Monetary Policy and the Federal Reserve: Current Policy and Conditions

Marc Labonte
Specialist in Macroeconomic Policy

April 23, 2009

Congressional Research Service
7-5700
www.crs.gov
RL30354

CRS Report for Congress
Prepared for Members and Committees of Congress

Summary

The Federal Reserve defines monetary policy as the actions it undertakes to influence the availability and cost of money and credit to help promote a stable price level and maximum sustainable economic growth. 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 Federal Reserve that influence how the future is perceived. In addition, the Federal Reserve acts as a "lender of last resort" to the nation's financial system, meaning that it ensures its sustainability, solvency, and integrity. This role has become of great importance with the onset of the financial crisis in the summer of 2007.

Traditionally, the Federal Reserve has had three means for achieving its congressionally mandated goals: open market operations involving the purchase and sale of U.S. Treasury securities, the discount rate charged to banks who borrow from it, and reserve requirements that governed the proportion of deposits that must be held either as vault cash or as a deposit at the Federal Reserve. Historically, open market operations have been the primary means for executing monetary policy. Recently, in response to the financial crisis, the discount window has become important once again and the Fed has created a number of new ways for injecting reserves, credit, and liquidity into the financial systems as well making loans to non-financial firms. The scope and magnitude of these changes are evolving.

The Federal Reserve conducts open market operations by setting an interest rate target that it believes will allow it to achieve price stability and maximum sustainable growth. 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, are linked to longer term interest rates.

While monetary policy is charged with promoting maximum sustainable economic growth, it does so only indirectly by maintaining a stable price level since the direct effect of monetary policy is primarily on the rate of inflation. A low and stable rate of inflation through the business cycle 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. Between January 3, 2001, and June 25, 2003, the target rate was reduced to 1% from 6½%. This policy was reversed on June 30, 2004. In 17 equal increments ending on June 29, 2006, the target rate was raised to 5¼%. No additional 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. At the conclusion of its March 17, 2009 meeting, the FOMC announced plans to purchase some $1.15 trillion in various Agency and Treasury securities over the coming months. This will increase Fed asset holdings by more than one-third. These target reductions and increased asset purchases are designed to ease credit market conditions, shore-up financial institutions, and stimulate interest-sensitive and credit constrained spending. This report will be updated periodically as new data become available.

Contents

Figures

Tables

Appendixes

Contacts

Introduction

The Federal Reserve 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 economic growth. 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 Federal Reserve, a broader definition of monetary policy would include the directives, policies, statements, forecasts of the economy, and other actions by the Federal Reserve, especially those made by or associated with the chairman of its Board of Governors, the nation's central banker.[1]

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 Federal Reserve 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 Federal Reserve was an outgrowth of the financial panic of 1907.[2] 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 ongoing 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 Federal Reserve 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 allowing banks to discount large amounts of eligible paper. 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-financial firms. These innovations are still evolving and several appear to have a limited life.[3]

Thus, the Federal Reserve has a monetary policy function and a financial stability function. Its monetary policy function is one of 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

[1] 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.

[2] For a discussion of Federal Reserve independence and its Congressional mandate, see **Appendix A**.

[3] For a discussion of the current financial crisis, its origins, and the innovations by the Federal Reserve, see CRS Report RL34730, *The Emergency Economic Stabilization Act and Current Financial Turmoil: Issues and Analysis*, by Baird Webel and Edward V. Murphy, and 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 Government Debt: The Fed's Early Years. *Review*, Federal Reserve Bank of St. Louis. May/June 2002, pp. 1-14.

maximum sustainable growth. Its second function is as "lender of last resort" to the nation's financial system.[4]

How Does the Federal Reserve Execute Monetary Policy?

The Federal Reserve has traditionally relied on three means to conduct monetary policy and they are used to alter the reserves available to depository institutions. These institutions are required to maintain reserves in the form of vault cash (currency) or as a deposit at the Federal Reserve against their deposit liabilities, primarily checking, saving, and time (CDs). 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.

