

BACKGROUND

No. 2876 | JANUARY 29, 2014

The Fed at 100: A Primer on Monetary Policy

Norbert J. Michel, PhD

Abstract

The Federal Reserve is the official central bank of the United States and is responsible for U.S. monetary policy (altering the amount of money in an economy to promote economic growth and stability). This paper provides a brief overview of the Fed's structure, purpose, and operations and discusses the implications of its recent policies. In general, the Fed conducts monetary policy by buying and selling securities, such as U.S. Treasuries. Since at least the 1950s, the Federal Reserve has actively tried to stabilize the private economy and thus calm business cycles, but the evidence suggests that the Fed has been largely ineffective at accomplishing its goals. The Fed's 100th birthday offers a perfect time for Congress to assess its overall effectiveness, ideally by forming a formal congressional commission.

Monetary policy refers to altering the amount of money in an economy (its money supply) to promote economic growth and stability. Getting monetary policy right is critical because the wrong money supply can severely alter the economy even if the government's fiscal (tax and spending) policies are ideally suited to economic growth. The Federal Reserve (the Fed), the official central bank of the United States, is responsible for U.S. monetary policy.

Since the creation of the Federal Reserve in 1913 the U.S. has experienced the Great Depression in the 1930s, severe inflation and unemployment during the 1970s, a major banking crisis in the 1980s, and a severe financial crisis and recession in 2007. Even worse, the Federal Reserve's unorthodox actions in the wake of the most recent

KEY POINTS

- The Federal Reserve is the official central bank of the United States and is responsible for the country's monetary policy. Its organizational structure has changed little since the 1930s, but its role has evolved greatly since its founding.
- The Fed's day-to-day operations are not under the direct control of any branch of the U.S. government, and it is not bound by law to meet any specific economic goals, so it has broad discretionary powers.
- Since the creation of the Federal Reserve in 1913, the U.S. has experienced the Great Depression in the 1930s, a period of severe inflation and unemployment in the 1970s, a major banking crisis in the 1980s, and a severe financial crisis in 2007.
- Policymakers should actively question the effectiveness of the Fed's discretionary monetary policies, beginning by forming a formal commission to examine U.S. monetary policy.

This paper, in its entirety, can be found at <http://report.heritage.org/bg2876>

Produced by the Thomas A. Roe Institute
for Economic Policy Studies

The Heritage Foundation
214 Massachusetts Avenue, NE
Washington, DC 20002
(202) 546-4400 | heritage.org

Nothing written here is to be construed as necessarily reflecting the views of The Heritage Foundation or as an attempt to aid or hinder the passage of any bill before Congress.

financial crisis have moved it further into the realm of fiscal policy and financial market regulation. As a result, taxpayers will ultimately bear the burden through higher taxes, higher prices, or both.

The Federal Reserve System was originally a decentralized group of private banks with federal oversight.

With the Federal Reserve undergoing a leadership change as well as its centennial, now is the perfect time for Congress to consider major reform of this institution. This paper provides a brief overview of the structure and purpose of the Federal Reserve and its operations, as well as a short description of its recent policies and their implications.

The Federal Reserve System Begins: Christmas 1913

On December 23, 2013, the Federal Reserve celebrated its 100th birthday. The Fed's organizational structure has changed little since the 1930s, but its role has evolved greatly since its founding. The Federal Reserve System was originally a decentralized group of private banks with federal oversight.

The original purpose of the Federal Reserve system was to manage member banks' gold reserves during cyclical fluctuations around peak harvest months. Ironically, as recently noted by former Fed Chairman Alan Greenspan, the gold standard was a self-regulating mechanism that did not require a central bank.¹ The system initially consisted of 12 district banks throughout the U.S. and a Federal Reserve Board in Washington, D.C. The 1913 Federal Reserve Act set up a weak oversight presence in Washington with virtually autonomous district banks because many people did not like the idea of one strong central bank in the nation's capital.

However, by the end of its first decade, the relatively weak Federal Reserve Board had asserted itself in many ways, diminishing the district banks' autonomy. In 1935, the original Federal Reserve Board was replaced by the Board of Governors, the Fed's governing agency under seven presidential appointees. The board still exists today. At the same time, the Federal Open Market Committee (FOMC) was created to conduct monetary policy. From the time the FOMC was created, all members of the Board of Governors and five of the 12 district bank presidents have held voting seats on the FOMC.² Although the Fed is not under the direct control of any branch of the federal government, these changes dramatically shifted its power structure to Washington and further centralized what was originally designed to be a decentralized agency.

