



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

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## Summary

The Federal Reserve (Fed) defines monetary policy as the actions it undertakes to influence the availability and cost of money and credit. Since the expectations of market participants play an important role in determining prices and growth, monetary policy can also be defined to include the directives, policies, statements, and actions of the Fed that influence how the future is perceived. In addition, the Fed acts as a “lender of last resort” to the nation’s financial system, meaning that it ensures continued smooth functioning of financial intermediation by providing financial markets with adequate liquidity. This role has become of great importance following the onset of the recent financial crisis.

Traditionally, the Fed has three means for achieving its goals: open market operations involving the purchase and sale of U.S. Treasury securities, the discount rate charged to banks who borrow from the Fed, and reserve requirements that governed vault cash or deposits with the Fed as a proportion of deposits. Historically, open market operations have been the primary means for executing monetary policy. Recently, in response to the financial crisis, direct lending has become important once again and the Fed has created a number of new ways for injecting reserves, credit, and liquidity into the banking system, as well as making loans to firms that are not banks. As financial conditions normalize, the Fed is moving back to a reliance on open market operations.

The Fed traditionally conducts open market operations by setting an interest rate target that it believes will allow it to achieve price stability and maximum sustainable employment. The interest rate targeted is the federal funds rate, the price at which banks buy and sell reserves on an overnight basis. This rate is linked to other short-term rates and these, in turn, influence longer-term 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. 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.

The Fed has frequently changed the federal funds target to match changes in expected economic conditions. Beginning June 30, 2004, the target was raised from 1% to 5¼% in 17 equal increments ending on June 29, 2006. No further changes were made until September 18, 2007, when, in a series of 10 moves, the target was reduced to a range of 0% to 1/4% on December 16, 2008, where it now remains. Since then, the Fed has added liquidity to the financial system beyond what is needed to meet its federal funds target through direct lending and, more recently, purchases of Treasury and government sponsored enterprise (GSE) securities. This practice is sometimes referred to as quantitative easing, which has tripled the size of the Fed’s balance sheet since financial turmoil began. A second round of quantitative easing began in November 2010.

Congress has delegated responsibility for monetary policy to the Fed, but retains oversight responsibilities to ensure that the Fed is adhering to its statutory mandate “maximum employment, stable prices, and moderate long-term interest rates.” H.R. 245 would switch to a single mandate of price stability. The Dodd-Frank Act enhanced the GAO’s ability to audit the Fed, including the ability to review its lending programs. H.R. 459/H.R. 1496/S. 202 would remove all remaining restrictions on GAO’s audit powers. H.R. 1512 would remove the regional Fed bank presidents from the Federal Open Market Committee.

## **Contents**

Introduction .....	1
How Does the Federal Reserve Execute Monetary Policy? .....	2
Economic Effects of Monetary Policy in the Short Run and Long Run .....	5
Monetary vs. Fiscal Policy .....	6
The Recent and Current Stance of Monetary Policy.....	8
Before the Financial Crisis .....	8
During and After the Financial Crisis .....	9
The Growth in the Balance Sheet and Bank Reserves .....	11
Congressional Oversight and Disclosure.....	12
Humphrey-Hawkins Hearings .....	12
GAO Audits .....	12
Disclosure of Lending Records.....	13
The Federal Reserve’s Mandate and Its Independence .....	13

## **Contacts**

Author Contact Information .....	15
Acknowledgments .....	15

## Introduction

Congress has delegated responsibility for monetary policy to the Federal Reserve, 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 Federal Reserve’s (Fed’s) responsibilities as the nation’s central bank fall into four main categories: monetary policy, ensuring financial stability through the lender of last resort function, supervision of bank holding companies, and providing payment system services to financial firms and the government. This report will discuss the first two areas of responsibility.<sup>2</sup>

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. Since the expectations of households as consumers and businesses as the 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, the nation’s central banker.<sup>3</sup>

In addition, governments have traditionally assigned to a central bank the role of “lender of last resort” to the nation’s financial system. This role means that the Federal Reserve is responsible for ensuring the sustainability, solvency, and continued functioning of the nation’s financial system as a whole, although this does not necessarily extend to any individual financial institution. Thus, in times of financial stress or crisis, the Fed is responsible for ensuring that financial intermediation does not come to a halt. Historically, Federal Reserve intervention has been limited to the banking system. Indeed, the impetus for the founding of the Fed was an outgrowth of the financial panic of 1907. During its nearly 100-year history, the Federal Reserve has rarely been called upon to perform this role. It is now widely regarded as having failed to perform it during the collapse of the U.S. banking system in the contraction of 1929-1933. However, the financial crisis that began in the summer of 2007 with the bursting of the “housing price bubble” has placed this role front and center. The Fed has responded in the conventional way by making massive additions of reserves available to depository institutions (primarily commercial banks) through the purchase of U.S. Treasury securities and through lending facilities. In addition, it has created a number of additional ways to make credit available to a broader range of financial institutions as well as making loans directly to non-bank financial intermediaries. These innovations were unprecedented and several were authorized only in “unusual and exigent circumstances.”<sup>4</sup>

