

## A Review of Recent Monetary Policy

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Committee on Financial Services  
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Chairman Campbell, Ranking Member Clay, and other members of the Subcommittee on Monetary Policy and Trade, thank you for the opportunity to testify at this hearing on “Near-Zero Rate, Near-Zero Effect? Is ‘Unconventional’ Monetary Policy Really Working?”

As you requested, my testimony will review the conduct of monetary policy by the Federal Reserve before, during, and after the financial crisis. I will draw on my research and previous testimony.

To be complete such a review must start a decade ago with the period from 2003 to 2005 when the Fed held interest rates very low, which accentuated the housing boom, stimulated risky lending in a search for higher yields, and thereby helped bring on the bust, the defaults and the financial crisis starting in 2007. The review then continues into the financial crisis and recession from late 2007 through early 2009—a period when Fed policy performance was mixed—and concludes with the ongoing weak recovery from the recession in which the Fed’s unconventional policy has become a drag on the economy.

A defining characteristic of monetary policy during this decade has been the highly discretionary and unpredictable nature of the changes in the policy instruments, especially in contrast to the steadier rules-based policy of the 1980s and 1990s. The economic outcomes have not been good. Using the Federal Open Market Committee’s performance objective, which is “to mitigate deviations of inflation from its longer-run goal and deviations of employment from the Committee’s assessments of its maximum level,” performance has deteriorated.<sup>2</sup> Deviations of the unemployment rate from the Fed’s assessment of the normal rate have increased substantially and inflation deviations have not improved.<sup>3</sup> While this association of outcomes with policy changes does not alone provide evidence of cause and effect, the following testimony presents additional evidence.

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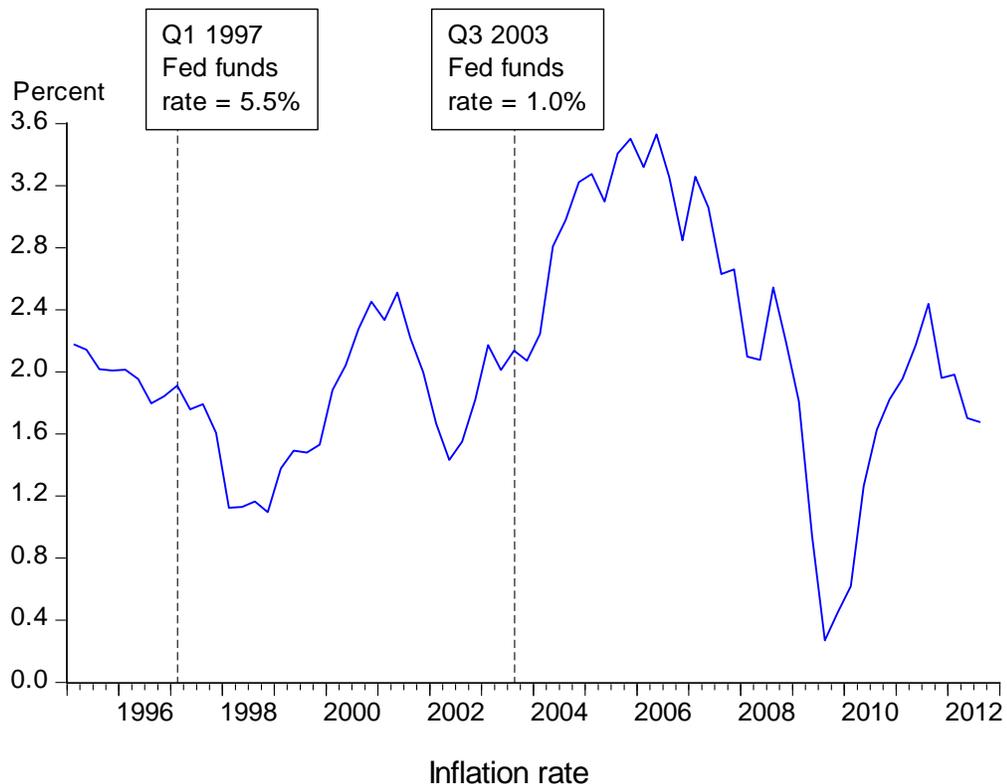
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<sup>2</sup> The criterion is stated in the Federal Open Market Committee’s “Statement on Longer-Run Goals and Monetary Policy Strategy” as amended effective on January 29, 2013.

