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# Monetary Policy and the Federal Reserve: Current Policy and Conditions

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## Summary

The Federal Reserve (the Fed) defines monetary policy as its actions to influence the availability and cost of money and credit. Because the expectations of market participants play an important role in determining prices and economic growth, monetary policy can also be defined to include the directives, policies, statements, and actions of the Fed that influence future perceptions.

Traditionally, the Fed has implemented monetary policy primarily through open market operations involving the purchase and sale of U.S. Treasury securities. The Fed traditionally conducts open market operations by setting an interest rate target with the goal of fulfilling its statutory mandate of “maximum employment, stable prices, and moderate long-term interest rates.” The interest rate targeted is the federal funds rate, the price at which banks buy and sell reserves on an overnight basis. Beginning in September 2007, in a series of 10 moves, the federal funds target was reduced from 5.25% to a range of 0% to 0.25% on December 16, 2008, where it has remained since.

With the federal funds target at the “zero lower bound,” the Fed has attempted to provide stimulus through unconventional policies. The Fed has provided “forward guidance” on its expectations for future rates, announcing that it “anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.” The Fed has also added monetary stimulus through unsterilized purchases of Treasury and government-sponsored enterprise (GSE) securities. This practice is popularly referred to as quantitative easing (“QE”), and it has caused the Fed’s balance sheet to increase to \$4.4 trillion at the end of June 2014—five times its pre-crisis size. On September 13, 2012, the Fed began a third round of QE, pledging to purchase GSE mortgage-backed securities and Treasury securities each month until the labor market improves, as long as prices remain stable. In December 2013, the Fed began tapering off (gradually reducing the rate of) its monthly asset purchases. If tapering maintains its current trajectory, asset purchases will end in late 2014.

The purpose of targeting the federal funds rate, forward guidance, and QE is to influence private interest rates. Interest rates affect interest-sensitive spending, such as business capital spending on plant and equipment, household spending on consumer durables, and residential investment. Through this channel, monetary policy can be used to stimulate or slow aggregate spending in the short run. Even if short-term interest rates reach zero, there is still scope for the Fed to influence long-term rates, although economists dispute how great that influence has been. In the long run, monetary policy mainly affects inflation. A low and stable rate of inflation promotes price transparency and, thereby, sounder economic decisions by households and businesses. Debate is currently focused on the proper timing for ending unconventional policy measures and moving away from the zero bound. Ending unconventional policy too soon could slow the return to full employment, while ending it too late could result in undesirably high inflation.

Congress has delegated responsibility for monetary policy to the Fed, but retains oversight responsibilities for ensuring that the Fed is adhering to its statutory mandate. H.R. 1174/S. 238, H.R. 492, and S. 215 would switch to a single mandate of price stability. Congressional debate on Fed oversight has focused on audits by the Government Accountability Office (GAO). The Dodd-Frank Act enhanced the GAO’s ability to audit the Fed and required audits of its emergency programs and governance. H.R. 24, H.R. 33, and S. 209 would remove all remaining statutory restrictions on GAO audits.

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## Introduction

Congress has delegated responsibility for monetary policy to the Federal Reserve (the Fed), but retains oversight responsibilities to ensure that the Fed is adhering to its statutory mandate of “maximum employment, stable prices, and moderate long-term interest rates.”<sup>1</sup> The Fed has defined stable prices as a longer-run goal of 2% inflation. The Fed’s responsibilities as the nation’s central bank fall into four main categories: monetary policy, provision of emergency liquidity through the lender of last resort function, supervision of certain types of banks and other financial firms for safety and soundness, and provision of payment system services to financial firms and the government.<sup>2</sup>

The Fed’s monetary policy function is one of aggregate demand management—stabilizing business cycle fluctuations. The Federal Open Market Committee (FOMC), consisting of 12 Fed officials, meets periodically to consider whether to maintain or change the current stance of monetary policy.<sup>3</sup> The Fed’s conventional tool for monetary policy is to target the federal funds rate, the overnight, inter-bank lending rate. It influences the federal funds rate through “open market operations,” the purchase and sale of securities.

In December 2008, the Fed lowered the federal funds rate to a range of 0% to 0.25%, which is referred to as the “zero lower bound” because the Fed cannot provide any further stimulus through conventional policy. Since then, it has turned to unconventional policy to provide further stimulus to the economy.<sup>4</sup> The Fed has provided “forward guidance” on its expectations for future rates, announcing that it “anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run.”<sup>5</sup> This is a departure from past practice—normally, the Fed begins to raise rates well before the economy returns to full employment.

In addition, the Fed has attempted to stimulate the economy through several rounds of large-scale asset purchases of Treasury securities and securities issued by government-sponsored enterprises (GSEs) since 2009, popularly referred to as quantitative easing (“QE”). As a result of QE, the size of the Fed’s balance sheet has increased to \$4.4 trillion at the end of June 2014—five times its pre-crisis size. Since September 2012, the Fed has pursued a program of large-scale monthly asset purchases of Treasury securities and mortgage-backed securities (MBS) issued by the GSEs (referred to as “QE3”).<sup>6</sup> Unlike the previous two rounds of asset purchases, the Fed specified no planned end date to its purchases, instead pledging to continue purchases until labor markets improved, in a context of price stability. In December 2013, the Fed began tapering off (gradually reducing the rate of) its monthly asset purchases. If tapering maintains its current trajectory, asset purchases will end in late 2014. Barring a future change in course, this is seen as the first step

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<sup>1</sup> Section 2A of the Federal Reserve Act, 12 U.S.C. 225a.

<sup>2</sup> For background on the makeup of the Federal Reserve, see CRS Report RS20826, *Structure and Functions of the Federal Reserve System*, by Marc Labonte.

<sup>3</sup> Its policy decisions can be accessed at <http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm>.

<sup>4</sup> See CRS Report R42962, *Federal Reserve: Unconventional Monetary Policy Options*, by Marc Labonte.

<sup>5</sup> Federal Reserve, press release, June 18, 2014, <http://federalreserve.gov/newsevents/press/monetary/20140618a.htm>.

<sup>6</sup> Federal Reserve, press release, September 13, 2012, <http://www.federalreserve.gov/newsevents/press/monetary/20120913a.htm>.

toward an eventual end to unconventional monetary policy and a higher federal funds rate. The Fed has announced that “it likely will be appropriate to maintain the current target range for the federal funds rate for a considerable time after the asset purchase program ends....”<sup>7</sup>

Before 2008, short-term interest rates had never reached the “zero lower bound.” Rates have remained there for several years since, and most members of the FOMC currently believe that it would not be appropriate to raise the federal funds target until 2015.<sup>8</sup> By contrast, in the previous two economic expansions, the Fed began raising rates less than three years after the preceding recession ended. Debate is currently focused on the proper timing for ending unconventional policy measures and moving away from the zero bound. Because the recent recession was unusually severe, there is disagreement among economists both how much slack remains in the economy today and how aggressive the Fed should be. Economists who currently argue that the Fed should not discontinue unconventional policy prematurely believe there is a large output gap (i.e., the difference between actual output and potential output) and point to the fact that inflation was slightly below the Fed’s 2% goal throughout 2013 and the first quarter of 2014. In other words, they justify the continued use of unconventional policy to stimulate the economy in terms of both the Fed’s full employment mandate and price stability mandate. Economists who currently argue that unconventional policy has been in place too long point out that the economic recession ended in June 2009 and the economy has been growing steadily since (although GDP declined in the first quarter of 2014). Further, the unemployment rate is no longer abnormally high and has been on a downward trajectory since 2011. Finally, although inflation has remained low thus far, unconventional policy has led to above-average growth in the money supply that arguably poses a threat to price stability. In critics’ eyes, the economy is now functioning close enough to normal that the risks of continued unconventional policy stimulus outweigh the benefits.