If the Federal Reserve wishes to expand money and credit, it has three ways to do so. The primary method is called open market operations and it involves the Fed buying and selling 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 the reserve requirement meaning that a given amount of reserves will now support more or less deposits and, in the process, this will affect the lending capability of financial institutions (this is rarely used today). 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. 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.[5]

Since the Federal Reserve 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.[6] The Federal

[4] This report will deal with the traditional role of the Federal Reserve. The "lender of last resort" role is examined in CRS Report RL34427, *Financial Turmoil: Federal Reserve Policy Responses*, by Marc Labonte.

[5] For a more complete discussion of the role of the discount rate in Federal Reserve policy, see **Appendix B**.

[6] For a discussion of why the Federal Reserve does not conduct monetary policy by targeting the monetary aggregates, see **Appendix C**.

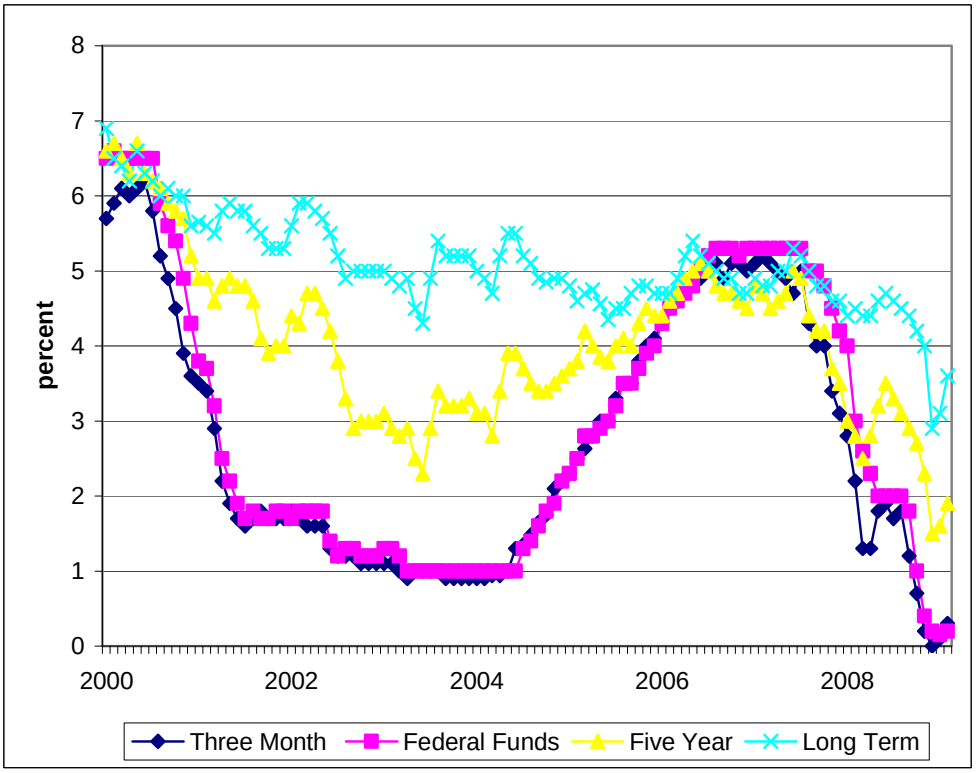
Reserve thus conducts monetary policy by focusing on the cost of money and credit as proxied by an interest rate. In particular, it targets a very short term interest rate known as the federal funds rate. This rate is determined in the overnight market for reserves of depository institutions. At the 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).[7] 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 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 Federal Reserve 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.[8]

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 is linked to other longer term rates. However, as shown on **Figure 1**, 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 policies and what they are expected to accomplish.

[7] 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.

[8] 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.

Figure 1. Yield on Selected Treasury Securities and Federal Funds



Source: Federal Reserve

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 will be influenced by international credit conditions and business cycles.