The Dual Mandate and Stabilization

A 1977 amendment to the Federal Reserve Act established what is generally referred to as the Federal Reserve's "dual mandate" and the monetary objectives of the Federal Reserve's Board of Governors and Open Market Committee:

The Board of Governors of the Federal Reserve System and the Federal Open Market Committee shall maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.³

Technically, the law does not mandate that the Fed must reach any specific goals, and it discusses three economic measures—employment, prices, and interest rates—instead of two. Nonetheless, the Fed is assumed to operate under a dual mandate of main-

1. See Alan Greenspan and Jon Stewart, *The Daily Show*, September 19, 2007, in "Alan Greenspan and Jon Stewart on Free Markets Versus Central Banking," transcript, Division of Labour blog, September 19, 2007, at <http://divisionoflabour.com/archives/004047.php> (accessed December 19, 2013).

2. The New York Fed president always votes, but the other four voting positions are rotated among the other district presidents. Board of Governors of the Federal Reserve System, "Federal Open Market Committee," September 3, 2013, <http://www.federalreserve.gov/monetarypolicy/fomc.htm> (accessed December 5, 2013).

3. Congress added the quoted language to the Federal Reserve Act by Section 202 of Public Law 95-188 (November 16, 1977).

taining maximum employment and stable prices.⁴ Although the Fed is not mandated to hit any specific inflation or employment targets, the minutes of the FOMC meetings from the past several decades show that the Fed tries to promote price stability and employment.

Not only is there no binding requirement to hit specific economic goals, but no rule dictates how the Fed should implement its policies. Therefore, the Federal Reserve generally conducts discretionary monetary policy as opposed to rules-based policy. For example, if the Fed conducted rules-based policies, it would always try to grow or shrink the money supply by a given percentage based on the growth rate of the economy. Instead, under its discretionary policy framework, the Federal Reserve constantly tries to adjust the money supply—and therefore the economy—in whatever manner it deems appropriate.

In general, if the economy grows (for example, if it creates more jobs and produces more output), the Fed implements policies to prevent inflation (a general increase in prices) and slow the economy. On the other hand, if the economy slows, the Fed tries to induce more economic activity. The FOMC implements these policies at its own discretion to smooth the business cycle.

The Fed does not try to accomplish its goals by directly adding to or subtracting from the amount of money in the economy. In fact, the Fed can use its policy tools only to influence how much money is created in the economy (mainly) through its control of bank reserves. Ultimately, the decisions of private

banks to increase lending create money in the U.S. economy. The Fed cannot force banks to lend more money.

Money creation is often misunderstood or taken for granted. The Fed has had a monopoly on the type of money that banks can issue since the 1930s. As a result, the U.S. government issues what most people think of as money: U.S. currency (Federal Reserve Notes) and coins.⁵ But currency and coin are only part of America's money supply. Private banks, for example, add to the supply of money by lending an amount to businesses and individuals that is larger than the amount of currency and coin they have in their vaults or on deposit at other banks. In general, banks can safely create these funds as long as they reserve appropriate amounts on hand to pay depositors who may seek to withdraw their money from time to time. Thus, the Fed does not exercise absolute control of the money supply because the actual amount of money in the economy fluctuates with the amounts deposited in banks and lent to individuals and businesses, among other things.⁶ Open-market operations are the Fed's main tool for influencing the amount of money that banks create.

Traditional Open-Market Operations

Historically, the Fed most commonly has implemented monetary policy through open-market operations. These operations, decided by the FOMC, have consisted almost exclusively of buying and selling short-term Treasury bills in the public (open) markets.⁷ The main difference between the Fed's and the

-
4. The idea of promoting price stability as a policy goal was first introduced by Congress in the 1977 amendment to the Federal Reserve Act. Subsequent legislation, such as the 1978 Full Employment and Balanced Growth Act, expanded policy goals for the federal government (in general) to "promote full employment and production, increased real income, balanced growth, a balanced Federal budget, adequate productivity growth, proper attention to national priorities, achievement of an improved trade balance...and reasonable price stability." Ultimately, the President of the United States was required to publish a timetable for achieving price stability and full employment in each year's *Economic Report of the President*. See John Judd and Glenn D. Rudebusch, "The Goals of U.S. Monetary Policy," Federal Reserve Bank of San Francisco *Economic Letter*, January 29, 1999, <http://www.frbsf.org/economic-research/publications/economic-letter/1999/january/the-goals-of-us-monetary-policy/> (accessed October 17, 2013).
 5. 12 U.S. Code §§ 411 and 418 (currency) and 31 U.S. Code §§ 5111-5112 (coins). The government prints its Federal Reserve Notes in the Department of the Treasury's Bureau of Engraving and Printing. 31 U.S. Code § 303; Treasury Order No. 101-07 (September 16, 1996); and U.S. Department of the Treasury, Bureau of Engraving and Printing, "Delegation to the Director, Bureau of Engraving and Printing, for the Production of Currency Notes To Meet the Demands of the Federal Reserve Banks," *Federal Register*, Vol. 61, No. 180 (September 16, 1996), p. 48727. The government mints its coins in the facilities of the U.S. Mint. 31 U.S. Code § 5131. Federal Reserve Notes and coins are "legal tender for all debts, public charges, taxes, and dues." 31 U.S. Code § 5103.
 6. For a more technical description of the money supply, see Board of Governors of the Federal Reserve System, "What Is the Money Supply? Is It Important?" September 26, 2013, http://www.federalreserve.gov/faqs/money_12845.htm (accessed January 8, 2014).
 7. The types of securities that the Fed may purchase for open-market operations are rather limited and are mainly spelled out in Section 14 of the Federal Reserve Act. Board of Governors of the Federal Reserve System, "Federal Reserve Act," May 23, 2013, <http://www.federalreserve.gov/aboutthefed/section14.htm> (accessed October 10, 2013).