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

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

<sup>3</sup> For a discussion of the important role played by expectations in formulation and execution of monetary policy, see 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>4</sup> For a discussion of the 2007-2009 financial crisis, its origins, and the innovations by the Federal Reserve, see CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte. For historical perspective on Federal Reserve’s dealing in non-government debt, see Wheelock, David C. “Conducting Monetary Policy Without (continued...)”

Thus, the Federal Reserve has a monetary policy function and a financial stability function. Its monetary policy function is one of aggregate demand management. The availability and cost of credit are used to manage aggregate demand in such a way as to promote a stable price level and through it maximum sustainable employment. Its financial stability function is as “lender of last resort” to the nation’s financial system.

The financial crisis and the Fed’s unprecedented response to it has garnered renewed attention from Congress. On the one hand, the Fed was given new regulatory requirements 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, some Representatives have pressed for enhanced oversight of the Fed, while others have called for narrowing the scope of its statutory mandate. The Dodd-Frank Act allowed GAO to audit the Fed’s monetary and lending activities for the first time, and the Federal Reserve Transparency Act of 2011 (H.R. 459/H.R. 1496/S. 202) would remove remaining restrictions on GAO’s audit authority. H.R. 245 would change the Fed’s statutory mandate to a single mandate of price stability.

This report provides an overview of monetary policy and issues for Congress. 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. 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.

## **How Does the Federal Reserve Execute Monetary Policy?**

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 (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 places a ceiling on 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.

The Fed can also change reserve requirements, controlling a portion of deposits that banks must hold as vault cash or in deposit at the Fed, which affects the available liquidity within the market.

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Government Debt: The Fed’s Early Years. *Review*, Federal Reserve Bank of St. Louis. May/June 2002, pp. 1-14.

Currently, banks with \$58.8 million or more in liabilities are required to hold 10.3% of their liabilities in reserves. This tool is used rarely—the percentage was last changed in 1998.<sup>5</sup> To increase control over 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 certain depository institutions to borrow from it directly on a temporary basis. 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 markup over the federal funds rate.<sup>6</sup> Direct lending, from the discount window and other recently created lending facilities, was negligible until late 2007, but has been an important source of reserves since then.

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 Federal Open Market Committee (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 comprised 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.<sup>7</sup>

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>8</sup> Some institutions may discover a reserve shortage (too few reservable assets relative to those it wants to

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<sup>5</sup> The deposit threshold is regularly adjusted for inflation. The Dodd-Frank Act encouraged regulators to implement heightened liquidity standards, particularly for Systemically Important Financial Institutions (SIFIs), that may affect reserve requirements once fully implemented. The status of SIFI regulation was discussed in a speech by Federal Reserve Governor Daniel Tarullo on June 3, 2011. The speech can be seen at <http://www.federalreserve.gov/newsevents/speech/tarullo20110603a.htm>.

<sup>6</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>7</sup> H.R. 1512 would remove the regional Fed bank presidents from the Federal Open Market Committee.

<sup>8</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.

hold) while others may have had reservable assets in excess of their wants. A market exists in which these reserves can be bought and sold on an overnight basis. The interest rate in 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>9</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. 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 fraught with danger, 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, and this may affect conduct of monetary policy to maintain maximum employment and price stability.<sup>10</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 systemic risk in 2008. In a recent speech, Fed Chairman Bernanke said he is committed to serving on and working closely with the Financial Stability Oversight Committee, created by the Dodd-Frank Act, to safeguard against systemic risk.<sup>11</sup> He also described how the

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<sup>9</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.

<sup>10</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>.

<sup>11</sup> For more information, see CRS Report R41384, *The Dodd-Frank Wall Street Reform and Consumer Protection Act: Systemic Risk and the Federal Reserve*, by Marc Labonte.

Fed has recently restructured its internal operations to facilitate a macroprudential approach to supervision and regulation.<sup>12</sup>

## **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>13</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>12</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>.

