



After Unconventional Monetary Policy

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This testimony before the Joint Economic Committee of the United States Congress shows the unintended consequence of the Federal Reserve's unconventional monetary policy. It suggests returning to a rules-based policy in order to promote stable prices, economic growth, and job creation.

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Testimony before the
Joint Economic Committee of Congress at the Hearing on
“Unwinding Quantitative Easing:
How the Fed Should Promote Stable Prices, Economic Growth and Job Creation”

March 26, 2014

Chairman Brady, Vice Chair Klobuchar, other members of the Committee, thank you for the opportunity to testify on U.S monetary policy. As requested I will focus on unwinding current unconventional monetary policy—including quantitative easing and the Fed’s forward guidance—and on moving toward a rules-based policy that promotes stable prices, economic growth and job creation.

I have been a strong supporter of Federal Reserve policy in the past, especially during the 1980s, 1990s and until recently, a period called the Great Moderation because of the excellent economic performance. But I have been critical of the Fed’s unconventional monetary policy in recent years as I was of the Fed’s highly discretionary policy of the late 1960s and 1970s.

Concerns about Unconventional Monetary Policy

The Federal Reserve’s recent decision to slow down its quantitative easing with a reasonably clear plan to reduce the size of its purchases of long-term Treasury and mortgage-backed securities is welcome. Compared with the Fed’s statements of last May and June, this more systematic tapering of quantitative easing—in which purchases are expected to reach zero by the end of this year—has caused relatively little volatility in the financial markets.

Quantitative Easing

Quantitative easing has not fulfilled its stated objective of stimulating the economy, and at best it has reached diminishing returns. Reports that it worked, such as Gagnon et al. (2011), are based largely on estimated announcement effects on interest rates. But these estimates are unreliable because they do not incorporate interest rate reversals that occur after the policy announcements.

Examining the entire time span of quantitative easing (QE1, QE2 and QE3 thus far) shows that yield spreads went in the opposite direction of what was intended. The 10-year US Treasury spread over 1-year interest rates was 1.3% from 2003 through 2008 versus 2.4% from 2009 through 2013, the period of quantitative easing. My research with Johannes Stroebel (2012) focused on QE1. We found little or no significant effect on mortgage interest rates once

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credit and prepayment risks are taken into account. It is even more difficult to find a favorable impact of QE3 on interest rates without the hypothesis of a synchronized event that moved rates in the opposite direction: When QE3 started the 10-year Treasury was yielding 1.7%. Now it is yielding about 2.7%. And it is worth noting that economic growth has come in below the Fed's forecasts which assumed the positive effects of quantitative easing.

There are also a number of unintended consequences of quantitative easing. At a fundamental level, quantitative easing is unpredictable. The magnitudes of the purchases are huge and the impacts are controversial among Fed policy makers. With the large magnitudes, frequent changes in size, and little consensus on the impacts, it's nearly impossible to make decisions about such policy actions predictable or rules-based.

The impact of a single government agency dominating the market has created uncertainty and distorted price discovery. The long-term interest rate does not react to news as it does when more conventional policies are in place. And with the short rate held near zero for a long time, the money market—and in particular the market for federal funds—does not function normally.

Uncertainty about the eventual unwinding or reduction in the size of the balance sheet—which has not occurred yet—creates a two-sided risk. The securities purchases are financed by increasing banks' reserve balances, which have risen from around \$10 billion in 2008 to over \$2,600 billion today. This is a massive increase in liquidity in the banking system, and it will keep on rising until QE3 is over. One side of the two-sided risk is a slower recovery due to the uncertainty caused by concerns of an unwinding that is too quick or erratic. On the other side is the risk of higher inflation that would occur if the Fed cannot reduce the size of its balance sheet quickly enough to avoid an increase in the broad money supply. Thus far the slower recovery risk has been realized, but future inflation risk still exists, and with the balance sheet still rising the risk remains very real today.

The policies also create incentives for otherwise risk-averse investors—retirees and pension funds—to take on too much risk. In addition quantitative easing can disrupt monetary policy in other countries as their central banks take special actions in response. This disruption can feed back on the American economy. Finally, the excursion of a limited purpose institution into fiscal policy and credit allocation and its effects on fiscal discipline and the distribution of income and wealth raise questions about its independence.

Time Inconsistent Forward Guidance

The other part of unconventional policy is forward guidance in which the Fed endeavors to say what the policy interest rate will be in the future. The rationale for the policy recently has been to keep expectations of future short-term interest rates exceptionally low in order to hold long-term interest rates low. As practiced by the Fed, however, forward guidance has also created uncertainty. There are two main reasons for the uncertainty. First, forward guidance procedures have changed every year since it began in 2009. The Fed began by saying it would hold the federal funds rate low for “for an extended period” and then change to “at least through mid-2013” and then to “late 2014” and then “through mid-2015.” Then it changed the whole focus from dates to economic conditions, giving levels of the unemployment rate as a guide. And

at the time of the last FOMC meeting it switched back to a mixture of time (six months) and a series of economic indicators for interest rate changes.

A second reason for the uncertainty—at least during the past two years—has been that the Fed has indicated that it would keep the policy interest rate low for longer than would likely be appropriate. It thus puts policy into a time inconsistency bind which has become increasingly clear as future promises have gotten closer to the present. At its last meeting the Fed indicated that it will hold the interest near zero for a while even after the economy is back to normal. This raises the question as to whether or not the members of the FOMC will actually do this when the time comes. Thus time inconsistency raises uncertainty.

A Rules-Based Strategy

For these reasons, it is important for the Fed to exit from these unconventional policies and lay out a strategy to do so. The most important part of the strategy should be to clarify where monetary policy is going in the future.

