the Treasury's $700 billion bailout authority.

Beginning in the spring of 2008, the Fed repeatedly claimed authority in its press releases for these unorthodox lending programs under the "unusual and exigent circumstances" provisions of section 13(3) of the Federal Reserve Act.[14] But Section 13(3) never conveyed unlimited authority. The Fed's authority to discount "notes, drafts, and bills of exchange" for a financial or other firm is not the authority to purchase just any assets, and it is not the authority to overpay for assets in order to recapitalize a firm. Thus one can doubt that adequate statutory author-

---

11. Anna J. Schwartz, "The Misuse of the Fed's Discount Window." *Federal Reserve Bank of St. Louis Review* 74 (Sept./Oct. 1992): 58–59. As an economist at the Federal Reserve Bank of San Francisco spells it out, "The acronym 'CAMEL' refers to the five components of a bank's condition that are assessed: Capital adequacy, Asset quality, Management, Earnings, and Liquidity. A sixth component, a bank's Sensitivity to market risk, was added in 1997; hence the acronym was changed to CAMELS." Jose A. Lopez, "Using CAMELS Ratings to Monitor Bank Conditions," FRBSF Economic Letter, June 11, 1999, http://www.frbsf.org/economic-research/publications/economic-letter/1999/june/using-camels-ratings-to-monitor-bank-conditions/ .
12. David Fettig, "Lender of More Than Last Resort," *The Region* (December 2002), http://www.minneapolisfed.org/publications_papers/pub_display.cfm?id=3392
13. Schwartz, "Discount Window"; Walker F. Todd, "FDICIA's Emergency Liquidity Provisions," *Federal Reserve Bank of Cleveland Economic Review* (Fall 1993), 16–23..
14. For citation of 13(3) as authority for the creation of the Maiden Lane LLC's, see the footnotes to the Fed's statements of "Factors Affecting Reserve Balances," *Federal Reserve Statistical Release*, Sept. 5, 2013, www.federalreserve.gov/releases/h41/current.

ity existed for the Fed's actions in the Bear Stearns and AIG cases. Walker Todd commented frankly in 2008 that "much less of [the Fed's recent] lending is based on clear statutory authority than one might prefer if one cared about the rule of law." It is difficult to disagree with economist Edward Kane in his judgment that the Fed in 2008 "exercised discretion it was never given."[15]

THE BEAR STEARNS OPERATION IN MORE DETAIL

Whether it recognized that it would be venturing onto thin ice for the Federal Reserve Bank of New York (FRBNY) itself to buy bad assets from Bear Stearns for the benefit of JPMorgan Chase, or for some other reason, the FRBNY created a wholly owned *special-purpose subsidiary* to do so.

The Federal Reserve describes what it did for JPMorgan Chase (JPMC) on its website:

> JPMC was concerned about its ability to absorb a portion of Bear Stearn's [*sic*] mortgage trading portfolio, given the uncertainty about the scale of potential losses facing the financial system at the time and strained credit markets.
>
> To facilitate a prompt acquisition of Bear Stearns by JPMC, the FRBNY created a limited liability company, Maiden Lane LLC, to acquire that set of assets of Bear Stearns. The FRBNY extended credit to the LLC, which would then manage those assets through time to maximize the repayment of credit extended to the LLC and to minimize disruption to financial markets. Maiden Lane LLC purchased approximately $30 billion in assets from Bear Stearns with a loan of approximately $29 billion from the FRBNY.[16]

The Dodd-Frank Act of 2010 placed some constraints on the Fed's discretion to make such deals for single institutions in the future. As an FRBNY web page explains, special Fed lending must now meet some additional criteria:

> The Dodd-Frank Act changes the Federal Reserve's authority for lending under unusual and exigent circumstances. Reserve Banks can no longer extend credit to an individual, partnership, or corporation other than through a "program with broad-based eligibility." Such emergency facilities can only be created with prior approval of the Treasury Secretary and must be for the purposes of providing liquidity to the financial system and not to aid a failing financial company.[17]

I can applaud this change, but I am compelled to point out that this is not enough to reinstate the rule of law. Elsewhere Dodd-Frank ratifies the Fed's discretion to allocate credit through lending programs with "broad-based eligibility" and fails to constrain the Fed to limit its focus to monetary policy (including modern lender-of-last-resort responsibility) alone. It allows the Fed to arbitrarily direct this much credit to investment banks, that much to broker-dealers, and that much to money-market mutual funds. Such allocation decisions are not monetary policy but rather fiscal policy. They should be considered as falling within the purview of Congress, not the Fed, or better yet, left to the competitive financial marketplace.