The Importance of Monetary Policy

It has been said the "money matters" and the case for this statement can be made in at least two different contexts. In one, monetary policy is compared with fiscal policy and, given the current international financial system with flexible exchange rates and a high degree of capital mobility between countries, the ability of changes in monetary policy to affect aggregate demand is great compared with fiscal policy. In the other context, changes in monetary policy have the potential to bring about major changes in the growth of GDP and employment only in the *short run*. Most economists do not believe that this holds true over the *longer run*. Over the more extended

horizon, monetary policy has its primary effect on the rate of inflation. A brief discussion of the two contexts summarized above follows.

Monetary vs. Fiscal Policy

The standard open economy macroeconomic model makes a compelling case for the relative importance of monetary policy in a world whose financial arrangements involve the use of flexible exchange rates and where capital is highly mobile between countries. To see this, fiscal and monetary expansion will be contrasted.

Allow the full employment budget deficit to rise (or the full-employment surplus to fall) through either a tax rate cut or a rise in appropriated expenditures. While the increase in this budget deficit (or fall in surplus) raises aggregate demand, it also reduces national saving. The fall in the supply of saving relative to domestic investment demand causes domestic interest rates (both real and market) to rise relative to those in other financial centers. The rise in domestic interest rates makes U.S. financial assets more attractive to foreigners. They, in turn, increase the demand for dollars in foreign exchange markets to acquire the wherewithal to purchase U.S. assets. The increased demand for dollars causes the dollar to appreciate. Dollar appreciation then reduces the cost of foreign goods and services to Americans and raises the price of American goods and services to foreigners. As a result, U.S. spending on imports tends to rise and foreign spending on U.S. exports tends to fall. Thus, any expansionary effects on domestic demand from the larger budget deficit tends to be offset in part or total by a reduced foreign trade surplus or a larger foreign trade deficit.[9]

Monetary policy stimulus (as shown by a reduction in the target rate for federal funds) initially serves to lower U.S. interest rates (both real and market) relative to those in other financial centers. Foreign financial assets become more attractive to U.S. investors, the supply of dollars on the foreign exchange markets rises as U.S. investors attempt to acquire foreign currencies to buy foreign assets, and the dollar depreciates. Dollar depreciation then makes foreign goods and services more expensive to Americans and American goods and services cheaper to foreigners. As a result, the United States spends less on imports and foreigners spend more on U.S. exports. A falling foreign trade deficit or rising trade surplus thus reinforces any stimulus to domestic demand that comes from lower U.S. interest rates.

The implication from the standard open economy macroeconomic model is that monetary policy is more powerful than fiscal policy in influencing GDP growth and employment given current international financial arrangements.[10]

[9] It is important to note that this explanation requires the *full employment or structural* budget deficit to rise. Budget deficits produced by a fall in income, or *cyclical* deficits need not produce these results.

[10] It might be thought that this highly stylized account of monetary and fiscal policy is irrelevant to a world whose financial institutions and practices are undergoing rapid change. For a contrary view, see Sellon, Gordon H., Jr., "The Changing U.S. Financial System: Some Implications for the Monetary Transmission Mechanism," *Economic Review*, Federal Reserve Bank of Kansas City, First Quarter 2002, pp. 5-36.

Short Run vs. Longer Run

The analysis above suggests that a more expansive monetary policy can cause domestic demand to expand. 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. 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.

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. 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.[11]

It is noteworthy that in societies where high rates of inflation are endemic, the short run may be very short indeed. During the final stages of very rapid inflations, called hyperinflation, the ability of more rapid rates of growth of money and credit to alter GDP growth and employment is virtually nonexistent, if not negative.