In my view the experience of monetary policy during the 100 years since the Fed was founded shows that monetary policy should become more rules-based. A rules-based policy would not involve the massive purchases of mortgages that we have seen in the past few years. It would ensure that any forward guidance be consistent over time. It would include the Fed's important lender of last resort role, as in the case of 9/11 attacks in 2001 and the financial panic in 2008.

I believe that the Congress can help the Fed move in this direction. A rules-based policy should be the benchmark for Fed decisions, and deviations from the rule should be explained by the Fed to the Congress and the American people.

Reverse Repos and Permanent Quantitative Easing

Some argue that the Fed should remain indefinitely on a policy of quantitative easing in which it would regularly intervene in any market it chooses and simultaneously move its policy interest rate around. One proposed mechanism would utilize reverse repurchase agreements (repos), as recommended for example by Gagnon and Sack (2014), to change the short-term interest rate during periods when the Fed's balance sheet and reserve balances are excessively high. The proposal would be to combine changes in the interest rate on reverse repos with the interest rate the Fed pays on bank reserves at the Fed. The Fed would likely move the reverse repo rate and interest on reserves in tandem.

But such a policy would bring with it all the problems with quantitative easing listed above, and it would throw away basic monetary policy principles including the ultimate importance of the growth of the quantity of money. To avoid such a development the Congress could require that the Fed submit in writing (as I suggested in Taylor (2011) as part of a broader legislative proposal reviewed below) “the procedure for adjusting the supply of bank reserves to bring about the desired federal funds rate, recognizing that the rate is determined by the supply and demand for reserves in the money market.” Of course during a transition period from the

current unusually high balance sheet and reserve balances, it may be necessary to use reverse repos as well as the interest rate on reserves to determine the short rate, but that should stop as soon as the transition is over and reserves return to normal. This should be part of a broader exit rule to reduce bank reserves in a predictable way.

Legislation for Rules-Based Policy

I have concluded that the Congress should pass legislation requiring the Fed to adopt a policy rule for the instruments of monetary policy. It would be the Fed's job not the Congress's to choose the rules-based policy, but if and when the Fed deviated from its chosen rule, it would have explain why in writing and in testimony before the House and Senate. Some argue that such legislation is not needed to achieve such a reform if the Fed and the Congressional committees could agree to follow such a procedure on their own, but the experience over the recent years suggests that legislation could help greatly, an issue that could be explored further by the proposed Centennial Monetary Commission.

There has been considerable research and experience with monetary policy rules, and the so-called Taylor rule, which emerged from years of extensive research by many people, has continued to attract a lot of interest. That such a rules-based policy would work well follows from Fed history over the past century as monetary historian Allan Meltzer (2012) has concluded, reporting that "The longest period of low inflation and relatively stable growth that the Fed has achieved was the 1985–2003 period when it followed a Taylor Rule."

There are of course other rules-based procedures for the instruments of policy. One way to judge the effectiveness of this type of policy is to note that it would keep the growth of nominal GDP steady as some have suggested as a goal of policy: The volatility of nominal GDP growth was less during 1985-2003 than in the years before and after.

There are some promising signs that the Fed could move toward such a rules-based policy in the future. The Fed has already adopted a 2% inflation target, the value imbedded into the Taylor rule. A 2% inflation target also now guides policy at the European Central Bank, the Bank of England, and the Bank of Japan, creating an international standard which also improves exchange rate stability.

Moreover, members of the Federal Open Market Committee now forecast that in the long-run the federal funds rate should average around 4%, implying a 2% real interest rate, which is also imbedded in the Taylor rule. There is now agreement that the Fed's interest rate response to changes in the inflation rate should be greater than one, leaving the appropriate response to the economy's overall capacity and its measurement as the remaining area of disagreement.

Recently Janet Yellen (2013) stated that "Many studies have shown that, in normal times, when the economy is buffeted by typical shocks—not the extraordinary shock resulting from the financial crisis—simple rules can come pretty close to approximating optimal policies." The implication is that after the recent experience with unconventional monetary policy, a rules-based policy should become the norm.

References

- Gagnon, Joseph, Matthew Raskin, Julie Remanche, and Brian Sack. (2011). “The Financial Market Effects of the Federal Reserve’s Large-Scale Asset Purchases,” *International Journal of Central Banking*, vol. 7(1), 3-44
- Gagnon, Joseph and Brian Sack (2014) “Monetary Policy with Abundant Liquidity: An New Operating Framework for the Federal Reserve” Peterson Institute for International Economics, Policy Brief, PB14-4, January 2014
- Meltzer, Allan (2012), “Federal Reserve Policy in the Great Recession,” *The Cato Journal*, Vol. 32, No. 2
- Stroebel, Johannes and John B. Taylor (2012), “Estimated Impact of the Fed's Mortgage-Backed Securities Purchase Program,” *International Journal of Central Banking*, 8 (2), pp. 1-42
- Taylor, John B. (1993) “Discretion Versus Policy Rules in Practice,” *Carnegie-Rochester Series on Public Policy*, North-Holland, 39, pp. 195-214. Also Stanford Center for Economic Policy Research (CEPR, now SIEPR) Publication No. 327, November 1992.
- Taylor, John B. (2011), “Legislating a Rule for Monetary Policy,” *Cato Journal* Vol. 31, No. 3, pp. 1-9.
- Taylor, John B. (2014) “Monetary Policy and the State of the Economy,” Testimony before the Committee on Financial Services, United States House of Representatives, February 11.
- Yellen, Janet L. (2013), “Revolution and Evolution in Central Bank Communications,” Remarks, Haas School of Business, University of California, Berkeley, California, November 13.