Besides monetary policy, the Fed is also the “lender of last resort,” meaning that it ensures continued smooth functioning of financial intermediation by providing banks and financial markets with adequate liquidity. In response to the financial crisis, this role became prominent again, as the Fed provided liquidity to banks through the discount window and other parts of the financial system through emergency facilities. As financial conditions normalized, loans were repaid with interest and emergency lending programs have been wound down, with the exception of foreign central bank liquidity swaps.<sup>9</sup>

The Fed’s unprecedented response to the financial crisis has garnered renewed attention on the Fed from Congress. On the one hand, the Fed was given new regulatory responsibilities in the Dodd-Frank Wall Street Reform and Consumer Protection Act (P.L. 111-203) in an attempt to prevent future crises. On the other hand, the Dodd-Frank Act shifted the Fed’s consumer protection responsibilities to the newly created Consumer Financial Protection Bureau, placed restrictions on the Fed’s emergency powers, allowed the Government Accountability Office (GAO) to audit the Fed’s monetary and lending activities, and required the Fed to release detailed lending records for the first time. Fed oversight and disclosure has remained a congressional

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<sup>7</sup> Federal Reserve, press release, June 18, 2014, <http://federalreserve.gov/newsevents/press/monetary/20140618a.htm>.

<sup>8</sup> *Economic Projections of Federal Reserve Board Members and Presidents*, press release, June 2014, <http://federalreserve.gov/monetarypolicy/files/fomcprojtabl20140618.pdf>.

<sup>9</sup> Details of the lending facilities created by the Federal Reserve and other government agencies during the financial crisis are discussed in CRS Report R41073, *Government Interventions in Response to Financial Turmoil*, by Baird Webel and Marc Labonte.

focus since then. In the 112<sup>th</sup> Congress, H.R. 459, which the House passed as amended on July 25, 2012, would have removed remaining restrictions on GAO's audit authority, which prevent GAO from analyzing monetary policy on policy grounds. Similar bills in the 113<sup>th</sup> Congress include H.R. 24, H.R. 33, and S. 209. H.R. 1174/S. 238, H.R. 492, and S. 215 would switch to a single mandate of price stability, removing the mandate of maximum employment. H.R. 1174/S. 238 would also limit the purchase of permissible securities other than Treasury securities to "unusual and exigent circumstances," which could last up to five years, increase the voting power of the Fed's regional bank presidents on the FOMC, and accelerate the lagged release of FOMC meeting transcripts. H.R. 3928 would, among other things, change disclosure requirements, place restrictions on employees, eliminate Fed regional bank directors chosen by the Board, and require cost-benefit analysis of Fed rulemaking.

This report provides an overview of monetary policy and recent developments. It discusses issues for Congress, including transparency and proposals to change the Fed's mandate. It ends with a brief overview of the Fed's regulatory responsibilities.<sup>10</sup>

## How Does the Federal Reserve Execute Monetary Policy?

The Fed defines monetary policy as the actions it undertakes to influence the availability and cost of money and credit to promote the goals mandated by Congress, a stable price level and maximum sustainable employment. Because the expectations of households as consumers and businesses as purchasers of capital goods exert an important influence on the major portion of spending in the United States, and these expectations are influenced in important ways by the actions of the Fed, a broader definition of monetary policy would include the directives, policies, statements, forecasts of the economy, and other actions by the Fed, especially those made by or associated with the chairman of its Board of Governors, who is the nation's central banker.

The Federal Reserve has traditionally relied on three instruments to conduct monetary policy. Each works by altering the reserves available to depository institutions. These institutions are required to maintain reserves against their deposit liabilities, primarily checking, saving, and time certificates of deposit (CDs). These reserves can be held in the form of vault cash (currency) or as a deposit at the Fed. The size of these reserves constrains the amount of deposits that financial institutions can have outstanding, and deposit liabilities are related to the amount of assets these institutions can acquire. These assets are often called "credit" since they represent loans made to businesses and households, among others.

The Federal Reserve has three ways to expand or contract money and credit. The primary method is called open market operations and it involves the Fed buying existing U.S. Treasury securities (or those that have been already issued and sold to private investors). Should it buy securities, it does so with the equivalent of newly issued currency (Federal Reserve notes). This expands the reserve base and the ability of depository institutions to make loans and expand money and credit. The reverse is true if the Fed decides to sell securities from its portfolio.

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<sup>10</sup> Legislative changes to the Fed's duties and authority related to financial regulatory reform can be found in CRS Report R40877, *Financial Regulatory Reform: Systemic Risk and the Federal Reserve*, by Marc Labonte.

The Fed can also change reserve requirements, controlling a portion of deposits that banks must hold as vault cash or on deposit at the Fed, which affects the available liquidity within the market. Currently, banks are required to hold 0% to 10% of their deposits in reserves, depending on the size of the bank. This tool is used rarely—the percentage was last changed in 1998.<sup>11</sup> To increase control over the growth in the money supply at a time of rapid reserve growth, the Federal Reserve began to pay interest on required and excess reserves in October 2008, reducing the opportunity cost of holding that money as opposed to lending it out.

Finally, the Fed permits depository institutions to borrow from it directly on a temporary basis at the discount window. That is, these institutions can “discount” at the Fed some of their own assets to provide a temporary means for obtaining reserves. Discounts are usually on an overnight basis. For this privilege they are charged an interest rate called, appropriately, the discount rate. The discount rate is set by the Fed at a small markup over the federal funds rate.<sup>12</sup> Direct lending, from the discount window and other recently created lending facilities, is negligible under normal financial conditions, but was an important source of reserves during the financial crisis.

Because the Fed defines monetary policy as the actions it undertakes to influence the availability and cost of money and credit, this suggests two ways to measure the stance of monetary policy. One is to look at the cost of money and credit as measured by the rate of interest relative to inflation (or inflation projections), while the other is to look at the growth of money and credit itself. Thus, one can look at either interest rates or the growth in the supply of money and credit in coming to a conclusion about the current stance of monetary policy, that is, whether it is expansionary, contractionary, or neutral.

Since the great inflation of the 1970s, most central banks have preferred to formulate monetary policy more in terms of the cost of money and credit rather than on their supply. The Federal Reserve thus conducts monetary policy by focusing on the cost of money and credit as proxied by an interest rate. In particular, it targets a very short-term interest rate known as the federal funds rate. The FOMC meets every six weeks to choose a federal funds target and sometimes meets on an ad hoc basis if it wishes to change the target between regularly scheduled meetings. The FOMC is composed of the 7 Fed governors, the President of the New York Fed, and 4 of the other 11 regional Fed bank presidents selected on a rotating basis.

The federal funds rate is determined in the private market for overnight reserves of depository institutions. At the end of a given period, usually a day, depository institutions must calculate how many dollars of reserves they want to hold against their reservable liabilities (deposits).<sup>13</sup> Some institutions may discover a reserve shortage (too few reservable assets relative to those it wants to hold) while others may have had reservable assets in excess of their wants. A private market exists in which these reserves can be bought and sold on an overnight basis. The interest rate in

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<sup>11</sup> The deposit threshold is regularly adjusted for inflation. For current reserve requirements, see <http://www.federalreserve.gov/monetarypolicy/reservereq.htm>.

<sup>12</sup> Until 2003, the discount rate was set slightly below the federal funds target, and the Fed used moral suasion to discourage healthy banks from profiting from this low rate. To reduce the need for moral suasion, lending rules were altered in early 2003. Since that time, the discount rate has been set at a penalty rate above the federal funds rate target. However, during the financial crisis, the Fed encouraged banks to use the discount window.

<sup>13</sup> Depository institutions are obligated by law to hold some fraction of their deposit liabilities as reserves. In addition, they are also likely to hold additional or excess reserves based on certain risk assessments they make about their portfolios and liabilities. Until very recently these reserves were non-income earning assets. The Fed now pays interest on both types of reserves. It is too early to assess how this shift in policy will affect bank reserve holdings.

this market is called the federal funds rate. It is this rate that the Fed uses as a target for conducting monetary policy. If it wishes to expand money and credit, it will lower the target, which encourages more lending activity and, thus, demand in the economy. To support this lower target, the Fed must stand ready to buy more U.S. Treasury securities. Conversely, if it wishes to tighten money and credit, it will raise the target and remove as many reserves from depository institutions as are necessary to accomplish its ends. This will require the sale of treasuries from its portfolio of assets.<sup>14</sup>

The federal funds rate is linked to the interest rates that banks and other financial institutions charge for loans—or the provision of credit. Thus, while the Fed may directly influence only a very short-term interest rate, this rate influences other longer-term rates. However, this relationship is far from being on a one-to-one basis since the longer-term market rates are influenced not only by what the Fed is doing today, but what it is expected to do in the future and what inflation is expected to be in the future. This highlights the importance of expectations in explaining market interest rates. For that reason, there is a growing body of literature that urges the Federal Reserve to be very transparent in explaining what its policy is and will be and making a commitment to adhere to that policy.<sup>15</sup> In fact, the Fed has responded to this literature and is increasingly transparent in explaining its policy measures and what these are expected to accomplish.