The Recent and Current Stance of Monetary Policy

The behavior of the three major indicators of economic performance are set out in **Table 1**. During 2008, GDP contracted during the third and fourth quarters, with the fourth quarter contraction being large. Unemployment continued to rise during the year and in March 2009 it reached 8.5% (up from a low of 4.4% during the preceding expansion). Job losses mirrored this rise and in March 2009 payroll employment was some 5.1 million below the peak reached in December 2007. The rate of inflation accelerated during the first half of 2008, driven largely by the rise in the prices of food and energy. This was reversed during the second half of the year. In fact, the level of consumer prices actually fell during this period. The driving force for this was the fall in energy prices. For the 12 months ended in March 2009, the Consumer Price Index fell 0.4% (excluding food and energy prices, it rose 1.8%).[12] However, for the three months ended in March 2009, both measures of the price level rose at an annual rate of 2.2%.

[11]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.

[12] This was the first time the CPI fell over a year since 1955. Between 1954 and 1955, the CPI fell by 0.4%.

Table 1. Recent Economic Performance

Year	Real Growth[a]	Inflation Rate[b]	Unemployment Rate[c]
2000	2.3	2.3	4.0
2001	0.2	1.7	4.7
2002	1.9	1.9	5.8
2003	3.7	1.8	6.0
2004	3.0	3.1	5.5
2005	2.6	1.9	5.1
2006	2.4	1.9	4.6
2007	2.0	2.6	4.6
2008	-0.2	1.9	5.8
2007:1Q	0.1	3.4	4.5
:2Q	4.8	3.6	4.5
:3Q	4.8	2.5	4.6
:4Q	-0.2	4.3	4.8
2008:1Q	0.9	3.6	4.9
:2Q	2.8	4.3	5.3
:3Q	-0.5	5.4	6.0
:4Q	-6.3	-0.1	6.9
2009:1Q			8.1

Source: U.S. Departments of Labor and Commerce.

a. Real growth and inflation are measured on a fourth quarter over fourth quarter basis. For 2007 and 2008, the quarterly data are at annualized rates.

b. Inflation is measured by the price deflator for Personal Consumption Expenditures (PCE) on a fourth quarter over fourth quarter basis. For 2007 and 2008, the quarterly data are at annualized rate.

c. Annual data are the average unemployment rate for the year. For 2007, 2008, and 2009, the quarterly data are the average unemployment rate for three months of the quarter.

Monetary policy during 2007 and 2008 reacted to both the financial crisis and the onset of an economic downturn. It is now argued by many economists that the financial crisis was, at least in part, due to Federal Reserve policy to ensure that the then ongoing expansion continued. The federal funds target had been lowered to 1% by mid-2003. As the expansion gathered momentum and prices began to rise, the federal funds target was increased in a series of moves to 5¼% in mid-2006. Short-term interest rates followed and by the end of 2006, the yield curve (the relationship between short- and long-term interest rates) became inverted, with shorter term rates higher than longer term rates. [13] The shift in financing housing from fixed to variable rate

[13] Yield curve inversions pose potentially difficult problems for depository institutions since they squeeze their profitability and possibly undermine their capital structure. The reason for this is that depository institutions generally lend long and borrow short. Thus, their borrowing (their ability to attract and retain deposits which are the source of their funds) costs are very sensitive to movements in short term interest rates. Since they lend long, only a fraction of their assets, their new loans, are affected by movements in longer term rates. Thus, when short term rates rise relative to long term rates, depository institutions find their costs rising sharply as they struggle to retain and attract deposits, (continued...)

mortgages made this sector of the economy increasingly vulnerable to movements in short-term interest rates. In particular, critics now claim that the low short-term rates prevailing from 2001 through 2004 caused an increased demand for housing leading to a "price bubble." One consequence of the tightening of monetary policy, critics now claim, was to burst this "price bubble" (a bubble that was also due, in part, to lax lending standards). The net result was the onset of a financial crisis affecting not only depository institutions, but other segments of the financial sector involved with housing finance as the delinquency rates on home mortgages rose to record numbers and the subsequent losses of financial institutions made national headlines. 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. The economic forecasts for 2009, including that by the Federal Reserve shown below, expect the economy to continue to contract into mid-2009. The initial stages of recovery are expected to be insufficiently strong to prevent the unemployment rate from rising. Currently, the unemployment rate during the fourth quarter of 2009 is expected to be at or near 10%.[14]