general public's purchases is that the Fed conducts these operations with the specific intent of manipulating the amount of reserves in the banking system.

By law, banks are required to hold a certain percentage, specified by the Fed within statutory limits, of their customers' deposits in reserve. Banks can hold these reserves as cash (in their vaults) or in their accounts at their District Federal Reserve Banks, but they are required to hold the specified percentage (currently 10 percent in most cases) of their customers' deposits in reserve.⁸ Banks' total reserves are then divided into two parts: required reserves (the amount that is required by law) and excess reserves (those that exceed the required amount).

At any given time, an individual bank cannot lend more than it has in excess reserves. (If it did, it would not have enough required reserves.) Hence, the reserve requirement also dictates the maximum amount of money that the banking system can lend. This amount is 10 times the level of excess reserves held by banks. For instance, if a bank has \$900 in customer deposits, it must keep \$90 in reserve. If someone were then to give the bank \$10 in additional reserves, the bank could then create an additional \$100 in loans because it has the required \$10 in reserve. Although an oversimplification, this process of increasing banks' reserves is what the Fed tries to do to induce banks to create more money.

The idea behind this policy tool is that the Fed can buy or sell enough securities to adjust banks' reserves and ultimately the amount of money that banks lend. If the Fed wants banks to create less money, it takes reserves out of the banking system, thus reducing the amount that banks can lend.

However, the Fed does not directly control the amount banks decide to lend, because banks may or may not want to make loans. In the event that a bank does not have enough reserves to make loans at any given point, it can borrow them from another bank. Banks commonly lend and borrow each other's reserves to satisfy reserve requirements, and

the interest rate in this lending market is known as the Federal Funds Rate (FFR). The FFR and banks' reserve balances are both integral parts of the Fed's traditional open-market operations.

To carry out these operations, the Fed directs a group of traders at the New York Fed to buy and/or sell ("trade") through a group of banks called primary dealers.⁹ These dealers represent some of the largest financial institutions in the world and are required to carry out trades with the Fed as well as to participate in all U.S. Treasury debt auctions. In other words, the primary dealers have no choice but to buy U.S. Treasuries from the government and to buy and sell with the Federal Reserve.

How the Fed Tries to Influence the Economy

In general, the Fed is always trying to manage (stabilize) the economy under the auspices of its dual mandate. Therefore, if the economy grows, the Fed will try to prevent inflation by inducing banks to stop lending as much money. On the other hand, when the economy is judged to be doing too poorly, the Fed tries to boost the economy by encouraging banks to lend more money. Whereas fiscal policies alter government spending and taxes in the hope of having an impact on economic growth, monetary policy aims to alter the money-creation process to manage the economy.

Expansionary Open-Market Operations. In theory, if the Fed wants to boost economic activity with open-market operations, it must print money to buy Treasury securities. In practice, the Fed "prints" money without actually printing any tangible bills by simply crediting primary dealers' reserve accounts.¹⁰ In other words, the Fed directs its traders to buy Treasuries from the primary dealers and then electronically credits the reserve accounts of the dealers' banks. These purchases add to banks' reserve accounts even though no bills are actually printed. As a result, the Fed increases the maximum

8. Officially, banks currently must hold 10 percent of their customer *transaction account* deposits exceeding \$79.5 million, which means that most deposits in the U.S. are subject to the 10 percent requirement. Federal Reserve Board of Governors, "Reserve Requirements," November 5, 2013, <http://www.federalreserve.gov/monetarypolicy/reservereq.htm> (accessed October 13, 2013). For the Fed's final rule, see Federal Reserve System, "Reserve Requirements of Depository Institutions," *Federal Register*, Vol. 78, No. 214 (November 5, 2013), pp. 66249-66249.

9. For a list of the dealers, see Federal Reserve Bank of New York, "Primary Dealers List," http://www.newyorkfed.org/markets/pridealers_current.html (accessed October 10, 2013).

10. When banks need additional vault cash and/or damaged bills need to be removed from circulation, the Fed has new bills shipped from Treasury and credits reserve accounts as needed. This form of printing money is not directly related to expansionary monetary policy.

amount that private banks can lend to the public. If banks make new loans, they create new money, and economic activity will increase.