Using market interest rates as an indicator of monetary policy is potentially misleading, however. The interest rate that is essential to decisions made by households and businesses to buy capital goods is what economists call the “real” interest rate. It is often proxied by subtracting from the market interest rate the actual or expected rate of inflation. The real rate is largely independent of the amount of money and credit since over the longer run, it is determined by the interaction of saving and investment (or the demand for capital goods). The internationalization of capital markets means that for most developed countries the relevant saving and investment that determines the real interest rate is on a global basis. Thus, real rates in the United States depend not only on our national saving and investment, but on the saving and investment of other countries as well. For that reason, national interest rates are influenced by international credit conditions and business cycles.

The recent financial crisis underlines that open market operations alone can be insufficient at times for meeting the Fed’s statutory mandate. Since the crisis, many economists and central bankers have argued that a macroprudential approach to supervision and regulation is needed (discussed in the section below entitled “Regulatory Responsibilities”), and this may affect conduct of monetary policy to maintain maximum employment and price stability.<sup>16</sup> Whereas traditional open market operations managed to contain systemic risk following the bursting of the “dot-com” bubble in 2000, direct lending by the Fed on a large scale was unable to contain

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<sup>14</sup> For a technical discussion of how this is actually done, see Edwards, Cheryl L., “Open Market Operations in the 1990s,” *Federal Reserve Bulletin*, November 1997, pp. 859-872; Benjamin Friedman and Kenneth Kuttner, “Implementation of Monetary Policy: How Do Central Banks Set Interest Rates?,” National Bureau of Economic Research, working paper, no. 16165, March 2011.

<sup>15</sup> See, for example, Santomero, Anthony M. “Great Expectations: The Role of Beliefs in Economics and Monetary Policy.” *Business Review*, Federal Reserve Bank of Philadelphia. Second Quarter 2004, pp. 1-6, and Sellon, Gordon H., Jr., “Expectations and the Monetary Policy Transmission Mechanism,” *Economic Review*, Federal Reserve Bank of Kansas City, Fourth Quarter 2004, pp. 4-42.

<sup>16</sup> Bank for International Settlements, “Monetary Policy in a World with Macro Prudential Policy,” speech by Jaime Caruana on June 11, 2011, <http://www.bis.org/speeches/sp110610.htm>.



systemic risk in 2008. This had led to a debate about whether the Fed should be aggressive in using monetary policy against asset bubbles, even at the expense of meeting its mandate in the short term. Traditionally, the Fed has expressed doubt that it could correctly identify or safely neutralize bubbles using monetary policy.

## Economic Effects of Monetary Policy in the Short Run and Long Run

How do changes in short-term interest rates affect the overall economy? In the short run, an expansionary monetary policy that reduces interest rates increases interest-sensitive spending, all else equal. Interest-sensitive spending includes physical investment (i.e., plant and equipment) by firms, residential investment (housing construction), and consumer-durable spending (e.g., automobiles and appliances) by households. As discussed in the next section, it also encourages exchange rate depreciation that causes exports to rise and imports to fall, all else equal. To reduce spending in the economy, the Fed raises interest rates, and the process works in reverse. An examination of U.S. economic history will show that money- and credit-induced demand expansions can have a positive effect on U.S. GDP growth and total employment. The extent to which greater interest-sensitive spending results in an increase in overall spending in the economy in the short run will depend in part on how close the economy is to full employment. When the economy is near full employment, the increase in spending is likely to be dissipated through higher inflation more quickly. When the economy is far below full employment, inflationary pressures are more likely to be muted. This same history, however, also suggests that over the longer run, a more rapid rate of growth of money and credit is largely dissipated in a more rapid rate of inflation with little, if any, lasting effect on real GDP and employment. (Since the crisis, the historical relationship between money growth and inflation has not held so far, as will be discussed below.)

Economists have two explanations for this paradoxical behavior. First, they note that, in the short run, many economies have an elaborate system of contracts (both implicit and explicit) that makes it difficult in a short period for significant adjustments to take place in wages and prices in response to a more rapid growth of money and credit. Second, they note that expectations for one reason or another are slow to adjust to the longer-run consequences of major changes in monetary policy. This slow adjustment also adds rigidities to wages and prices. Because of these rigidities, changes in the growth of money and credit that change aggregate demand can have a large initial effect on output and employment albeit with a policy lag of six to eight quarters before the broader economy fully responds to monetary policy measures. Over the longer run, as contracts are renegotiated and expectations adjust, wages and prices rise in response to the change in demand and much of the change in output and employment is undone. Thus, monetary policy can matter in the short run but be fairly neutral for GDP growth and employment in the longer run.<sup>17</sup>

It is noteworthy that in societies where high rates of inflation are endemic, price adjustments are very rapid. During the final stages of very rapid inflations, called hyperinflation, the ability of

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<sup>17</sup> Two interesting papers bearing on what monetary policy can accomplish by two former officials of the Federal Reserve are Santomero, Anthony M. "What Monetary Policy Can and Cannot Do," *Business Review*, Federal Reserve Bank of Philadelphia, First Quarter 2002, pp. 1-4, and Mishkin, Frederic S. "What Should Central Banks Do?," *Review*, Federal Reserve Bank of St. Louis, November/December 2000, pp. 1-14.

more rapid rates of growth of money and credit to alter GDP growth and employment is virtually nonexistent, if not negative.

## Monetary vs. Fiscal Policy

Either fiscal policy (defined here as changes in the structural budget deficit) or monetary policy can be used to alter overall spending in the economy. However, there are several important differences to consider between the two.

First, economic conditions change rapidly, and in practice monetary policy can be much more nimble than fiscal policy. The Fed meets every six weeks to consider changes in interest rates, and can call an unscheduled meeting any time in between. Large changes to fiscal policy typically occur once a year at most. Once a decision to alter fiscal policy has been made, the proposal must travel through a long and arduous legislative process that can last months before it can become law, while monetary policy changes are made instantly.<sup>18</sup>

In addition to differences in implementation lags, both monetary and fiscal policy face lags due to “pipeline effects.” In the case of monetary policy, interest rates throughout the economy may change rapidly, but it takes longer for economic actors to change their spending patterns in response. For example, in response to a lower interest rate, a business must put together a loan proposal, apply for a loan, receive approval for the loan, and then put the funds to use. In the case of fiscal policy, once legislation has been enacted, it may take some time for authorized spending to be outlaid. An agency must approve projects and select and negotiate with contractors before funds can be released. In the case of transfers or tax cuts, recipients must receive the funds and then alter their private spending patterns before the economy-wide effects are felt. For both monetary and fiscal policy, further rounds of private and public decision-making must occur before “multiplier” or “ripple” effects are fully felt.

Second, political constraints have led to fiscal policy being employed mostly in only one direction. Over the course of the business cycle, aggregate spending in the economy can be expected to be too high as often as it is too low. This means that stabilization policy should be tightened as often as it is loosened, yet increasing the budget deficit has proven to be much more popular than implementing the spending cuts or tax increases necessary to reduce it. As a result, the budget has been in deficit in all but five years since 1961. This has led to an accumulation of federal debt that gives policy makers less leeway to potentially undertake a robust expansionary fiscal policy, if needed, in the future. By contrast, the Fed is more insulated from political pressures,<sup>19</sup> and experience shows that it is as willing to raise interest rates as it is to lower them.