<sup>13</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. For example, there were three large tax cuts from the 2001 recession through 2006;<sup>14</sup> in the same period, interest rates were changed 29 times. 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>15</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 has 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 policymakers 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>16</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

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<sup>14</sup> The tax cuts are the Economic Growth and Tax Relief Reconciliation Act (P.L. 107-16), the Job Creation and Worker Assistance Act (P.L. 107-147), and the Jobs and Growth Tax Relief Reconciliation Act (P.L. 108-27).

<sup>15</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>16</sup> For more information, see CRS Report RL31056, *Economics of Federal Reserve Independence*, by Marc Labonte.

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>17</sup> Monetary policy does not have this effect on 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>18</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>19</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 reduces 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). This theory is supported by experience—as the budget deficit increased, so did the trade deficit.<sup>20</sup> 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, policymakers 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 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.

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<sup>17</sup> An exception to the rule would be a situation where the economy is far enough below full employment that virtually no crowding out takes place because the stimulus to spending generates enough resources to finance new capital spending.

<sup>18</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>19</sup> For more information, see CRS Report RL31235, *The Economics of the Federal Budget Deficit*, by Brian W. Cashell.

<sup>20</sup> See CRS Report RS21409, *The Budget Deficit and the Trade Deficit: What Is Their Relationship?*, by Marc Labonte and Gail E. Makinen.

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 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 policymakers disagree in the current system, they can potentially choose policies with the intent of offsetting each others' actions.<sup>21</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 usefully 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, as 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>22</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>23</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." 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,

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<sup>21</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>22</sup> Historical and current targets for the federal funds rate can be found at <http://www.federalreserve.gov/fomc/fundsrate.htm>.

<sup>23</sup> In a WSJ 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.

championed by Chairman 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>24</sup> One consequence of the tightening of monetary policy later in the decade, critics now claim, was to burst this “price bubble” (a bubble that was also due, in part, to lax lending standards that were subject to regulation by the Fed and others).

## **During and After the Financial Crisis**

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>25</sup> Beginning on September 18, 2007, and ending on December 16, 2008, the target was reduced from 5¼% to a range between 0% and ¼%, where it currently remains.

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. Under 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 more 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 exceeds the value of the loan.<sup>26</sup> A number of the recipients were non-banks that 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>27</sup> that allows it to make loans to other financial institutions and to non-financial firms as well. The Fed justified their pursuit of this

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<sup>24</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.

<sup>25</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>26</sup> See CRS Report R41073, *Government Interventions in Response to Financial Turmoil*, by Baird Webel and Marc Labonte.

<sup>27</sup> 12 U.S.C. 343.

policy 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>28</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. 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, and support to specific institutions fell below \$100 billion in January 2011.<sup>29</sup> The majority of these facilities expired at the beginning of February 2010, and all those that have expired to date saw all transactions repaid with interest.

With direct lending falling as financial conditions began to normalize and the federal funds rate at its zero bound, the Fed found other tools to maintain the elevated level of liquidity in the financial system in order to prevent a removal of monetary stimulus while the economy was still fragile. In March 2009, the Fed announced plans to purchase \$300 billion of Treasury securities, \$200 billion of Agency (Fannie Mae and Freddie Mac) 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.

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 six months. The Fed has focused on purchasing securities with maturities between 2½ and 10 years in length.<sup>30</sup> According to the Fed, these actions were taken to promote a stronger pace of economic recovery because current progress towards the Fed’s policy objectives has been “disappointingly slow.”<sup>31</sup>

This is clearly not a “business as usual” monetary policy, but something quite extraordinary, sometimes referred to as “quantitative easing.” 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.”

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<sup>28</sup> Federal Reserve Act, Section 2A, 12 USC 225a.

<sup>29</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>30</sup> CRS Report R41540, *Quantitative Easing and the Growth in the Federal Reserve’s Balance Sheet*, by Marc Labonte.

<sup>31</sup> Federal Open Market Committee, Federal Reserve, “press release,” November 3, 2010, <http://www.federalreserve.gov/newsevents/press/monetary/20101103a.htm>.

## **The Growth in the Balance Sheet and Bank Reserves**

The assistance provided by the Federal Reserve to banks and non-bank institutions is considered an asset on the Federal Reserve balance sheet because it represents money owed to or assets owned by the Fed. This assistance and its holdings of Treasury securities, mortgage-backed securities and government sponsored enterprise 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 through emergency facilities.

From November 2008 to November 2010, the overall size of the Fed's balance sheet did not vary much; however, its composition changed. As of December 2010, loans made up \$46 billion of the \$2,427 billion of the Fed's balance sheet and securities made up \$2,225 billion. When the purchases of Treasury securities announced in November 2010 is complete, the balance sheet is expected to be about \$600 billion larger.