If the statute law allows the Fed a wide range of discretionary actions with so little constraint that its future actions cannot be predicted, then we have not the rule of law but the rule of central bankers. Hayek explained the difference in the following terms:

> The fact that someone has full legal authority to act in the way he does gives no answer to the question whether the law gives him power to act arbitrarily or whether the law prescribes unequivocally how he

15. Walker Todd, "The Tyranny of the Fed," American Institute for Economic Research Commentaries, April 3, 2008. Bill Bergman, "How the Federal Reserve Contributes to Crises: Interview with Ed Kane, Martin Mayer, and Walker Todd," *Global Research*, Sept. 7, 2009, www.globalresearch.ca/index.php?context=va&aid=15094.
16. Board of Governors of the Federal Reserve System, "Bear Stearns, JPMorgan Chase, and Maiden Lane LLC," Regulatory Reform,last updated Aug. 2, 2013, http://www.federalreserve.gov/newsevents/reform_bearstearns.htm
17. Federal Reserve Bank of New York, "The Discount Window," *Fedpoint*, March 2011, http://www.newyorkfed.org/aboutthefed/fedpoint/fed18.html

> has to act. . . . If the law says that such a board or authority may do what it pleases, anything that board or authority does is legal—but its actions are certainly not subject to the Rule of Law. By giving the government unlimited powers, the most arbitrary rule can be made legal.[18]

THE RULE OF CENTRAL BANKERS

The rule of law clearly does not yet prevail in our current monetary and financial system. We do not have, again to use Hayek's words, "government in all its actions . . . bound by rules fixed and announced beforehand."[19] Not when participants in financial markets hang on every word of the central banker's press conference statements, trying to guess the central banker's future policy actions.

Defenders of the rule of law, who generally decry the arbitrary rule of authorities, should be concerned to prevent the arbitrary credit-allocation powers of the Federal Reserve Board, however well-meaning members of the Board undoubtedly are.

Discretion in monetary policy and financial regulatory policy does not give us better results. It is today widely recognized that inflation is inadvertently fostered by the discretion of central banks, where "discretion" means the absence of precommitment to any fixed policy rule.[20] It should be equally widely recognized that discretionary central bank policy can create housing and other asset bubbles, as the record since 2001 has shown. When Fed Chairman Alan Greenspan held interest rates so low that the real fed funds rate (the nominal rate minus the contemporary inflation rate) was negative for two and a half years, he was exercising discretion, not faithfully executing any rule on the books. Chairman Bernanke exercises the same discretion today, and his successor will as well—unless Congress acts.

FOLLOWING THE RULE OF LAW IN A FINANCIAL CRISIS

What is the alternative? What does the rule of law tell monetary and regulatory authorities to do when large financial firms are insolvent? The first thing it says is: Do not practice discretionary forbearance, turning a blind eye in the vain hope that a failing firm's red ink will happily turn to black, that a zombie institution will come back to life, that toxic assets will detoxify themselves. Do not arbitrarily rescue or bail out an insolvent firm at taxpayer expense. Instead, resolve the insolvency. If nobody wants to buy the firm as a going concern without subsidy, follow bankruptcy law. If a special bankruptcy law applies to financial institutions, follow that. In the United States, the FDIC Improvement Act of 1991 mandates that the FDIC (Federal Deposit Insurance Corporation) resolve banks on the edge of insolvency swiftly and at least cost to taxpayers. The authorities have been ignoring this statutory mandate. (Instead, the Treasury "injected capital" into failing banks when it forcibly purchased preferred shares.)

Enacting a "prepackaged bankruptcy" law to swiftly resolve future failures of nonbank financial institutions would be a good idea, but in its absence, Congress should insist that the Fed follows the laws that are on the books.

The rule of law in bankruptcy means not only making shareholders accept that they have been wiped out but also consistently making creditors and counterparty institutions take the losses that are theirs. Creditors divide up the remaining assets without discretionary authorities sheltering them from losses with taxpayer funds. Under the rule of law, Bear Stearns bondholders would not have been bailed out. Consequently, the decision not to bail out Lehman Brothers would not have been a shock to the financial market because it would have been fully expected.