Contractionary Open-Market Operations. Conversely, the Fed implements a contractionary (“tight”) policy to slow down the economy, perhaps to head off a rapid increase in prices (inflation). To implement this strategy, the Fed directs its traders to sell securities to the primary dealers. These sales take reserves out of the banking system because the primary dealers must use their own funds to buy from the Fed, and the Fed can simply hold the funds. So the decline in bank reserves reduces the maximum amount that banks can lend, potentially reducing lending and slowing down the economy.

Fed Funds Rate Targeting. The Federal Funds Rate (the interest rate on short-term loans of bank reserves) is often a confusing aspect of the Fed’s open-market operations. Despite repeated claims by reporters that it “sets” interest rates to conduct monetary policy, the Fed does not do so.¹¹ In reality, it sets a target for the FFR to guide its open-market operations.

For example, if the Fed wants to implement expansionary policy, it lowers its FFR target and then directs its traders to buy Treasuries. These Federal Reserve purchases place additional cash in banks’ reserve accounts, making funds less scarce, therefore lowering the FFR. In other words, banks have more funds to lend, so they will charge less to induce other banks to borrow funds. The Fed would then continue to buy Treasuries until the FFR nears its target. This process is simply supply and demand at work—the supply of and demand for credit. The interest rate is the price paid to borrow the money.

On the other hand, to implement contractionary monetary policy, the Fed would increase its FFR target and direct its traders to sell securities. These

sales would force primary dealers to effectively use their cash reserves to purchase Treasuries from the Fed, thus making reserves more scarce and putting upward pressure on the FFR. In this case, banks have fewer funds to lend, so they will charge more, that is, a higher interest rate, to anyone who wants to borrow them. To whatever extent other interest rates (for example, mortgage rates and the prime interest rate) are influenced by changes in the FFR and the level of reserves, monetary policy will be more successful at impacting economic activity.¹² In this way, the Fed indirectly influences interest rates and the amount that private banks lend.

Quantitative Easing: A New Era in Fed Policy

For the past several years, the Fed has followed an expansionary policy in an effort to stimulate economic growth. Since 2007, the Fed has been lowering its FFR target and buying Treasuries. In September 2007, the Fed lowered the target to 4.75 percent, the first in a long series of target reductions. On October 9, 2013, the Fed announced that it would *maintain* its FFR target range at 0 percent to 0.25 percent.¹³ The actual FFR—not just the target—has been very close to zero since November 2008, leading to an interesting policy question: What happens when the FFR target cannot be lowered any further?

Because the Fed cannot lower its target FFR to a negative number, it can no longer expand its short-term security purchases when the FFR is very close to zero.¹⁴ Therefore, the Fed decided to buy longer-term securities to try to push longer-term interest rates down. The Fed began to use this approach, commonly referred to as quantitative easing (QE), in late 2008. This sort of monetary policy had never really been used in the U.S., but it is an expansion of traditional open-market operations. The Fed has

11. For example, see John Waggoner, “What the Fed Chairman Does,” *USA Today*, October 9, 2013, <http://www.usatoday.com/story/money/business/2013/10/09/what-the-fed-chairman-really-does/2950999/> (accessed October 10, 2013).

12. There is disagreement over the extent to which the Fed’s open-market operations affect other interest rates. See Daniel Thornton, “The Fed and Short-Term Interest Rates: Is It Open Market Operations, Open Mouth Operations, or Interest Rate Smoothing?” *Journal of Banking and Finance*, Vol. 28, No. 3 (March 2004), pp. 475–498.

13. Press release, Board of Governors of the Federal Reserve System, September 18, 2007, <http://www.federalreserve.gov/newsevents/press/monetary/20070918a.htm> (accessed December 6, 2013). See also press release, Board of Governors of the Federal Reserve System, October 9, 2013, <http://www.federalreserve.gov/newsevents/press/monetary/20131009a.htm> (accessed October 10, 2013).

14. A negative FFR would indicate that one bank was paying another bank to borrow its money—something that would not happen. At most, we would expect the FFR to approach very close to 0 percent, thus making continued short-term Treasury purchases and further target FFR decreases unlikely.

engaged in three successive rounds of QE since 2008, and each has its own unique characteristics.

QE1 (December 2008). In December 2008, the Fed started buying longer-term Treasury securities and the debt and mortgage-backed securities (MBS) of Fannie Mae and Freddie Mac, two government-sponsored enterprises (GSEs).¹⁵ The Fed announced that it would purchase up to \$100 billion of the GSEs' debt and up to \$500 billion of their MBS from banks and from the GSEs themselves. The Fed stated that its goal was to "reduce the cost and increase the availability of residential mortgage credit" and to "reduce borrowing costs for a range of private borrowers."¹⁶ These purchases have come to be known as QE1, the first round of quantitative easing.

The Fed now holds trillions of dollars in debt of companies that were insolvent as well as the same securities that led to the financial crisis.