Third, the long-run consequences of fiscal and monetary policy differ. Expansionary fiscal policy creates federal debt that must be serviced by future generations. Some of this debt will be “owed to ourselves,” but some (presently, about half) will be owed to foreigners. To the extent that expansionary fiscal policy “crowds out” private investment, it leaves future national income lower than it otherwise would have been.<sup>20</sup> Monetary policy does not have this effect on

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<sup>18</sup> To some extent, fiscal policy automatically mitigates changes in the business cycle without any policy changes because tax revenue falls relative to GDP and certain mandatory spending (such as unemployment insurance) rises when economic growth slows, and vice versa.

<sup>19</sup> For more information, see CRS Report RL31056, *Economics of Federal Reserve Independence*, by Marc Labonte.

<sup>20</sup> An exception to the rule would be a situation where the economy is far enough below full employment that virtually (continued...)

generational equity, though different levels of interest rates will affect borrowers and lenders differently. Furthermore, the government faces a budget constraint that limits the scope of expansionary fiscal policy—it can only issue debt as long as investors believe that the debt will be honored—even if economic conditions require larger deficits to restore equilibrium.<sup>21</sup>

Fourth, openness of an economy to highly mobile capital flows changes the relative effectiveness of fiscal and monetary policy. Expansionary fiscal policy would be expected to lead to higher interest rates, all else equal, which would attract foreign capital looking for a higher rate of return.<sup>22</sup> Foreign capital can only enter the United States on net through a trade deficit. Thus, higher foreign capital inflows lead to higher imports, which reduce spending on domestically produced substitutes, and lower spending on exports. The increase in the trade deficit would cancel out the expansionary effects of the increase in the budget deficit to some extent (in theory, entirely). Expansionary monetary policy would have the opposite effect—lower interest rates would cause capital to flow abroad in search of higher rates of return elsewhere. Foreign capital outflows would reduce the trade deficit through an increase in spending on exports and domestically produced import substitutes. Thus, foreign capital flows would (tend to) magnify the expansionary effects of monetary policy.

Fifth, fiscal policy can be targeted to specific recipients. In the case of normal open market operations, monetary policy cannot. This difference could be considered an advantage or disadvantage. On the one hand, policy makers could target stimulus to aid the sectors of the economy most in need, or most likely to respond positively to stimulus. On the other hand, stimulus could turn out to be allocated on the basis of political or other non-economic factors that reduce the macroeconomic effectiveness of the stimulus. As a result, both fiscal and monetary policy have distributional implications, but the latter's are largely incidental, whereas the former's can be explicitly chosen.

In cases where economic activity is extremely depressed, monetary policy may lose some of its effectiveness. When interest rates become extremely low, interest-sensitive spending may no longer be very responsive to further rate cuts. Furthermore, interest rates cannot be lowered below zero. In this scenario, fiscal policy may be more effective. As is discussed in the next section, some would argue that the U.S. economy experienced this scenario following the recent financial crisis.

Of course, using monetary and fiscal policy to stabilize the economy are not mutually exclusive policy options. But because of the Fed's independence from Congress and the Administration, the two policy options are not always coordinated. If compatible fiscal and monetary policies are chosen by Congress and the Fed, respectively, then the economic effects would be more powerful than if either policy were implemented in isolation. For example, if stimulative monetary and fiscal policies were implemented, the resulting economic stimulus would be larger than if one policy were stimulative and the other were neutral. But if incompatible policies are selected, they

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(...continued)

no crowding out takes place because the stimulus to spending generates enough resources to finance new capital spending.

<sup>21</sup> The analogous constraint on monetary policy is that after a certain limit, expansionary monetary policy would become highly inflationary. But from the current starting point of price stability, problems with inflation would presumably only occur after a point where the economy had returned to full employment.

<sup>22</sup> For more information, see CRS Report RL31235, *The Economics of the Federal Budget Deficit*, by Brian W. Cashell.

could partially negate each other. For example, a stimulative fiscal policy and contractionary monetary policy may end up having little net effect on aggregate demand (though there may be considerable distributional effects). Thus, when fiscal and monetary policy makers disagree in the current system, they can potentially choose policies with the intent of offsetting each other's actions.<sup>23</sup> Whether this arrangement is better or worse for the economy depends on what policies are chosen. If one actor chooses inappropriate policies, then the lack of coordination allows the other actor to try to negate its effects.

## The Recent and Current Stance of Monetary Policy

Until financial turmoil emerged in 2007, a consensus had emerged among economists that a relatively stable business cycle could be maintained through prudent and nimble changes to interest rates via transparently communicated and signaled open market operations. That consensus would break down as the financial crisis worsened, and the Fed took increasingly unconventional and unprecedented steps to restore financial stability.

### Before the Financial Crisis

As the U.S. economy was coming out of the short and shallow 2001 recession, unemployment continued rising until mid-2003. Fearful that the economy would slip back into recession, the Fed kept the federal funds rate extremely low.<sup>24</sup> The federal funds target reached a low of 1% by mid-2003. As the expansion gathered momentum and prices began to rise, the federal funds target was slowly increased in a series of moves to 5¼% in mid-2006.

It is now argued by some economists that the financial crisis was, at least in part, due to Federal Reserve policy to ensure that the then-ongoing expansion continued.<sup>25</sup> In particular, critics now claim that the low short-term rates were kept too low for too long after the 2001 recession had ended, and this caused an increased demand for housing that resulted in a “price bubble” (a bubble that was also due, in part, to lax lending standards that were subject to regulation by the Fed and others). The shift in financing housing from fixed to variable rate mortgages made this sector of the economy increasingly vulnerable to movements in short-term interest rates. An alternative perspective, championed by Ben Bernanke and others, was that the low mortgage rates that helped fuel the housing bubble were mainly caused by a “global savings glut” over which the Fed had little control.<sup>26</sup> One consequence of the tightening of monetary policy later in the decade, critics now claim, was to burst this “price bubble.”

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<sup>23</sup> It is important to take this possibility into consideration when evaluating the potential effects of fiscal policy on the business cycle. Because the Fed presumably chooses (and continually updates) a monetary policy that aims to keep the economy at full employment, the Fed would need to alter its policy to offset the effects of any stimulative fiscal policy changes that moved the economy above full employment. Thus, the actual net stimulative effect of a fiscal policy change (after taking into account monetary policy adjustments) could be less than the effects in isolation.

<sup>24</sup> Historical and current targets for the federal funds rate can be found at <http://www.federalreserve.gov/fomc/fundsrate.htm>.

<sup>25</sup> In a *Wall Street Journal* opinion article, six economists are polled regarding if the Fed was to blame for creating the housing bubble that in part led to the recent financial crisis, and five of six responded that the Fed in some degree was to blame. See David Henderson, “Did the Fed Cause the Housing Bubble?,” *Wall Street Journal*, March 27, 2009.

<sup>26</sup> See Ben Bernanke, “The Global Saving Glut and the U.S. Current Account Deficit,” speech at the Virginia Association of Economists, March 10, 2005.

## The Early Stages of the Crisis and the “Zero Lower Bound”

The bursting of the housing bubble led to the onset of a financial crisis that affected both depository institutions and other segments of the financial sector involved with housing finance. As the delinquency rates on home mortgages rose to record numbers, financial firms exposed to the mortgage market suffered capital losses and lost access to liquidity. The contagious nature of this development was soon obvious as other types of loans and credit became adversely affected. This, in turn, spilled over into the broader economy, as the lack of credit soon had a negative effect on both production and aggregate demand. In December 2007, the economy entered a recession.

As the spillover effects from the housing slump to the financial system, as well as its international scope, became apparent, the Fed responded by reducing the federal funds target and the discount rate.<sup>27</sup> Beginning on September 18, 2007, and ending on December 16, 2008, the federal funds target was reduced from 5¼% to a range between 0% and ¼%, where it currently remains. Economists call this the “zero lower bound” to signify that once the federal funds rate is lowered to zero, conventional open market operations cannot be used to provide further stimulus.

The decision to maintain a target interest rate near zero is unprecedented. First, short-term interest rates have never been reduced to zero before in the history of the Federal Reserve.<sup>28</sup> Second, the Fed has waited much longer than usual to begin tightening monetary policy in this recovery. For example, in the previous two expansions, the Fed began raising rates less than three years after the preceding recession ended.