The alternative to leaving the losses with Bear Stearns' and Lehman's stakeholders was arbitrarily shifting the losses onto taxpayers, either through loss-covering handouts to those who deliberately took great risks of loss to enjoy the upside of great gains, or through nationalization. Viewed in a long-run perspective rather than in the heat of the moment, both alternatives are worse than resolving major financial institutions that have reached insolvency. Both are inconsistent with the rule of law because they cannot possibly be applied consistently. Not every

---

18. Hayek, *Road to Serfdom*, 119.
19. Ibid., 112.
20. Finn E. Kydland and Edward C. Prescott, "Rules Rather than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy* 85 (June 1977).

failed business in a country can be bailed out and kept on life support indefinitely—there is not enough money in the Treasury. Not every firm can be nationalized—the economy will cease to function.

Consistently enforcing the rules that require insolvent firms to exit the market promptly would remove the kind of uncertainty that followed the Lehman collapse and provide greater clarity to financial markets. It was inconsistency on this front—from abrogation of the rule of law in the Bear Stearns case—that created the situation where the authorities faced the choice between an ugly Lehman failure and the even uglier options of nationalization or open-ended bailouts.

The prospect of bailouts and other favors, in violation of the rule of law, creates moral hazard. We have learned the hard way that letting only shareholders bear losses while protecting creditor and counterparties at taxpayer expense, as was done in the case of Bear Stearns, is not enough to control moral hazard. After Bear Stearns was rescued, Lehman Brothers increased its leverage and its exposure to risky mortgage assets. If creditors and counterparties think that they can count on government protection, they will be willing to lend copiously and cheaply, enabling a borrowing firm like Lehman to hold a highly leveraged portfolio of risky assets. From the viewpoint of the shareholders in an intermediary, the higher return on capital from "leveraging up"—relying heavily on borrowed funds—makes it a profitable strategy when lenders supply funds with very low risk premiums. From the viewpoint of the taxpayers now on the hook, the firm takes on an overly leveraged portfolio of overly risky assets. The most stunning examples of this over-leveraging phenomenon were Fannie Mae and Freddie Mac, but investment houses like Lehman and Bear Stearns exhibited it as well.

If everyone knows that the rule of law will be followed, because the Fed is strictly constrained to do so, such that nobody will get bailed out, the incentive for imprudence disappears along with the hook into taxpayers. This does not mean that no financial firm will ever act imprudently but rather that there won't be system-wide bad incentives producing an epidemic of imprudence. If it is known that nobody is "too big to fail," or too well connected to fail, then lenders will not let financial firms leverage up cheaply in the belief that they will be protected. Dodd-Frank in its current state unfortunately codifies the notion that some firms are "systemically important financial institutions," that is, too big to fail.

It cannot be denied that without bailouts and with consistent resolution of insolvent firms, in Hume's words, "some inconveniences arise." But it should be recognized that the advantages "much overbalance" the inconveniences for the good reason that pulling the plug on failed firms is consistent with the logic of the market economy. Those who stand to gain when their financial strategies succeed must also stand to lose when they fail. Nationalization and bailouts are failed policies because they are inconsistent with the logic of a market economy.

Thank you again for inviting me here today. I would be happy to answer any questions.

ABOUT THE AUTHOR

Lawrence H. White is a senior scholar at the Mercatus Center and a professor of economics at George Mason University, where his research focuses on the theory and history of monetary and banking systems. He is the author of *The Theory of Monetary Institutions* (Blackwell, 1999) and *Competition and Currency* (NYU Press, 1989) and the editor of *The Crisis in American Banking* (NYU Press, 1993). His work has appeared in the *American Economic Review*, the *Journal of Economic Literature*, the *Journal of Money, Credit, and Banking*. Dr. White earned his PhD from the University of California, Los Angeles, and his AB from Harvard University. He has been a visiting scholar at the Federal Reserve Bank of Atlanta and a visiting lecturer at the Swiss National Bank.

ABOUT THE MERCATUS CENTER

The Mercatus Center at George Mason University is the world's premier university source for market-oriented ideas—bridging the gap between academic ideas and real-world problems. A university-based research center, Mercatus advances knowledge about how markets work to improve people's lives by training graduate students, conducting research, and applying economics to offer solutions to society's most pressing problems.

Our mission is to generate knowledge and understanding of the institutions that affect the freedom to prosper and to find sustainable solutions that overcome the barriers preventing individuals from living free, prosperous, and peaceful lives. Founded in 1980, the Mercatus Center is located on George Mason University's Arlington campus.

www.mercatus.org