This increase in the Fed's assets must be matched by a corresponding increase in its liabilities on its balance sheet, mostly in 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 to \$1,138 billion at the end of 2009. As of January 2011 total reserves still remained high with \$1,077 billion still being held by banks. The increase in bank reserves can be seen as the inevitable outcome of the increase in assets held by the Fed because they, in effect, financed the Fed's asset purchases and loan programs. The lending facilities increased reserves because the loan amounts are credited to the recipients' reserve accounts at the Fed.<sup>32</sup>

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. 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) 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.<sup>33</sup>

By contrast, the Fed has argued that quantitative easing has successfully stimulated the economy, mainly through lower long-term interest rates.<sup>34</sup> Janet Yellen, Vice Chair of the Board of

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<sup>32</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>.

<sup>33</sup> See, for example, "An Open Letter to Chairman Bernanke," November 15, 2010, <http://economics21.org/commentary/e21s-open-letter-ben-bernanke>.

<sup>34</sup> For a recent discussion of this issue by the president of the Federal Reserve Bank of St. Louis, see Bullard, Thomas. (continued...)

Governors of the Federal Reserve System, defended these policies in a recent speech. She argues that the evidence has shown that the financial securities purchases by the Federal Reserve have proven effective in easing financial conditions. 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.<sup>35</sup>

## Congressional Oversight and Disclosure

### Humphrey-Hawkins Hearings

Congress has delegated monetary policy decisions to the Fed but retains oversight responsibilities. A primary form of congressional oversight of the Federal Reserve is the semi-annual hearings with the Senate Committee on Banking, Housing, and Urban Affairs and the House Committee on Financial Services. 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. 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).

The semiannual *Monetary Policy Report* presents a review of recent economic and monetary policy developments, as well as economic projections for three years. Since monetary policy plays an important role in determining economic outcomes, these projections can be viewed as the Fed's perceptions of how today's monetary policy stance will influence future economic conditions. To increase the transparency of monetary policy, the Fed in 2007 began to publicly provide additional forecasts. They now appear quarterly.

### GAO Audits

In the wake of the financial crisis there was a strong push to remove the statutory restrictions on the Government Accountability Office's (GAO's) ability to audit the Fed. This restriction was modified by Title XI of the Dodd-Frank Wall Street Reform and Consumer Protection Act (P.L. 111-203).<sup>36</sup> As a result, the GAO can now audit the Fed's monetary actions and lending programs for issues such as operational integrity, accounting and financial reporting, and internal controls, but is still unable to conduct policy evaluations of those activities. Further, any confidential information that the GAO gathers cannot be released until it is first made public by the Fed.

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(...continued)

*Effective Monetary Policy in a Low Interest Rate Environment*, The Henry Thornton Lecture, Cass Business School, London, March 24, 2009.

<sup>35</sup> Board of Governors of the Federal Reserve System, "2011 International Conference," speech by Janet L. Yellen on June 1, 2011, <http://www.federalreserve.gov/newsevents/speech/yellen20110601a.htm>.

<sup>36</sup> More details on the changes made in the Dodd-Frank Act can be found in CRS Report R40877, *Financial Regulatory Reform: Systemic Risk and the Federal Reserve*, by Marc Labonte.

Some Representatives have pressed for greater GAO oversight than provided in the Dodd-Frank Act. The Federal Reserve Transparency Act of 2011 (H.R. 459/H.R. 1496/S. 202) would remove remaining audit restrictions and require a GAO audit of the Fed.

## **Disclosure of Lending Records**

As a result of another section of the Dodd-Frank Act, the Fed is required, for the first time, to publicly disclose information on the identities of borrowers, amount borrowed, rate charged, and collateral pledged or assets transferred within one year after a credit facility is terminated and within two years after the transaction for discount window loans or open market operations. On December 1, 2010, the Federal Reserve released the summary of all transactions made since December 1, 2007, under programs created during the crisis; however, this release did not include information on discount window transactions. Separately, Bloomberg and Fox News Network sued the Federal Reserve under the Freedom of Information Act for the release of internal records pertaining to lending activities, including the discount window, for the period of August 2007 to March 2010. As a result, the Fed released this information on March 31, 2011.

Greater disclosure and outside evaluation could potentially help Congress perform its oversight duties more effectively. A main argument against increasing Fed oversight would be that it could be perceived to reduce the Fed's operational independence from Congress. While few policymakers argue for total independence or total disclosure and oversight, the policy challenge is to strike the right balance between the two. The Fed's independence is discussed in the next section.