## Direct Assistance During and After the Financial Crisis

With liquidity problems persisting as the federal funds rate was reduced, it appeared that the traditional transmission mechanism linking monetary policy to activity in the broader economy was not working. It also began to concern the monetary authorities that the liquidity provided to the banking system was not reaching other parts of the financial system. Using only traditional monetary policy tools, additional monetary stimulus cannot be provided once the federal funds rate has reached its zero bound. To circumvent this problem, the Fed decided to use non-traditional methods to provide additional monetary policy stimulus.

First, the Federal Reserve introduced a number of emergency credit facilities to provide increased liquidity directly to financial firms and markets. The first facility was introduced in December 2007, and several were added after the worsening of the crisis in September 2008. These facilities were designed to fill perceived gaps between open market operations and the discount window. The loans primarily provided by these facilities were designed to provide short-term loans backed by collateral that exceeded the value of the loan.<sup>29</sup> A number of the recipients were non-banks that

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<sup>27</sup> For a detailed account of the Fed’s role in the financial crisis, see CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte.

<sup>28</sup> The Fed did not target the federal funds rate as its monetary policy instrument until the late 1980s or early 1990s. (See Daniel Thornton, “When Did the FOMC Begin Targeting the Federal Funds Rate?,” Federal Reserve Bank of St. Louis, working paper 2004-015B, May 2005, <http://research.stlouisfed.org/wp/2004/2004-015.pdf>.) Data on the federal funds rate back to 1914 is not available. Since 1914, the Fed had not set its discount rate (the rate charged at the Fed’s discount window) as low as 0.5% before 2008.

<sup>29</sup> See CRS Report R41073, *Government Interventions in Response to Financial Turmoil*, by Baird Webel and Marc (continued...)

are outside the regulatory umbrella of the Federal Reserve; this marked the first time that the Fed lent to non-banks since the Great Depression. The Fed began to employ a seldom used emergency provision, Section 13(3) of the Federal Reserve Act,<sup>30</sup> that allows it to make loans to other financial institutions and to non-financial firms as well. The Fed justified emergency lending on the grounds that it falls under its mandate to “promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates.”<sup>31</sup>

The Fed provided assistance through liquidity facilities, which included both the traditional discount window and the newly created emergency facilities previously mentioned, and through direct support to two specific institutions, AIG and Bear Stearns.<sup>32</sup> The magnitude of this assistance has been large. Total assistance from the Federal Reserve at the beginning of August 2007 was approximately \$234 billion provided through liquidity facilities, with no direct support given. In mid-December 2008, it reached a high of \$1.6 trillion, with a near high of \$108 billion given in direct support. From that point on, it fell steadily. Assistance provided through liquidity facilities fell below \$100 billion in February 2010, when many facilities were allowed to expire, and support to specific institutions fell below \$100 billion in January 2011.<sup>33</sup> Central bank liquidity swaps, discussed in the next section, are the only facility created during the crisis that is still active. With one exception, all assistance through expired facilities has been fully repaid with interest, and eventual repayment in that case is expected.<sup>34</sup>

## Central Bank Liquidity Swaps

The Fed’s central bank liquidity swap lines, or temporary reciprocal currency agreements, are the only lending facility introduced during the recent financial crisis that is still active. The first swap lines were created in December 2007. Overall, 10 central banks have drawn on the swap lines at some point, and 4 more were eligible to—but did not—use the swap lines.<sup>35</sup> In October 2008, the Fed made the swap lines with certain countries unlimited in size. The swap lines expired in February 2010, but were subsequently reopened in May 2010 with the Bank of Canada, the Bank of England, the European Central Bank (ECB), the Bank of Japan, and the Swiss National Bank in response to the eurozone crisis. The Fed has extended the expiration date of the swap lines several times, and in October 2013, it converted them to permanent standing arrangements.

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(...continued)

Labonte.

<sup>30</sup> 12 U.S.C. 343.

<sup>31</sup> Federal Reserve Act, Section 2A, 12 U.S.C. 225a.

<sup>32</sup> In 2011, the Dodd-Frank Act (P.L. 111-203) changed Section 13(3) to rule out direct support to specific institutions in the future.

<sup>33</sup> Data from “Recent Balance Sheet Trends,” *Credit and Liquidity Programs and the Balance Sheet*, [http://www.federalreserve.gov/monetarypolicy/bst\\_recenttrends.htm](http://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm). Values include totals from credit extended through Federal Reserve liquidity facilities and support for specific institutions.

<sup>34</sup> One expired facility, the Term Securities Lending Facility, still has a small amount of long-term loans outstanding. The Fed expects that all assistance through this facility will be repaid with interest once the loans mature in March 2015. For more information, see <http://www.federalreserve.gov/monetarypolicy/talf.htm>.

<sup>35</sup> U.S. Government Accountability Office, *Federal Reserve System: Opportunities Exist to Strengthen Policies and Processes for Managing Emergency Assistance*, GAO-11-696, July 21, 2011, Appendix IX, <http://www.gao.gov/new.items/d11696.pdf>.

Under a swap with, say, the ECB, the ECB temporarily receives U.S. dollars and the Fed temporarily receives euros. After a fixed period of time (up to three months), the transaction is reversed. Interest on swaps is paid to the Fed at 0.5 percentage points above the U.S. dollar overnight index swap rate (OIS), a private borrowing rate. The temporary swaps are repaid at the exchange rate prevailing at the time of the original swap, meaning that there is no downside risk for the Fed if the dollar appreciates in the meantime (although the Fed also does not enjoy upside gain if the dollar depreciates). Except in the unlikely event that the borrowing country's currency becomes unconvertible in foreign exchange markets, there is no credit risk involved because the swap is with other central banks (the foreign central bank bears losses if the private bank it lends the dollars to defaults). The Fed has reported no losses under the program. The swaps were created under the section of the Federal Reserve Act providing authority for open market operations (Section 14); they did not require the emergency authority found in Section 13(3) of the Federal Reserve Act.<sup>36</sup>

Swaps outstanding peaked at \$583 billion in December 2008 and fell to zero by March 2010. After reestablishment in May 2010, small amounts were drawn from May 2010 to March 2011. They were then unused between March and August 2011. Swaps outstanding increased suddenly in December 2011, averaging more than \$100 billion from late December to February 2012. Their use has since declined, and less than \$1 billion has been outstanding since August 2013. To date, most of the swaps have been with the European Central Bank; the Bank of Japan has been the second-largest counterparty.

Swap lines are intended to provide liquidity to private banks in non-domestic denominations. Because banks lend long-term and borrow short-term, a solvent bank can become illiquid, meaning it cannot borrow in private markets to meet short-term cash flow needs. For example, many European banks have borrowed in dollars to finance dollar-denominated transactions. Normally, foreign banks could finance their dollar-denominated borrowing through the private inter-bank lending market. As some banks have become reluctant to lend to each other through this market, central banks at home and abroad have taken a much larger role in providing banks with liquidity directly. Normally, banks can only borrow from their home central bank, and central banks can only provide liquidity in their own currency. The Fed's swap lines allow foreign central banks to provide needed liquidity to their country's banks in dollars. News articles indicate that access to dollar liquidity deteriorated for European banks when the eurozone crisis has worsened.<sup>37</sup> Initially, the swap lines were designed to provide foreign central banks with access to U.S. dollars. In April 2009, the swap lines were modified so that the Fed could access foreign currency to provide to its banks as well; to date, the Fed has not done so.

## Unconventional Policy Measures at the Zero Bound After the Crisis

With the federal funds rate at its zero bound since December 2008 and direct lending falling as financial conditions began to normalize in 2009, the Fed was faced with the decision of whether to try to provide additional monetary stimulus through unconventional measures. Since then, it has done so through two unconventional tools—large-scale asset purchases (“quantitative easing”) and “forward guidance.”

<sup>36</sup> Prior to the crisis, currency swaps had been used sporadically dating back to 1962, including after September 11, 2011. See William Dudley, Testimony Before the Committee on Oversight and Government Reform, U.S. House of Representatives, December 16, 2011.

<sup>37</sup> See, for example, “The Dash for Cash,” *The Economist*, December 3, 2011, p. 85.