The QE1 transactions were carried out through the New York Fed's trading desk, just as traditional open-market operations are carried out. On the surface, the underlying idea behind QE1 was the same as with traditional open-market operations: to buy securities to increase excess reserves and lower interest rates, enabling banks to lend more and boost the economy.

However, buying longer-term Treasuries instead of short-term Treasuries is somewhat unusual. Even more unusual is that the Fed started purchasing the securities of Fannie and Freddie, the former GSEs now under the direct control of the U.S. government. These purchases are the more troublesome of the QE

plans because the Fed now holds trillions of dollars in debt of two companies that were insolvent as well as the same securities that led to the financial crisis.

Other major differences are that QE1 involved a much larger scale of purchases than traditional open-market operations and that the Fed predetermined the quantity of reserves it wanted to inject into the system as opposed to targeting the FFR.¹⁷ Regardless, the Fed pitched QE1 as a type of expansionary monetary policy (an "easing" of credit conditions). The Fed also announced that it was prepared to expand its purchases of securities if necessary, which it did in 2010.

QE2 (November 2010). In its press release of November 3, 2010, the Fed declared that it would purchase \$75 billion per month of longer-termed Treasuries for a total of \$600 billion. The minutes of the Open Market Committee meeting state: "Purchases were concentrated in nominal Treasury securities with maturities of 2 to 10 years, though some shorter-term and some longer-term securities were purchased."¹⁸ As with QE1, these purchases were also carried out through the New York Fed's trading desk, just as with traditional open-market operations. Thus, the QE2 purchases could be expected to have the same impact on reserves as purchases of short-term Treasuries have.

In June 2011, the Fed announced it would "complete purchases of \$600 billion of longer-term Treasury securities by the end of this month" and that its "sales of agency securities...will likely commence sometime after the first increase in the target for the federal funds rate."¹⁹ This statement that it could start selling securities indicated a possible shift from expansionary to contractionary policy, a shift that typically would not happen unless the Fed thought the economy was doing well. Consequently, June 2011 is viewed as the official end of QE2. However,

15. Mortgage-backed securities (MBS) refer to investments that pay out cash based on the performance of a group of mortgages. Hence, they are "backed" by mortgages.

16. Board of Governors of the Federal Reserve System, "Minutes of the Federal Open Market Committee," December 15-16, 2008, pp. 6 and 8, <http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20081216.pdf> (accessed December 6, 2013).

17. "In 1999, the portfolio of domestic securities in the System Open Market Account (SOMA) expanded by a record \$44 billion, surpassing the previous record of \$41 billion set in 1997. At the end of the year, the SOMA stood at \$517 billion.... All of the expansion was achieved through outright purchases of Treasury securities in the market." Federal Reserve Bank of New York, "Domestic Open Market Operations During 1999," February 2000, p. 14, <http://www.newyorkfed.org/markets/omo/omo99.pdf> (accessed October 16, 2013).

18. Board of Governors of the Federal Reserve System, "Minutes of the Federal Open Market Committee," November 2-3, 2010, p. 2, <http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20101103.pdf> (accessed December 6, 2013).

19. Board of Governors of the Federal Reserve System, "Minutes of the Federal Open Market Committee," June 21-22, 2011, p. 10, <http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20110622.pdf> (accessed December 6, 2013).

little more than one year later, the Fed announced that it was not done with its QE programs, leaving many anxious about the state of the economy.

QE3 (September 2012). On September 13, 2012, the Fed announced a new round of easing, which is now referred to as QE3. The key distinction between QE3 and its predecessors is that QE3 is an open-ended commitment. In other words, rather than commit to purchasing a fixed amount of securities by a certain date, the Fed declared that it would make purchases until the labor market “substantially” improved.

Specifically, the Fed announced that its combined securities purchases (long-term Treasuries, GSE debt, and MBS) would increase “by about \$85 billion each month through the end of the year.” To remove any doubt about the end date, the Fed disclosed that QE3 would continue “[i]f the outlook for the labor market does not improve substantially.”²⁰ These purchases, as with the two previous rounds of QE, were carried out in the normal manner through the New York Fed’s trading desk. Consequently, QE3 is expected to have the same impact on reserves as purchases of short-term Treasuries (and QE1 and QE2) have had.

In December 2012, the Fed stated that it would “keep the target range for the federal funds rate at 0 to 1/4 percent” and that it “currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6-1/2 percent.”²¹ In a follow-up news conference, Fed Chairman Ben Bernanke made it clear that the Fed could decide to continue its purchases even if the unemployment rate fell below 6.5 percent.