## **The Federal Reserve's Mandate and Its Independence**

The Constitution grants Congress the power to “coin money, and regulate the value thereof...” However, operational responsibility for making U.S. monetary policy has been delegated by Congress to the Fed. Congress is still responsible for oversight, setting the Fed's mandate and approving the President's nominations for the Fed's Board of Governors, but several institutional features grant it significant “independence” from the political process.<sup>37</sup> The Federal Reserve system is quasi-public in structure: its regional banks are owned by its member banks. The governors are appointed to staggered 14-year terms, and can only be removed by Congress for cause. It is self-funded and its budget is not subject to the congressional appropriation process. It has been granted broad *discretion* to interpret and carry out its congressional mandate as it sees fit on a day-to-day basis.

Although the Fed's statutory mandate might be expected to be a significant curb on its independence, The Federal Reserve Act of 1977 (P.L. 95-188, 91 Stat. 1387) charged the Fed with “the goals of maximum employment, stable prices, and moderate long-term interest rates.” Note that the Fed controls none of these three indicators directly; it controls only overnight interest rates through the use of open market operations, the discount window, and reserve requirements. There will be times when the goals will be at odds with each other, and the Fed will have to

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<sup>37</sup>For more information, see CRS Report RL31056, *Economics of Federal Reserve Independence*, by Marc Labonte.



choose to pursue one at the expense of the other two. For example, an energy price shock would be expected to raise prices and reduce employment. In this case, the current mandate could be used to justify expansionary monetary policy in response to lower employment or contractionary monetary policy in response to higher prices. Critics have argued that the ambiguity inherent in the current mandate makes for less than optimal transparency and accountability. It may also strengthen political independence if it allows the Fed to deflect congressional criticism by pointing, at any given time, to whatever goal justifies its current policy stance.

The most popular alternative to the current mandate is to replace it with a single mandate of price stability.<sup>38</sup> H.R. 245 is an example of such a bill in the 112<sup>th</sup> Congress. This proposal is often coupled with a proposal for the Fed to be given (or, under the version mooted by Chairman Bernanke, give itself) a numerical inflation target, and the Fed would then be required to set monetary policy with the goal of meeting the target on an ongoing basis. Proponents of inflation targeting say that maximum employment and moderate interest rates are not meaningful policy goals because monetary policy has no long-term influence over either one. They argue a mandate that is focused on keeping inflation low would deliver better economic results and improve transparency and oversight.<sup>39</sup> Opponents, including former Fed chairman Greenspan, say that the flexibility inherent in the current system has served the United States well in the past 25 years, delivering both low inflation and economic stability, and there is little reason to fix a system that is not broken. They argue that some focus on employment is appropriate given that monetary policy has powerful short-term effects on it, and that too great a focus on inflation could lead to an overly volatile business cycle. Various forms of inflation targeting have been adopted abroad.<sup>40</sup> Other economists argue that a single mandate would do little to curb the Fed's independence, and would therefore have little practical effect on its decision making.

Most economists argue that central bank independence leads to good monetary policy because it reduces the temptation to raise inflation in the long run in order to lower unemployment in the short run. Researchers have made cross-country comparisons to try to make the case that countries with independent central banks are more likely to have low inflation rates and better economic performance.<sup>41</sup> As noted in the previous section, independence from Congress may make oversight less effective, however.

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<sup>38</sup> See CRS Report R41656, *Changing the Federal Reserve's Mandate: An Economic Analysis*, by Marc Labonte.

<sup>39</sup> In a 2009 speech, then Fed Vice Chairman Donald Kohn reports that the Fed Governors and Reserve Bank presidents continue "to discuss whether an explicit numerical objective for inflation would be beneficial. Under current circumstances, those benefits would include underscoring our understanding that our legislative mandate for promoting price stability encompasses both preventing inflation from falling too low in the near term and from rising too far as the economy recovers." See *Monetary Policy in the Financial Crisis*, a Conference in Honor of Dewey Daane, Nashville, Tennessee, April 18, 2009.

<sup>40</sup> See CRS Report RL31702, *Price Stability (Inflation Targeting) as the Sole Goal of Monetary Policy: The International Experience*, by Marc Labonte and Gail E. Makinen.

<sup>41</sup> For a review of the research and criticisms, see CRS Report RL31955, *Central Bank Independence and Economic Performance: What Does the Evidence Show?*, by Marc Labonte and Gail E. Makinen.

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