<sup>3</sup> The standard deviation of unemployment from the Fed’s 5.6% average normal rate increased from 1.0% during 1984Q1 -2006Q4 to 2.8% during 2007Q1 – 2012Q4 and the standard deviation of inflation was about the same at 0.8 percent in both periods.

## 1. *The Period Leading Up to the Financial Crisis*

The Federal Reserve decided during 2003-2005 to hold its target interest rate below the level implied by monetary principles that had characterized monetary policy in the previous two decades of good performance. This decision can be illustrated in the following graph of the overall inflation rate (measured by the GDP deflator) in which I have inserted two boxes showing the level of the interest rate (federal funds) at two different points in time. Observe that the federal funds rate was much lower in 2003 than in 1997, 1.0% rather than 5.5%, even though the inflation rate was about the same, around 2%, during the two time periods, as was the overall state of the economy.



This excessively low interest rate added fuel to the housing boom, which in turn led to the severe housing bust and eventually a sharp increase in delinquencies, foreclosures, and the deterioration of the balance sheets of many financial institutions as toxic assets grew rapidly.

To test the connection between the low interest rates and the housing boom I built an economic model relating the federal funds rate to housing construction. The empirically estimated model showed that a higher federal funds rate would have avoided much of the boom and bust.<sup>4</sup> This policy deviation was larger than any other during the Great Moderation of the 1980s and 1990s—similar in magnitude seen in the unstable period of the late 1960s and 1970s.

<sup>4</sup> See “Housing and Monetary Policy,” in *Housing, Housing Finance, and Monetary Policy* Federal Reserve Bank of Kansas City, September 2007, pp. 463-476. Since then there has been much more research which I reviewed in “Commentary: Monetary Policy after the Fall,” *Macroeconomic Challenges: The Decade Ahead*, Federal Reserve Bank of Kansas City, 2010, pp. 337-348.

The real interest rate was negative for a very long period, which is also similar to what happened in the 1970s. The intervention was an intentional departure from a policy approach that was followed in the decades before. The Fed's statements that interest rates would be low for a "prolonged period" and that interest rates would rise at a "measured pace" provide evidence of these intentions.

## 2. *The Financial Crisis and the Panic*

The financial crisis began to flare up in the interbank loan markets in August 2007 but the severe financial *panic* did not start until September 2008. Based on equity price movements and interbank borrowing rates, the panic period lasted through October 2008. It spread rapidly around the world, turning the recession into a great recession.<sup>5</sup>

My assessment is that the extraordinary monetary policy measures taken in the period leading up to the panic in September 2008 did not work, and that some were harmful. For example, the Fed introduced a new Term Auction Facility, but the TAF did little to affect interbank rates during this period, as I testified to the House Committee on Financial Services in February 2008 based on research with John Williams,<sup>6</sup> and it drew attention away from counterparty risks in the banking system. The Fed's extraordinary bailout measures began with Bear Stearns. The Fed's justification for this bailout led many to believe that the Fed's balance sheet would again be available in the case that another similar institution, such as Lehman Brothers, failed. But when the Fed and the Treasury were unable to orchestrate a rescue of Lehman over the weekend of September 13-14, 2008, it surprisingly cut off access to its balance sheet. On the next day, it reopened its balance sheet to make loans to rescue the creditors of AIG. It was then turned off again, and the TARP was proposed. Event studies of the interbank market and equity markets show that the chaotic roll out of the TARP coincided with the severe panic in the following weeks<sup>7</sup>.