As the magnitude of the financial crisis as well as its international scope became apparent, the Federal Reserve responded to the expected economic slump by reducing the federal funds target and the discount rate. Beginning on September 18, 2007, and ending on December 16, 2008, the target was reduced from 5¼% to a range between 0% and ¼%. This was accompanied by an unprecedented increase in the reserves of depository institutions. They increased from about $44.6 billion in August 2008 to a high of $858 billion at the end of January 2009. At the end of March, they had declined to $780 billion (of these about $55.3 billion were required). What began to concern the monetary authorities is that these large increases in reserves were not being lent out. It would appear that the traditional transmission mechanism for monetary policy is not working. To circumvent this problem, the Fed began to employ a little used emergency provision of the Federal Reserve Act that allows it to make loans to other financial institutions and to non-financial firms as well. The magnitude of these loans has been large. Total borrowing from the Federal Reserve during November 2007 was $366 million. At the end of March 2009, it stood at $612.1 billion (down from a high of $725 billion in mid-November 2008). On March 17, the FOMC announced plans for a massive purchase of Agency and Treasury securities in excess of $1.0 trillion to further ease credit market conditions and stimulate spending. This is clearly not a "business as usual" monetary policy, but something quite extraordinary. Once credit markets resume functioning smoothly, the task facing the Federal Reserve will be to remove this huge amount of credit from the financial system quickly enough to prevent inflation from taking hold.

It should not go unnoticed that a potential complication for the conduct of monetary policy emerges when the federal funds rate is at or near zero, its floor, as it is now. A zero federal funds rate does not constrain the Federal Reserve from supplying additional reserves and liquidity to the financial system. Whether the additional reserves will be lent out, resulting in lower market interest rates and an expansion of new spending, as posited in the text book explanation of how

(...continued)

while the gross earnings from their assets rise only slowly – the classic case of a profit squeeze. In fact, if losses ensue, they undermine the capital base of these institutions setting in motion the possibility of failure. In any case, an inverted yield curve generally has negative effects on credit creation and is often a leading indicator of an impending economic downturn (see CRS Report RS22371, *The Pattern of Interest Rates: Does It Signal an Impending Recession?*, by Marc Labonte.

[14]For a more extensive discussion of current economic conditions, see CRS Report RL30329, *Current Economic Conditions and Selected Forecasts*, by Marc Labonte.

monetary policy works, is another story. Recent experience is not reassuring. Yet, a zero federal funds rate does not rule out a role a stabilization role for monetary policy, even if it cannot influence market interest rates. Monetary policy shifts can influence inflationary expectations and, through them, the real rate of interest, or the rate that is relevant to business and household decisions to buy capital goods (also known as investment), an important component of aggregate spending.[15]

Congressional Oversight and The Near-Term Goals of Monetary Policy

The 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 provide additional forecasts. They now appear quarterly. The most recent, from the *Minutes of the Federal Open Market Committee* of January 27-28, 2009, representing the views of the Board of Governors and the 12 Reserve Bank Presidents, is presented in **Table 2**. These are contrasted with the projections made for similar variables by the same group in June and October, 2008.[16]

[15] For a recent discussion of this issue by the president of the Federal Reserve Bank of St. Louis, see Bullard, Thomas. *Effective Monetary Policy in a Low Interest Rate Environment*, The Henry Thornton Lecture, Cass Business School, London (March 24, 2009).

[16] These projections represent the "central tendency" for each variable, which means that in computing the averages in the table the three highest and lowest projections for each variable are excluded.