These sentiments were later reinforced when Janet Yellen, at the time a possible replacement for Chairman Bernanke, told an AFL–CIO gathering that Bernanke’s figures were “thresholds for possible action, not triggers.”²² The Fed officially extended

QE3 in September 2013 by announcing that it would not yet reduce (or “taper”) its securities purchases.²³ As of this writing, the Fed has not announced an end to the program, but it announced in December 2013 that it would begin tapering its purchases to \$75 billion per month.²⁴

QEs Failed to Expand the Economy

The monetary policy tools that the Fed has used since 2007 were designed to increase the amount of banks’ reserves and ultimately increase economic activity through additional lending. Yet as Chart 1 makes clear, the Fed’s policies have greatly expanded the amount of excess reserves. In other words, banks have mostly decided to hold onto the cash the Fed gave them when it executed all those securities purchases and not to create new money through additional lending.

Given that banks have built up excess reserves and have not lent more money to people, it is very difficult to argue that these Fed policies have done much to expand the economy. In fact, by the Fed’s own admission, its expansionary programs have not sufficiently improved the economy. The Fed would not have implemented successive rounds of QE if the previous rounds had worked, and it would not have implemented the first QE program if traditional open-market operations had worked.

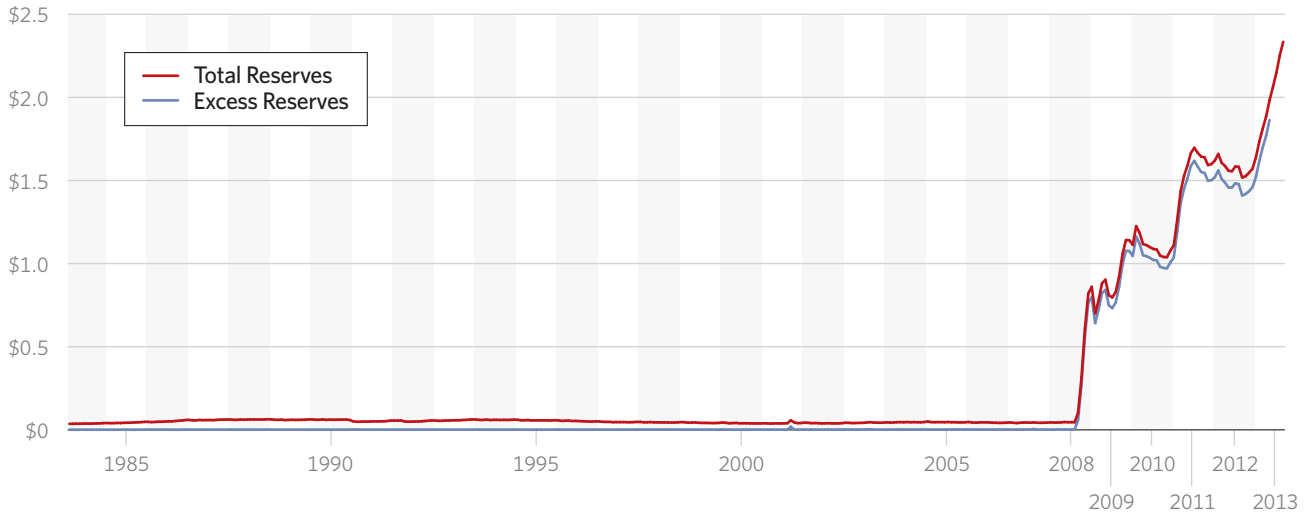
The reason that banks are holding on to all of these excess reserves is debatable, but the fact that they are holding them highlights the limits of monetary policy. Banks earn profits when they create new money through lending, but they lose money when they make bad loans. Therefore, many banks are likely waiting for economic conditions to improve and simply do not perceive that they have many profitable lending opportunities. Many banks are also likely hesitant to make too many loans given the

-
20. Press release, Board of Governors of the Federal Reserve System, September 13, 2012, <http://www.federalreserve.gov/newsevents/press/monetary/20120913a.htm> (accessed December 6, 2013).
 21. Press release, Board of Governors of the Federal Reserve System, December 12, 2012, <http://www.federalreserve.gov/newsevents/press/monetary/20121212a.htm> (accessed December 6, 2013).
 22. Associated Press, “Fed’s Yellen Says Rate Hikes Not Assured Even After Unemployment Drops Below 6.5 Percent,” Fox News, February 11, 2013, <http://www.foxnews.com/us/2013/02/11/fed-yellen-says-rate-hikes-not-assured-even-after-unemployment-drops-below-65/> (accessed October 12, 2013). The Senate confirmed Janet Yellen as Chairman of the Fed’s Board of Governors on January 6, 2014.
 23. See Fox Business, “Fed Decides Not to Begin Tapering QE3,” September 18, 2013, <http://www.foxbusiness.com/government/2013/09/18/fed-decides-not-to-begin-tapering-qe3/> (accessed October 12, 2013).
 24. See JeeYeon Park, “Fed to Taper Bond Buying by \$10 Billion a Month,” CNBC, December 18, 2013, <http://www.cnbc.com/id/101279385> (accessed December 19, 2013).