Evaluating monetary policy once the panic began is complex because the Fed's actions during this period were occurring at the same time as the FDIC issued bank debt guarantees and the Treasury clarified, after three weeks of uncertainty, that the TARP would be used for equity injections. This clarification was a major reason for the halt in the panic in my view. Based on conversations with traders and other market participants as well as on later studies, the Fed's actions taken during the panic were helpful in rebuilding confidence in money market mutual funds and stabilizing the commercial paper market. The Federal Reserve also rebuilt confidence by quickly starting up new lending programs and worked closely with central banks abroad to set up swap lines.

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<sup>5</sup> This section is drawn from my testimony "An Exit Rule for Monetary Policy," before the Committee on Financial Services, U.S. House of Representatives, March 25, 2010

<sup>6</sup> Taylor, John B. and John C. Williams (2008), "A Black Swan in the Money Market," Federal Reserve Bank of San Francisco, Working Paper Series, 2008-04; revised version published in *American Economic Journal: Macroeconomics*, 1 (1), pp. 58-83.

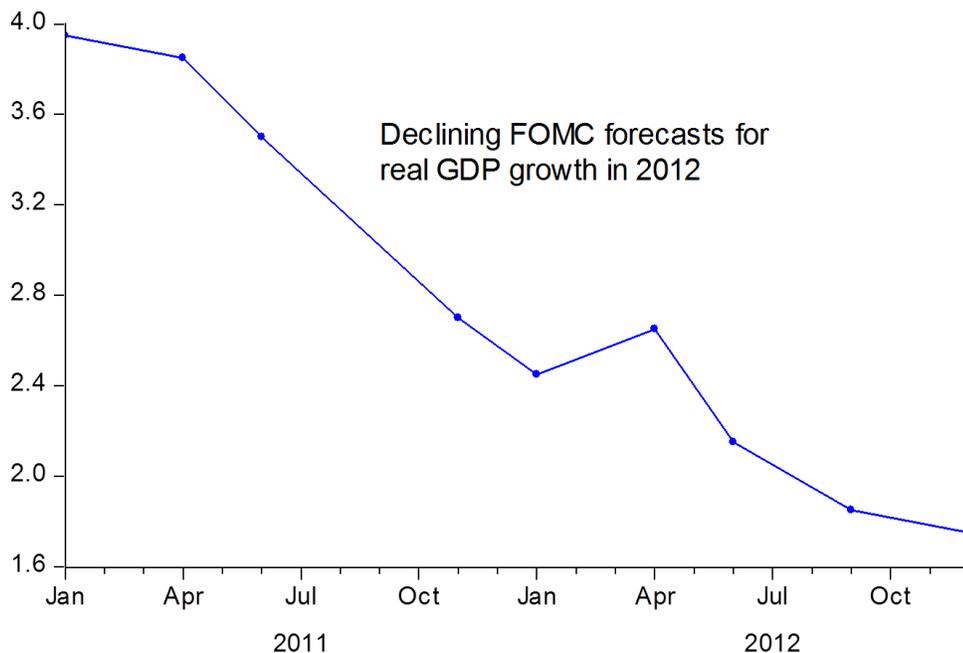
<sup>7</sup> See Taylor, John B. (2008b), "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong," in *A Festschrift in Honour of David Dodge's Contributions to Canadian Public Policy*, Bank of Canada, November 2008, pp. 1-18

As the panic subsided near the end of 2008 and the recession ended in June 2009, the temporary emergency liquidity facilities, including the swaps, began to be drawn down. However, around this time the Fed started its quantitative easing (QE) programs including the large scale purchases of mortgage backed securities. My assessment, based on research with Johannes Stroebel, is that this initial MBS purchase program had little effect on mortgage rates once one controls for prepayment risk and default risk, but the estimates are uncertain.<sup>8</sup> If it were not for the start of these large-scale asset purchase programs, the Fed would have already exited from its emergency measures removing considerable uncertainty about its exit strategy going forward.

### 3. *Unconventional Monetary Policies and the Weak Recovery*

The economic recovery from the recession has turned out to be far weaker than the Federal Reserve expected despite the unconventional policy. In June 2010 the Fed predicted that economic growth would be 4% in 2012, but it has turned out to be a disappointing 1.6%. The forecast range at that time for 2012 was actually from 3.5% to 4.5%, so even the pessimistic views were better than what happened.