Table 2. Federal Reserve System Economic Projections

(Percent)	2009	2010	2011
Growth of real GDP	-1.3 to -0.5	2.5 to 3.3	3.8 to 5.0
October Projections	-0.2 to 1.1	2.3 to 3.2	2.8 to 3.6
June Projections	2.0 to 1.8	2.5 to 3.0	n/a
Unemployment Rate	8.5 to 8.8	8.0 to 8.3	6.7 to 7.5
October Projections	7.1 to 7.6	6.5 to 7.3	5.5 to 6.6
June Projections	5.3 to 5.8	5.0 to 5.6	n/a
PCE Inflation[a]	0.3 to 1.0	1.0 to 1.5	0.9 to 1.7
October Projections	1.3 to 2.0	1.4 to 1.8	1.4 to 1.7
June Projections	2.0 to 2.3	1.8 to 2.0	n/a
Core PCE Inflation	0.9 to 1.1	0.8 to 1.5	0.7 to 1.5
October Projections	1.5 to 2.0	1.3 to 1.8	1.3 to 1.7
June Projections	2.0 to 2.2	1.8 to 2.0	n/a

Source: Table in the Minutes of the Federal Open Market Committee, January 27-28, 2009.

a. These projections use the price index for Personal Consumption Expenditures obtained from the Gross Domestic Product accounts. The Core PCE is the PCE less food and energy.

Appendix A. 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.[17] The Federal Reserve system is quasi-public in structure: it is 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 does not receive appropriations. While it must follow its congressional mandate, it has been granted broad *discretion* to interpret and carry out that mandate as it sees fit on a day-to-day basis. Most economists argue that good monetary policy depends on independence 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.[18]

As a practical matter, the Fed's mandate can be seen as a further source of political 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. Because it has only one instrument at its disposal and three goals, there will be times when the goals will be at odds with each other, and the Fed will have to choose to pursue one at the expense of the other two. 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. Under this proposal, the Fed would typically be given (or, under the version mooted by Chairman Bernanke, give itself) a numerical inflation target, and would then be required to set monetary policy with the goal of meeting the target on an ongoing basis.[19] 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.[20] Opponents, including former Chairman Greenspan, say that the

[17]For more information, see CRS Report RL31056, *Economics of Federal Reserve Independence*, by Marc Labonte.

[18]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.

[19]See CRS Report 98-16, *Should the Federal Reserve Adopt an Inflation Target?*, by Marc Labonte.

[20] In a recent speech, 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.

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.[21]

[21]See CRS Report RL31702, *Price Stability (Inflation Targeting) as the Sole Goal of Monetary Policy: The International Experience*, by Marc Labonte.

Appendix B. Federal Reserve and the Discount Rate

The Federal Reserve has preferred to conduct monetary policy by setting a target for the federal funds rate. This method has allowed the Federal Reserve to adopt an activist stance in the conduct of monetary policy. The Board of Governors controls another interest rate, the discount rate. Financial institutions can borrow on a temporary basis directly from the Federal Reserve at this rate (that is, they can use the discount window). The Board can either grant or deny the loan. The initiation of the loan, however, is at the discretion of the borrowing financial institution. In this sense, the Federal Reserve is passive in the process. Although the discount rate has long been a tool of central banking, the discount window has not been used much in the United States over the past several decades until market turmoil in 2008 gave it a more permanent role. Financial institutions prefer to borrow overnight in the federal funds market because they can obtain what they need without having to subject their borrowing needs to the purview of the Federal Reserve.[22] In conducting monetary policy, the Board has, in the past, moved the discount rate in sympathy with the federal funds target. For much of the past decade, the discount rate was set slightly below the federal funds target.

To discourage financial institutions from borrowing at the discount window, lending rules were altered in early 2003. Since that time, the discount rate has been set above the federal funds rate target and is now a penalty rate. However, a change in the discount rate independent from a change in the federal funds target can send a powerful message to financial markets. For example, on August 17, 2007, the Board of Governors, concerned about the adequacy of liquidity in national financial markets, reduced the discount rate for primary credit to 4¾% from 5¼%. Later, on September 18, October 31, December 11, 2007, January 22 and 30, March 18, April 30, October 8 and 29, and December 16, 2008, when the federal funds target was reduced, the discount rate was also reduced, replicating past behavior by the Federal Reserve (in addition, on March16, 2008, the discount rate was lowered without any change in the federal funds target). However, in the current financial environment, the Fed has not discouraged banks in their use of the discount window.