## Quantitative Easing and the Growth in the Balance Sheet and Bank Reserves

As direct lending declined, the Fed's first decision was whether to maintain the elevated level of liquidity in the financial system now that assistance through its liquidity facilities was declining. To prevent a removal of monetary stimulus while the economy was still fragile, the Fed decided to keep the liquidity in place, and in March 2009, the Fed announced plans to purchase \$300 billion of Treasury securities, \$200 billion of Agency debt (later revised to \$175 billion), and \$1.25 trillion of Agency mortgage-backed securities. These purchases were completed by the end of March 2010.<sup>38</sup>

This was clearly not a "business as usual" monetary policy, but something quite extraordinary, sometimes referred to as "quantitative easing."<sup>39</sup> While there may not be a universally accepted definition of quantitative easing, this report defines it as actions to further stimulate the economy through growth in the Fed's balance sheet once the federal funds rate has reached the "zero bound."

Beginning in November of 2010, the Federal Reserve, dissatisfied with the high level of unemployment, took steps to encourage economic growth by purchasing an additional \$600 billion of Treasury securities and continuing the practice of replacing maturing securities. The purchases were made at a pace of \$75 billion a month and were completed in about eight months. The Fed has focused on purchasing securities with maturities between 2½ and 10 years in length. This policy became popularly known as "QE2." According to the Fed, these actions were taken to promote a stronger pace of economic recovery because progress to date toward the Fed's policy objectives had been "disappointingly slow."<sup>40</sup>

After the completion of QE2, the Fed took no further monetary policy actions for about six months. On September 21, 2011, the Fed announced the Maturity Extension Program, which has been popularly coined "Operation Twist" after a similar 1961 program.<sup>41</sup> Under this program, the Fed purchased \$667 billion in long-term Treasury securities and sold an equivalent amount of short-term Treasury securities from its portfolio. Unlike "quantitative easing," the Maturity Extension Program had no effect on the size of the Fed's balance sheet, bank reserves, or the monetary base. The Maturity Extension Program expired at the end of 2012, at which point, the Fed announced that it would continue to purchase \$45 billion of long-term Treasury securities each month, but would no longer offset those purchases through the sale of short-term Treasury securities.

On September 13, 2012, in light of continuing high unemployment and inflation slightly below its long-term target, the Fed announced it would restart large-scale asset purchases (popularly

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<sup>38</sup> In this context, Agency securities and MBS are primarily securities issued by Fannie Mae and Freddie Mac, with some securities issued by the Federal Home Loan Banks and Ginnie Mae. The amounts announced in March 2009 included Agency securities and MBS that the Fed began purchasing in late 2008.

<sup>39</sup> See CRS Report R42962, *Federal Reserve: Unconventional Monetary Policy Options*, by Marc Labonte.

<sup>40</sup> Federal Reserve, "Federal Open Market Committee," press release, November 3, 2010, <http://www.federalreserve.gov/newsevents/press/monetary/20101103a.htm>.

<sup>41</sup> The original Operation Twist was devised as a way to stimulate the economy given that monetary policy was constrained by the need to maintain the gold standard. Since such a constraint does not exist today under the current market-determined exchange rate, the Fed could have stimulated the economy through expansionary monetary policy instead, although at the zero bound, this would have been limited to unconventional forms of stimulus, such as quantitative easing.



referred to as “QE3”), pledging to purchase \$40 billion of government-sponsored enterprise (GSE) mortgage-backed securities (MBS) per month. Coupled with its monthly purchases of Treasury securities, QE3 is a modestly higher monthly purchase rate than QE2. Unlike the previous two rounds of asset purchases, the Fed specified no planned end date to its purchases, instead pledging to continue purchases until labor markets improved, in a context of price stability.<sup>42</sup> Some economists have argued that pledging to pursue a policy for “as long as it takes” is more effective than announcing a limited and predetermined duration, although it has an unclear effect on market uncertainty.<sup>43</sup>

In December 2013, the Fed began to gradually taper off its asset purchases. At each subsequent FOMC meeting (which typically occur every six weeks), the Fed has reduced its asset purchases by \$10 billion, divided evenly between MBS and Treasury securities. Smaller asset purchases can still be considered an expansionary monetary policy, but one that adds less stimulus to the economy than previously. If the current rate of tapering is maintained, asset purchases will end in late 2014.

To understand the effect of quantitative easing on the economy, it is first necessary to describe its effect on the Fed’s balance sheet. The loans and other assistance provided by the Federal Reserve to banks and non-bank institutions are considered assets on the Fed’s balance sheet because they represent money owed to or assets owned by the Fed. This assistance and its holdings of Treasury securities, MBS, and GSE debt comprise most of the assets on the Fed’s balance sheet.

From the time its first emergency lending facility was introduced in December 2007 until the crisis worsened in September 2008, the Fed “sterilized” the effects of lending on its balance sheet by selling Treasury securities. After September 2008, the Fed allowed its balance sheet to grow, and between September and November 2008, it more than doubled in size, increasing from under \$1 trillion to over \$2 trillion. The increase in assets during this time took the form of direct assistance to the financial sector through emergency liquidity facilities. From November 2008 to November 2010, the overall size of the Fed’s balance sheet did not vary much; however, its composition changed. The amount of Fed loans fell until it was less than \$50 billion at the end of 2010, while holdings of securities rose from under \$500 billion in November 2008 to over \$2 trillion in November 2010. The purchases of \$600 billion in Treasury securities increased the balance sheet from \$2.3 trillion in November 2010 to \$2.9 trillion mid-2011. It remained around that level until September 2012, when it began rising for the duration of QE3. It was about \$4 trillion at the end of 2013 and \$4.4 trillion at the end of June 2014, or about five times larger than it was before the crisis.

This increase in the Fed’s assets must be matched by a corresponding increase in its liabilities on its balance sheet, which mostly takes the form of currency, bank reserves, and cash deposited by the U.S. Treasury at the Fed. Bank reserves increased from about \$46 billion in August 2008 to \$820 billion at the end of 2008. Since October 2009, bank reserves have exceeded \$1 trillion, reaching \$2.7 trillion by the end of June 2014.<sup>44</sup> The increase in bank reserves can be seen as the

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<sup>42</sup> Federal Reserve, *Press Release*, September 13, 2012, <http://www.federalreserve.gov/newsevents/press/monetary/20120913a.htm>.

<sup>43</sup> Michael Woodford, “Methods of Policy Accommodation at the Interest-Rate Lower Bound,” working paper, August 2012, available at <http://www.kansascityfed.org/publicat/sympos/2012/mw.pdf?sm=jh083112-4>.

<sup>44</sup> See H.3. Federal Reserve Statistical Releases, Aggregate Reserves of Depository Institutions and the Monetary Base at <http://www.federalreserve.gov/releases/h3/Current>.

inevitable outcome of the increase in assets held by the Fed because they, in effect, financed the Fed's asset purchases and loan programs. Reserves increase because the loans or proceeds from asset purchases are credited to the recipients' reserve accounts at the Fed.

Whether the additional reserves will be lent out by banks, resulting in lower market interest rates and an expansion of new spending, as posited in the textbook explanation of how monetary policy works, is another story. Recent experience is not reassuring, as the large volume of reserves added to the banking system by the Fed have remained as excess bank reserves, without commensurate increases in lending or other activities by banks. Some economists fear that the response of banks to additional reserves is a sign that the economy has entered a "liquidity trap," where total spending in the economy (aggregate demand) is unresponsive to additional monetary stimulus. This phenomenon could help explain why the unprecedented growth in the monetary base (the portion of the money supply controlled by the Fed) since 2008 has not translated into higher inflation to date. Critics fear that it is simply a matter of time before quantitative easing leads to high inflation, and argue that these long-term risks outweigh any modest short-term benefits of QE.<sup>45</sup> In particular, there is concern that the Fed's "exit strategy" for returning to conventional monetary policy is untested and may not prove successful. Because the current size of the balance sheet is inconsistent with a market-determined federal funds rate above zero, the Fed must either sell assets or find other ways to raise interest rates, such as raising the rate that it pays to banks for holding reserves.<sup>46</sup>

By contrast, the Fed has argued that quantitative easing has successfully stimulated the economy, mainly through lower long-term interest rates.<sup>47</sup> Fed Chair Janet Yellen has defended these policies, arguing that the evidence has shown that the financial securities purchases by the Federal Reserve have proven effective in easing financial conditions and stimulating economic activity. With unemployment remaining high and expectations that inflation will be low over the medium run, she argues that the accommodative stance of the Fed regarding their monetary policy is appropriate to achieve the Fed's mandate and that the economic costs have thus far proven small.<sup>48</sup> Some critics have questioned whether quantitative easing has been effective, given economic growth remains sluggish.