The following chart shows how the Fed continuously ratcheted down its forecasts.



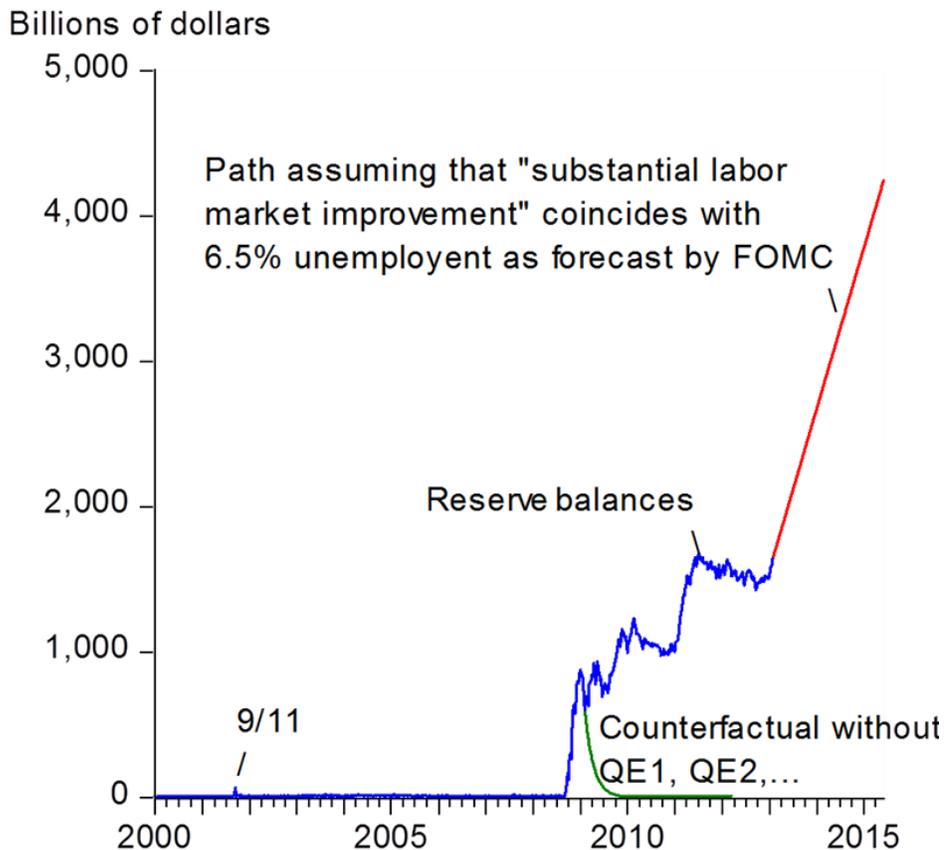
As the recovery fell short of their expectations, the Fed’s policymakers increased their unconventional interventions. They increased their purchases of mortgage-backed and U.S.

<sup>8</sup> Johannes Stroebel and John B. Taylor “Estimated Impact of the Fed’s Mortgage-Backed Securities Purchase Program,” *International Journal of Central Banking*, June 2012. Other studies—for example Joseph Gagnon, Matthew Raskin, Julie Remanche, and Brian Sack (2010), “Large-Scale Asset Purchases by the Federal Reserve: Did They Work?” Federal Reserve Bank of New York Staff Report no. 441, March 2010—argue that the interventions worked, but these studies are based on “announcement effects” which do not incorporate offsetting reverse effects not associated with the announcements.

Treasury securities, and they announced that large-scale purchases would keep coming at a pace of \$85 billion per month. They also kept extending the near-zero federal funds rate, and they now indicate that it will remain there at least until unemployment hits 6.5%, which according to the Fed's forecasts will be in mid-2015.