CHART 1

Excess Reserves Have Spiked Since 2008

IN TRILLIONS OF DOLLARS



Source: Board of Governors of the Federal Reserve System, Data Download Program, <http://www.federalreserve.gov/datadownload/Review.aspx?rel=H3> (accessed January 17, 2014).

B 2876 heritage.org

regulatory uncertainties of the Dodd–Frank Act and its implementation.

A more interesting explanation notes that the Fed started paying interest on reserves in October 2008, something it had not previously done.²⁵ This new policy reduced banks’ cost of holding excess reserves. In other words, the Fed lowered the incentive for banks to create more money with their new reserve balances by paying interest on reserves. Yet why would the Fed flood the market with trillions in reserves and simultaneously induce banks to forgo using them to make new loans?

One logical answer is that the Fed designed the QE programs not solely as a new form of expansionary monetary policy. Instead, it used the QEs to bail out banks that were holding Fannie’s and Freddie’s debt and MBS. The QE programs effectively exchanged cash—created out of thin air—for bank assets that had declined dramatically in value. Therefore, from the perspective of banks, the QEs can be judged a

success because the purchases strengthened their financial position. Of course, those assets—especially the MBS frequently referred to as “toxic” assets—have not simply disappeared.

The Future Impact

The Federal Reserve has now created more than \$2 trillion in excess reserves since the financial crisis, whereas the highest (month ending) amount in the banking system between 1959 and 2007 was only \$19 billion.²⁶ Additionally, the Fed now holds more than \$3 trillion in long-term Treasuries and MBS, a situation that presents at least two problems.

First, the Fed holds trillions of dollars in toxic assets that contributed to the financial crisis. One financial consulting firm estimates that the Fed stands to lose between \$200 billion and \$550 billion on these MBS in the next three years, depending on how much (and how soon) interest rates rise.²⁷ A private bank with this sort of balance sheet would like-

25. In 2008, the Fed claimed that it instituted this process to maintain more control of banks’ reserve balances. The Fed can change the rate at its discretion, and it currently uses a variable interest rate. Press release, Board of Governors of the Federal Reserve System, October 6, 2008, <http://www.federalreserve.gov/monetarypolicy/20081006a.htm> (accessed October 17, 2013).

26. The Federal Reserve does not provide this data series for years prior to 1959.

27. The firm is named MSCI, Inc. See Craig Torres, Josh Zumbun, and Caroline Salas Gage, “Fed Faces Explaining Billion-Dollar Losses in QE Exit Stress,” Bloomberg News, February 26, 2013, <http://www.bloomberg.com/news/2013-02-26/fed-faces-explaining-billion-dollar-losses-in-stress-of-qe3-exit.html> (accessed October 14, 2013).

MBS Financial Risks

Two important kinds of financial risk are attached to the MBS (and the GSEs' bonds) that the Fed has been buying. First, there is basic credit risk (also known as default risk). Credit risk is the risk that an investment will not deliver its promised payments. For someone holding MBS, default could occur when the homeowners whose mortgages back the security fail to make their house payments. This type of risk contributed to the recent financial crisis.

The second type of risk is interest-rate risk, which is concerned with whether interest rates will rise, causing the investment to lose value. This type of financial risk is not as straightforward as default risk, but this same type of risk caused the savings and loan crisis in the 1980s.

For example, if Sarah recently purchased an investment that promises to pay 3 percent interest on \$1,000 for the next five years (\$30 each year) and soon finds that interest rates on similar new investments have risen to 5 percent, Sarah's investment has declined in value. In this instance, instead of receiving the 5 percent return (\$50 each year), Sarah receives only 3 percent. Naturally, Sarah would like to sell her 3 percent investment, but no one will buy it from her when they could buy a new investment earning 5 percent unless she lowered the price enough to make sure they would earn a 5 percent return. Hence, the value of Sarah's security falls as interest rates rise.

This example is obviously a simplification, but the same principles apply to any investment that promises a fixed set of payments, such as MBS and bonds. The Fed now holds more than \$3 trillion in these types of securities.

ly become insolvent as interest rates increased. (See text box, "MBS Financial Risks.")

Second, the Fed will eventually need to reverse course and start selling securities to prevent banks from creating too much money. This sort of contractionary policy frequently comes amid rising interest rates, which would only magnify the Fed's losses on the MBS. Although the Fed is not a profit-making business, any losses it suffers translate into fewer dollars going back into the U.S. Treasury. Fewer dollars flowing into the Treasury means there will need to be some combination of more borrowing, more "printing" of money, higher taxes, or less government spending. The U.S. Treasury is the only organization left to back the Federal Reserve, so U.S. citizens will eventually cover these costs, whichever form they take.