Another concern is that by purchasing MBS, the Fed is allocating credit to the housing sector, putting the rest of the economy at a disadvantage compared with that sector. Arguments in favor of MBS purchases are that housing was the sector of the economy most in need of stabilization, given the nature of the crisis (this argument becomes less persuasive as the housing market continues to rebound); MBS markets are more liquid than most alternatives, limiting the potential

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<sup>45</sup> See, for example, "An Open Letter to Chairman Bernanke," November 15, 2010, <http://economics21.org/commentary/e21s-open-letter-ben-bernanke>.

<sup>46</sup> The Fed's exit strategy has been laid out in a number of speeches by Fed officials, such as testimony of Ben Bernanke, "Federal Reserve's Exit Strategy," testimony before U.S. Congress, House Committee on Financial Services, February 10, 2010, <http://www.federalreserve.gov/newsevents/testimony/bernanke20100210a.htm>.

<sup>47</sup> For a thorough discussion and defense of the Fed's recent actions, see Chairman Ben Bernanke, "Monetary Policy Since the Onset of the Crisis," speech at the Federal Reserve Bank of Kansas City Economic Symposium, August 31, 2012, available at <http://www.federalreserve.gov/newsevents/speech/bernanke20120831a.htm>. See also Thomas Bullard, *Effective Monetary Policy in a Low Interest Rate Environment*, The Henry Thornton Lecture, Cass Business School, London, March 24, 2009.

<sup>48</sup> Board of Governors of the Federal Reserve System, "Challenges Confronting Monetary Policy," speech by Janet L. Yellen on March 4, 2013, <http://www.federalreserve.gov/newsevents/speech/yellen20130302a.htm>.

for the Fed's purchases to be disruptive; and that there are few other assets that the Fed is legally permitted to purchase, besides Treasury securities.<sup>49</sup>

The Fed's securities holdings earn interest that the Fed uses to fund its operations. (The Fed receives no appropriations from Congress.) The Fed's income exceeds its expenses, and it remits most of its net income to the Treasury, which uses it to reduce the budget deficit. While the increase in, first, lending and, then, holdings of mortgage-related securities increased the potential riskiness of the Fed's balance sheet, its ex-post effect was to more than double the Fed's net income and remittances to Treasury. Remittances to Treasury rose from \$35 billion in 2007 to \$79 billion in 2010, and were \$78 billion in 2013. However, if the Fed increases interest paid on reserves in future years as part of the exit strategy, remittances could be significantly lower.

## Forward Guidance

Another tool that the Fed has used recently in an attempt to achieve additional monetary stimulus at the zero bound is to pledge to keep the federal funds rate low for an extended period of time, which has been called "forward guidance" or "forward commitment." The Fed believes that this will stimulate economic activity because businesses, for example, will be more likely to take on long-term investment commitments if they are confident that rates will be low over the life of a loan. Over time, this forward guidance became more detailed and explicit. In September 2012, the Fed extended its expected time frame for "exceptionally low levels for the federal funds rate" from late 2014 to mid-2015. In December 2012, the Fed replaced the date threshold with an economic threshold: it pledged to maintain an "exceptionally low" federal funds target at least as long as unemployment is above 6.5% and inflation is low.

It is difficult to pinpoint how effective the forward guidance tool has been, in part because it depends on how credible the market finds the commitment. A problem with this approach is that economic conditions may unexpectedly change, so this commitment is only a contingent one. This occurred in 2013 to 2014, when the unemployment rate fell unexpectedly rapidly without a commensurate improvement in broader labor market or economic conditions.<sup>50</sup> Had the Fed followed its existing forward guidance, the fall in the unemployment rate would have led to a tightening of policy sooner than intended. Instead, as the unemployment rate neared 6.5% in March 2014, the Fed replaced the specific unemployment threshold in its forward guidance with a vaguer statement—"The Committee currently anticipates that, even after employment and inflation are near mandate-consistent levels, economic conditions may, for some time, warrant keeping the target federal funds rate below levels the Committee views as normal in the longer run."<sup>51</sup> This statement provides less clarity to market participants about the path of future rates than the previous statement, but is less likely to need to be modified.

This statement represents a more aggressively stimulative policy stance than normal. Typically, the Fed employs below normal interest rates when the economy is operating below full employment, normal interest rates near full employment, and above normal interest rates when the economy is overheating. Because of lags between changes in interest rates and their economic effects, the Fed may pre-emptively change its monetary policy stance before the economy reaches

<sup>49</sup> H.R. 1174/S. 238 would allow the Fed to purchase MBS only if two-thirds of the FOMC finds that there are unusual and exigent circumstances and limits the Fed's holdings of MBS to a maximum of five years.

<sup>50</sup> See CRS Report R43476, *Returning to Full Employment: What Do the Indicators Tell Us?*, by Marc Labonte.

<sup>51</sup> Federal Reserve, press release, June 18, 2014, <http://federalreserve.gov/newsevents/press/monetary/20140618a.htm>.

the state that the Fed is anticipating. By contrast, in this case, the Fed is pledging to keep interest rates below normal even after the economy is approaching full employment. Normally, such a stance would risk resulting in high inflation. In this case, the Fed views low inflation as a greater risk than high inflation.

## GAO Audits, Congressional Oversight, and Disclosure

Critics of the Federal Reserve have long argued for more oversight, transparency, and disclosure. Criticism intensified following the extensive assistance provided by the Fed during the financial crisis. More specifically, critics have focused on the Government Accountability Office (GAO) audits of the Fed and the disclosure of details on the identities of borrowers and the terms of those loans.

Some critics have downplayed the degree of Fed oversight and disclosure that already takes place. For oversight, the Fed has been required by statute to report to and testify before the House and Senate committees of jurisdiction semi-annually since 1978. At these hearings, which take place in February and July, the Fed chairman presents the Fed's *Monetary Policy Report to the Congress*, testifies, and responds to questions from committee members.<sup>52</sup> In addition, these committees periodically hold more focused hearings on Fed topics. On January 25, 2012, the Fed began publishing its forecasts for its federal funds rate target, and announced a longer-run goal of 2% for inflation. The Fed hopes that greater transparency about its intentions will strengthen understanding of its actions by financial market participants, thereby making its actions more effective.

Contrary to popular belief, GAO has conducted audits of the Fed since 1978, subject to statutory restrictions. In addition, the Fed's financial statements are audited by private-sector auditors. The Dodd-Frank Act (P.L. 111-203) required in an audit of the Fed's emergency activities during the financial crisis, released in July 2011, and an audit of Fed governance, released in October 2011. The effective result of the audit restrictions remaining in law is that GAO cannot evaluate the economic merits of Fed policy decisions. In the 112<sup>th</sup> Congress, the House passed H.R. 459 on July 25, 2012, which would have removed all statutory restrictions on GAO audits. Similar bills in the 113<sup>th</sup> Congress include H.R. 24, H.R. 33, and S. 209.

For disclosure, the Fed has publicly released extensive information on its operations, mostly on a voluntary basis. For example, it has long released a weekly summary of its balance sheet. Historically, the Fed had never released information on individual loans, such as the names of borrowers or amounts borrowed, however. In December 2010, as a result of the Dodd-Frank Act, the Fed released individual lending records for emergency facilities, revealing borrowers' identities. Going forward, individual records for discount window and open market operation transactions will be released with a two-year lag. In addition, Freedom of Information Act lawsuits filed by Bloomberg and Fox News Network resulted in the release of individual lending records for the discount window (the Fed's traditional lending facility for banks).