Why have these unprecedented interventions been accompanied by disappointing outcomes? The Fed points to external causes, but the unconventional policies themselves have been a factor. In Congressional testimony last week Federal Reserve Chairman Ben Bernanke pointed to the recent pickup in housing markets as indication that the policy is working, but the steadily disappointing growth performance over four years of these policies is stronger counter evidence.

There are a number of reasons why these policies have been a drag on the recovery. First, the policies create uncertainty. The following chart illustrates this uncertainty. It shows the impact of the Fed's recent actions on the deposits that banks hold at the Fed. The blue line shows recent history and the red line shows a possible future scenario based on the Fed's own statements. When the Fed engages in its current policy of quantitative easing, it finances its purchase of mortgage-backed securities or federal debt by crediting the banks with these deposits. The deposits—called bank reserves—normally are increased during times of financial stress, as on 9/11/2001 as shown in the chart, or during the panic in the fall of 2008, also shown in the chart.



But the huge increases since 2009 are completely unprecedented. The recent Fed decision to buy \$85 billion per month until the labor market improves is illustrated by the red line, where I assume that this labor market criterion is the same as its unemployment trigger. In my view it is very risky to continue along this red line. The policy is a drag on the economy in part because people do not know how the bank reserves will be unwound, as they must be eventually.

Recent reports are that these risks are becoming a worry to a number of policy makers at the Fed. People recognize that the Fed will eventually have to undo the interventions and reverse the large-scale asset purchases. If the asset sales are too slow, inflation will rise as bank reserves used to finance the asset purchases flow out of the banks and money growth increases. If the asset sales are too fast or abrupt, there will be a recession as interest rates spike. Those who say not to worry about the interventions because inflation has not increased ignore the fact that the interventions can be a drag on the economy without increasing inflation in the short run.

The Fed's near-zero interest rate also creates problems. It increases incentives for retirees and pension funds receiving miniscule returns to take on risky investments as they search for higher yields. The near-zero rates makes it possible for banks to roll over rather than write off bad loans, locking up unproductive assets. And the low interest rate policy reduces fiscal discipline, which increases the risk of an exploding federal debt.

The excursion of the Fed into fiscal and credit allocation policy through its large scale purchases of Federal debt and mortgage backed securities raises questions about its independence and accountability which reduces public confidence in the Fed.<sup>9</sup> That these policies are being implemented long after the emergency of the panic of 2008 raises legitimate questions about whether the Fed will ever return to the more focused rules-based policy that helped to create growth and stability in the 1980s and 1990s and until recently.<sup>10</sup>

The asset purchases are inherently discretionary and unpredictable because they are so large. While the Fed now says it will continue the large-scale asset purchases until labor markets improve, there is a great deal of speculation about what that means. The quantitative impact of the interventions is very hard to assess and not fully understood by either policy makers or economists. Economic research demonstrates that unpredictable discretionary policy reduces macroeconomic stability. And the on-again off-again purchases have created highly variable money growth.<sup>11</sup>

Moreover, the policy also has potential international ramifications because central banks tend to follow each other as they try to counter sharp appreciations of their currencies. This is what people are now referring to as currency wars. Empirical evidence shows that very low interest rates set by the Fed make it more likely that other central banks will keep their own

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<sup>9</sup> See Allan Meltzer, "What's Wrong with the Fed? What Would Restore Independence?" paper presented at the American Economic Association meetings, January 2013.

<sup>10</sup> See Marvin Goodfriend, "The Elusive Promise of Independent Central Banking," *Monetary and Economic Studies*, Bank of Japan, Vol. 30, November 2012, pp. 39-54 and Otmar Issing, "The Mayekawa Lecture: Central Banks—Paradise Lost," *Monetary and Economic Studies*, Bank of Japan, Vol. 30, November 2012, pp. 55-74

<sup>11</sup> See John B. Taylor "Monetary Policy During the Past 30 Years With Lessons for the Next 30 Years," Cato Annual Monetary Conference, November 2012.

policy rates too low or engage in their own unconventional policy interventions.<sup>12</sup> This creates the risk of commodity booms and busts as we saw in 2011 and 2012.