[22] A certain stigma was once attached to using the discount window to obtain reserves. Since banks "borrow" from their depositors to acquire assets, it was thought to be a sign of unsound banking to also borrow from the Federal Reserve.

Appendix C. Federal Reserve and the Monetary Aggregates

Since the amount of money is an important determinant of money spending, it might appear to some as curious that the Fed does not target the money supply in the conduct of monetary policy. Such a target has not been popular with the Federal Reserve. This is due, in part, to the fact that until the early 1970s, the U.S. was a part of an international monetary regime based on fixed exchange rates. Under such a regime, money supply targeting isn't possible. However, after the U.S. switched to using flexible exchange rates in the early 1970s, the Fed did define several measures of money (designating them, ultimately, as M1, M2, and M3), published data on them on a monthly basis, and set growth rate ranges for each on a annual basis.

Early on the Fed encountered problems with its defined measures of money. These monetary aggregates were not stably and predictably related to money spending (in the technical language of the economist, the demand for these measures of money was unstable). Hence, their usefulness as a target for monetary policy was questionable and inferior to using an interest rate target. This the Fed ultimately recognized.[23] In its report to Congress, dated July 20, 1993, the Board of Governors expressed considerable uncertainty about the usefulness of M2 and M3 as measures of money and decided to de-emphasize both in its decision-making. While the board continued to set growth rate ranges for each aggregate, it concluded:

> With considerable uncertainty persisting about the relationship of the monetary aggregates to spending, the behavior of the aggregates relative to their annual ranges will likely be of limited use in guiding policy ... and the Federal Reserve will continue to utilize a broad range of financial and economic indicators in assessing its policy stance.

This position was reaffirmed by the board during subsequent Monetary Policy (formerly called Humphrey-Hawkins) hearings. However, in the Monetary Policy Report submitted to Congress on July 20, 2000, the Board of Governors stated:

> At its June meeting, the FOMC did not establish ranges for the growth of money and debt in 2000 and 2001. The legal requirement to establish and to announce such ranges had expired, and owing to uncertainties about the behavior of the velocities of debt and money, these ranges for many years have not provided useful benchmarks for the conduct of monetary policy. Nevertheless, the FOMC believes that the behavior of money and credit will continue to have value for gauging economic and financial conditions....

Even this view of the usefulness of the aggregates changed. The Board of Governors announced in November 2005 that beginning in March 23, 2006, it would no longer publish data on M3. In the words of the Board: "... publication of M3 was judged to be no longer generating sufficient

[23]For a discussion of their usefulness in the conduct of monetary policy, see CRS Report RL31416, *Monetary Aggregates: Their Use in the Conduct of Monetary Policy*, by Marc Labonte; Dotsey, Michael, Carl Lanta, and Lawrence Santucci, "Is Money Useful in the Conduct of Monetary Policy? *Quarterly Review*, Federal Reserve Bank of Richmond, Vol. 86, No. 4 (Fall 2000), pp. 23-48, and Meyer, Laurence H. "The 2001 Homer Jones Memorial Lecture," Washington University, St. Louis, Missouri, March 28, 2001. When this lecture was given, Laurence Meyer was a governor of the Federal Reserve.

benefit in the analysis of the economy or of the financial sector to justify the costs of publication."[24]

Author Contact Information

Marc Labonte
Specialist in Macroeconomic Policy
mlabonte@crs.loc.gov, 7-0640

Acknowledgments

Gail E. Makinen - Economic Policy Consultant**,** Government and Finance Division contributed to this report.

[24] *Monetary Policy Report to the Congress*, February 15, 2006, p. 22.