There is also the more immediate risk of banks using those excess reserves too quickly. Banks now have an additional \$2 trillion in excess reserves, which means they can create up to \$20 trillion in new money. In other words, as banks find it more profitable to lend rather than to hold these excess reserves, they will have the power to nearly double the amount of money in the U.S. economy, greatly increasing the danger of inflation.²⁸ The threat of

severe inflation—a general rise in all prices from excessive money creation—is very real. The Fed is betting that it can control those reserves and stop banks from making too many loans too quickly, but we will not really know whether such tight control is possible until after the fact.

Broader Implications of the Fed's Discretionary Monetary Policy

In general, the Fed always tries to stabilize the economy. Therefore, if the economy grows, the Fed will try to prevent inflation by inducing banks to stop lending as much money. If this action is taken too quickly or conducted on too large a scale, economic activity could slow to a halt. On the other hand, when the economy is judged to be doing too poorly, the Fed tries to boost the economy by inducing banks to lend more money.

Timing this process correctly—buying bonds to boost the economy (but not too much and not for too long) and then selling bonds to slow it down (but not too much and not too fast)—is the essence of discretionary monetary policy. There is little reason to believe that anyone, even the Federal Reserve's brain trust, can consistently get it right. Since the

28. Using "M2," the Fed's broadest monetary measure, there is almost \$11 trillion currently in the economy. Board of Governors of the Federal Reserve System, "Money Stock Measures—H.6," December 12, 2013, <http://www.federalreserve.gov/releases/h6/current/> (accessed December 16, 2013).

Federal Reserve was created, the U.S. has experienced the Great Depression in the 1930s, a period of severe inflation and unemployment in the 1970s, a major banking crisis in the 1980s, and a severe financial crisis and recession in 2007.

As the Fed enters its sixth consecutive year of aggressively trying to expand the economy through quantitative easing, policymakers should start to question the effectiveness of the Fed's discretionary monetary policies. These policies are supposed to expand the economy, but they are detrimental to the long-term health of the economy because of the way they distort markets.

When the Fed injects reserves into the system, it tends to keep short-term interest rates low. People who invest in traditionally safe investments, such as certificates of deposit (CDs), lose in this instance. Recently, holders of these safe investments lost an enormous amount of wealth as CD rates dropped from just under 5 percent at the end of 2007 to less than 1 percent by 2009 and approximately 0.25 percent as of June 2013. As long as banks have so much money (excess reserves) to use for making new loans, they will not need to offer high CD rates to attract more funds.

Second, the Fed's low interest rate policy has caused some people to forgo saving and others to invest in higher-return investments. Banks serve a key economic function in that they pool peoples' savings to make investments in items such as buildings, factories, or homes. To the extent that people decided against saving and instead either spent more or held cash, future economic growth will be harmed because fewer funds will be available for investing. Further, to the degree that individuals shifted savings into riskier investments, such as the stock market, these assets may have become priced artificially high, leading to the next financial "bubble" that bursts.

What Congress Should Do

Congress should:

- **Review the effectiveness of the Federal Reserve with a formal commission**, such as proposed by Representative Kevin Brady (R-TX) and Senator John Cornyn (R-TX) in the Centennial Monetary Commission Act of 2013 (H.R. 1176 and S. 1895). This bill would "establish a commission to examine the United States monetary policy, evaluate alternative monetary regimes, and recommend a course for monetary policy going forward."

- **End QE3.** The Fed has continued its quantitative easing programs for far too long. Congress should require that the Fed announce a plan detailing how it will end its bond-buying program.
- **End discretionary monetary policy** and direct the Fed to implement rules-based policies that can move the U.S. toward a truly competitive monetary system. The Federal Reserve should embrace its role as a facilitator of money creation by competitive banks, not usurp the role of the private banking sector.

Conclusion

The Federal Reserve celebrated its 100th birthday on December 23, which provides an excellent opportunity to assess the Fed's overall effectiveness and to decide what sort of monetary policies the U.S. should have for the next 100 years. Since at least the 1950s, the Federal Reserve has actively tried to stabilize the private economy and thus calm business cycles. Yet the evidence suggests that during this time, the U.S. has experienced no appreciable reduction in the ups and downs of the economy. A preponderance of evidence suggests that the Fed has not been effective in accomplishing its goals, and there is little reason to believe it could ever do so with discretionary monetary policy.

Many of the Fed's critics have been arguing over whether QE3 should be continued or stopped, but very few question whether the central bank should actively conduct monetary policy at all. Several people have even called for a full audit of the central bank, and perhaps such a review would provide the public with useful knowledge.

However, the most damaging aspect of what the Fed does to the economy is already public information. The main problem, unrelated to any policy inside the Fed, is that the U.S. central bank conducts discretionary monetary policy devoid of any rules, thus distorting private markets. The best place to start real monetary policy reform would be with a formal congressional commission, such as proposed in the Centennial Monetary Commission Act of 2013.

—*Norbert J. Michel, PhD, is Research Fellow in Financial Regulations in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation.*