When dissenters within the Fed and others point out these costs, the majority at the Fed argues that the costs are outweighed by a huge benefit. They argue that the unconventional policies reduce unemployment by increasing aggregate demand, and they back up the argument with macroeconomic models. But these models, which are useful for evaluating conventional monetary policy such as rules for the interest rate, were not designed and are not useful for evaluating unconventional policies.<sup>13</sup> In contrast, a basic microeconomic analysis shows that the policies perversely decrease aggregate demand and increase unemployment while they repress the classic signaling and incentive effects of the price system.<sup>14</sup>

Consider the “forward guidance” policy of saying the short term rate will be near zero for several years into the future. The purpose of this guidance is to keep longer-term interest rates down, and thus encourage more borrowing. A lower future short-term interest rate reduces long-term rates today because portfolio managers can, in a form of arbitrage, easily adjust their portfolio mix between long term bonds and a sequence of short term bonds. If investors are told by the Fed that the short term rate is going to be zero in the future, then they will bid down the yield on the long term bond. The forward guidance keeps the long term rate low and tends to prevent it from rising. Effectively the Fed is imposing an interest rate ceiling on the longer term market by saying it will keep the short rate unusually low.

The perverse effect comes when this ceiling is below what would be the equilibrium between borrowers and lenders who normally participate in that market. While borrowers might like a near zero rate, there is little incentive for lenders to extend credit at that rate. It is much like the effect of a price ceiling in a rental market where landlords reduce the supply of rental housing. Here lenders supply less credit at the lower rate. Even if their interest rate margin appears to be adequate, inherent uncertainty about the course of the short term rate raises risk from such lending.<sup>15</sup> The decline in credit availability reduces aggregate demand which tends to increase unemployment, a classic unintended consequence of the policy. Empirical research consistent with this view shows that during periods of forward guidance, the long term interest rate does not adjust to events that shift supply or demand as it does in normal periods.<sup>16</sup>

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<sup>12</sup> John B. Taylor, “International Monetary Coordination and the Great Deviation,” paper presented at the American Economic Association Annual Meetings, January 2013

<sup>13</sup> Since the 1970s I have been actively engaged along with many other economists in building such models for the purpose of evaluating monetary policy rules at central banks. Many of the models have been archived by Volker Wieland in his Macroeconomic Model Data Base at the University of Frankfurt. The models involve some form of price and wage rigidity through which monetary policy affects the real economy as well as expectations assumptions for longer term interest rates and other variables. But such models have not included ways to evaluate the impact of quantitative easing on interest rates, nor, of course, have they been tested for unprecedentedly long near-zero interest rate policy. Ronald McKinnon emphasizes in his “When Is a Monetary “Stimulus” Not a Stimulus?” Stanford Institute for Economic Policy Research, Policy Brief, February 11, 2013 that the models do not incorporate the perverse impacts of the near-zero rate policy on financial intermediation.

<sup>14</sup> This part of the testimony is drawn in part from my *Wall Street Journal* article, “Fed Policy Is a Drag on the Economy,” January 28, 2013.

<sup>15</sup> See Peter Fisher, “Bernanke Runs the Risk of Creating a Liquidity Effect,” *Financial Times*, September 10, 2012.

<sup>16</sup> Eric T. Swanson and John C. Williams “Measuring the Effect of the Zero Lower Bound on Medium- and Longer-Term Interest Rates,” paper presented at the American Economic Association Annual meetings, January 2012

## *Conclusion*

In answer to the questions raised for this hearing, this testimony argues that the Fed's unconventional monetary policy is not really working. Of course, this is contrary to the Fed's stated intentions as presented to the Financial Services Committee by the Chairman of the Federal Reserve. Ironically the ineffectiveness of these interventions and the disappointing economic performance during the weak recovery has led policy makers to intervene more. No one should want a continuation of this vicious circle. If the economy improves this year, perhaps the Fed will slow or halt its asset purchases and clarify its intentions to return to conventional policy in the future. In my view this will help to bolster growth and in turn result in fewer interventions in a virtuous circle that helps put the economy on a strong sustained recovery path.