<sup>52</sup> These hearings and reporting requirements were established by the Full Employment Act of 1978 (P.L. 95-523, 92 Stat 1897), also known as the Humphrey-Hawkins Act, and renewed in the American Homeownership and Economic Opportunity Act of 2000 (P.L. 106-569).

Although oversight and disclosure are often lumped together, they are separate issues and need not go together. Oversight relies on independent evaluation of the Fed; disclosure is an issue of what internal information the Fed releases to the public. Contrary to a common misperception, a GAO audit would not, under current law, result in the release of any confidential information identifying institutions that have borrowed from the Fed or the details of other transactions.

A potential consequence of greater oversight is that it could undermine the Fed's political independence, which is discussed in the next section. The challenge for Congress is to strike the right balance between a desire for the Fed to be responsive to Congress and for the Fed's decisions to be somewhat immune from political calculations. A potential drawback to greater disclosure is that publicizing the names of borrowers could potentially stigmatize them in a way that causes runs on those borrowers or causes them to shun access to needed liquidity. Either outcome could result in a less stable financial system. A potential benefit of publicizing borrowers is to safeguard against favoritism or other conflicts of interest.

For more information, see CRS Report R42079, *Federal Reserve: Oversight and Disclosure Issues*, by Marc Labonte.

## The Federal Reserve's Dual Mandate and Proposals for a Single Mandate of Price Stability

The Fed's current statutory mandate calls for it to "promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates."<sup>53</sup> Although this mandate includes three goals, it is often referred to by economists as a "dual mandate" of maximum employment and stable prices. Some economists have argued that this mandate should be replaced with a single mandate of price stability.

Often the proposal for a single mandate is paired with a more specific proposal that the Fed should adopt an inflation target. Under an inflation target, the goal of monetary policy would be to achieve an explicit, numerical target or range for some measure of price inflation. Inflation targets could be required by Congress or voluntarily adopted by the Fed as a way to pursue price stability, or a single mandate could be adopted without an inflation target. Alternatively, an inflation target could be adopted under the current mandate. In January 2012, the Fed voluntarily introduced a "longer-run goal for inflation" of 2%, which some might consider an inflation target.

In the 113<sup>th</sup> Congress, H.R. 1174/S. 238 and S. 215 would strike the goal of maximum employment from the mandate, leaving a single goal of price stability, and require the Fed to adopt an inflation target. Were a single mandate to be adopted in the United States, it would follow an international trend that has seen many foreign central banks adopt single mandates or inflation targets in recent decades.

Arguments made in favor of a price stability mandate are that it would better ensure that inflation was low and stable; increase the predictability of monetary policy for financial markets; narrow the potential to pursue monetary policies with short-term political benefits but long-term costs; remove statutory goals that the Fed has no control over in the long run; limit policy discretion;

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<sup>53</sup> This mandate was added to statute by The Federal Reserve Act of 1977 (P.L. 95-188, 91 Stat. 1387).

and increase transparency, oversight, accountability, and credibility. Defenders of the current mandate argue that the Fed has already delivered low and stable inflation for the past two decades, unemployment is a valid statutory goal since it is influenced by monetary policy in the short run, and discretion is desirable to respond to unforeseen economic shocks.

Discontent with the Fed's performance in recent years has led to calls for legislative change. It is not clear that a single mandate would have altered its decision making, however. A case could also be made that changing the mandate alone would not significantly alter policymaking, because Fed discretion, transparency, oversight, and credibility are mostly influenced by other factors, such as the Fed's political independence. Criticizing the Fed for the depth and length of the recession arguably leads to the prescription that monetary policy should have been more stimulative, which points to greater weight on the employment part of the dual mandate. Whether or not the Fed allowed the housing bubble to inflate, it is not clear that a single mandate would have changed matters because the housing bubble did not result in indisputably higher inflation (which measures the change in the prices of goods and services, not assets). Some economists believe that the Fed's recent policy of "quantitative easing" (large-scale asset purchases) will result in high inflation. Inflation has not increased to date, but even if these economists are correct, the Fed has discretion to pursue policies it believes are consistent with its mandate. It has argued that quantitative easing was necessary to maintain price stability by avoiding price deflation, and it could still make this argument under a single mandate. Chair Yellen has testified that she is in favor of the current mandate, and does not believe a single mandate would have led to different monetary policy decisions in recent years because inflation has been too low.<sup>54</sup>

For more information, see CRS Report R41656, *Changing the Federal Reserve's Mandate: An Economic Analysis*, by Marc Labonte.

## Regulatory Responsibilities

The Fed has distinct roles as a central bank and a regulator. Its main regulatory responsibilities are as follows:

- **Bank regulation.** The Fed supervises bank holding companies (BHCs) and thrift holding companies (THCs), which include all large and hundreds of small depositories, for safety and soundness.<sup>55</sup> The Dodd-Frank Act (P.L. 111-203) requires the Fed to subject BHCs with more than \$50 billion in consolidated assets to enhanced supervision (i.e., stricter standards than similar firms are subjected to) in an effort to mitigate the systemic risk they pose.<sup>56</sup> The Fed is also the prudential regulator of U.S. branches of foreign banks and state banks that have elected to become members of the Federal Reserve System. Often in concert with the other banking regulators,<sup>57</sup> it promulgates rules and

<sup>54</sup> Fed Chair Janet Yellen, testimony before the Senate Banking, Housing and Urban Affairs Committee, Hearing on Federal Reserve Semi-Annual Monetary Policy Report to Congress, February 27, 2014.

<sup>55</sup> The Fed was assigned regulatory responsibility for THCs as a result of the Dodd-Frank Act, which eliminated the Office of Thrift Supervision.

<sup>56</sup> For more information, see CRS Report R42150, *Systemically Important or "Too Big to Fail" Financial Institutions*, by Marc Labonte.

<sup>57</sup> The federal financial regulatory system is charter based. Other types of depositories are regulated by the OCC and (continued...)

supervisory guidelines that apply to banks in areas such as capital adequacy, and it examines depository firms under its supervision to ensure that those rules are being followed and those firms are conducting business prudently.

- **Prudential supervision of non-bank systemically important financial institutions.** The Dodd-Frank Act allows the Financial Stability Oversight Council (FSOC)<sup>58</sup> to designate non-bank financial firms as systemically important. Designated firms are supervised by the Fed for safety and soundness.
- **Regulation of the payment system.** The Fed regulates the retail and wholesale payment system for safety and soundness. It also operates parts of the payment system, such as inter-bank settlements and check clearing. The Dodd-Frank Act subjects payment, clearing, and settlement systems designated as systemically important by the FSOC to enhanced supervision by the Fed (along with the SEC and CFTC, depending on the type of system).
- **Margin requirements.** The Fed sets margin requirements on the purchases of certain securities, such as stocks, in certain private transactions. The purpose of margin requirements are to mandate what proportion of the purchase can be made on credit.

Through these regulatory responsibilities, as well as its lender of last resort activities and its participation on the FSOC (whose mandate is to identify risks and respond to emerging threats to financial stability), the Fed attempts to mitigate systemic risk and prevent financial instability. The Fed has also restructured its internal operations to facilitate a macroprudential approach to supervision and regulation.<sup>59</sup>

H.R. 3928 would, among other things, require cost-benefit analysis of Fed rulemaking and increase disclosures of the Fed's stress testing.

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(...continued)

FDIC. A BHC is typically regulated by the Fed at the holding company level and the other banking regulators at the bank subsidiary level. For more info, see CRS Report R43087, *Who Regulates Whom and How? An Overview of U.S. Financial Regulatory Policy for Banking and Securities Markets*, by Edward V. Murphy.

<sup>58</sup> The FSOC is an interagency council consisting of financial regulators and headed by the Treasury Secretary. For more information, see CRS Report R42083, *Financial Stability Oversight Council: A Framework to Mitigate Systemic Risk*, by Edward V. Murphy.

<sup>59</sup> Chairman Ben Bernanke, "Implementing a Macroprudential Approach to Supervision and Regulation," speech at the 47<sup>th</sup> Annual Conference on Bank Structure and Competition, Chicago, Illinois, Federal Reserve, May 5, 2011, <http://www.federalreserve.gov/newsevents/speech/bernanke20110505a.htm>.

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