FRBSF ECONOMIC LETTER

Number 2004-01, January 16, 2004

U.S. Monetary Policy: An Introduction

Part 1: How is the Fed structured and what are its policy tools?

Since 1999, when the first version of this Q&A on monetary policy appeared, several dramatic developments have had an impact on the U.S. economy. On the negative side are the bursting stock market bubble, the recession, the terrorist attacks of September 11, 2001, and, more recently, the emergence of the risk of deflation. On the positive side have been continued high productivity growth and the resilience of the economy. In light of these developments and their implications for monetary policy, it seemed appropriate to update and expand this Q&A on the Federal Reserve's tasks and how it carries them out. The revised text will appear in a pamphlet soon, and we present it here in the FRBSF Economic Letter *in four consecutive issues: (1) "How is the Federal Reserve structured?" and "What are the tools of U.S. monetary policy?" (2) "What are the goals of U.S. monetary policy?" (3) "How does monetary policy affect the U.S. economy?" and (4) "How does the Fed decide the appropriate setting for the policy instrument?"*

U.S. monetary policy affects all kinds of economic and financial decisions people make in this country—whether to get a loan to buy a new house or car or to start up a company, whether to expand a business by investing in a new plant or equipment, and whether to put savings in a bank, in bonds, or in the stock market, for example. Furthermore, because the U.S. is the largest economy in the world, its monetary policy also has significant economic and financial effects on other countries.

The object of monetary policy is to influence the performance of the economy as reflected in such factors as inflation, economic output, and employment. It works by affecting demand across the economy—that is, people's and firms' willingness to spend on goods and services.

While most people are familiar with the fiscal policy tools that affect demand—such as taxes and government spending—many are less familiar with monetary policy and its tools. Monetary policy is conducted by the Federal Reserve System, the nation's central bank, and it influences demand mainly by raising and lowering short-term interest rates.

How is the Federal Reserve structured?

The Federal Reserve System (called the Fed, for short) is the nation's central bank. It was established by an Act of Congress in 1913 and consists of the Board of Governors in Washington, D.C., and twelve Federal Reserve District Banks (for a discussion of the Fed's overall responsibilities, see *The Federal Reserve System: Purposes and Functions*).

The Congress structured the Fed to be independent within the government—that is, although the Fed is accountable to the Congress and its goals are set by law, its conduct of monetary policy is insulated from day-to-day political pressures. This reflects the conviction that the people who control the country's money supply should be independent of the people who frame the government's spending decisions.

What makes the Fed independent?

Three structural features give the Fed independence in its conduct of monetary policy: the appointment procedure for Governors, the appointment procedure for Reserve Bank Presidents, and funding.

Appointment procedure for Governors. The seven Governors on the Federal Reserve Board are appointed by the President of the United States and confirmed by the Senate. Independence derives from a couple of factors: first, the appointments are staggered to reduce the chance that a single U.S. President could "load" the Board with appointees; second, their terms of office are 14 years—much longer than elected officials' terms.

Appointment procedure for Reserve Bank Presidents. Each Reserve Bank President is appointed to a five-year term by that Bank's Board of Directors, subject to final approval by the Board of Governors. This

procedure adds to independence because the Directors of each Reserve Bank are not chosen by politicians but are selected to provide a cross-section of interests within the region, including those of depository institutions, nonfinancial businesses, labor, and the public.

Funding. The Fed is structured to be self-sufficient in the sense that it meets its operating expenses primarily from the interest earnings on its portfolio of securities. Therefore, it is independent of Congressional decisions about appropriations.

How is the Fed "independent within the government"?
Even though the Fed is independent of Congressional appropriations and administrative control, it is ultimately accountable to Congress and comes under government audit and review. Fed officials report regularly to the Congress on monetary policy, regulatory policy, and a variety of other issues, and they meet with senior Administration officials to discuss the Federal Reserve's and the federal government's economic programs. The Fed also reports to Congress on its finances.

Who makes monetary policy?
The Fed's FOMC (Federal Open Market Committee) has primary responsibility for conducting monetary policy. The FOMC meets in Washington eight times a year and has twelve members: the seven members of the Board of Governors, the President of the Federal Reserve Bank of New York, and four of the other Reserve Bank Presidents, who serve in rotation. The remaining Reserve Bank Presidents contribute to the Committee's discussions and deliberations.

In addition, the Directors of each Reserve Bank contribute to monetary policy by making recommendations about the appropriate discount rate, which are subject to final approval by the Governors.

What are the tools of U.S. monetary policy?

The Fed can't control inflation or influence output and employment directly; instead, it affects them indirectly, mainly by raising or lowering a short-term interest rate called the "federal funds" rate. Most often, it does this through open market operations in the market for bank reserves, known as the federal funds market.

What are bank reserves?
Banks and other depository institutions (for convenience, we'll refer to all of these as "banks") keep a certain amount of funds in reserve to meet unexpected outflows. Banks can keep these reserves as cash in their vaults or as deposits with the Fed. In fact, banks are *required* to hold a certain amount in reserves. But, typically, they hold even more than they're required to in order to clear overnight checks, restock ATMs, and make other payments.

What is the federal funds market?
From day to day, the amount of reserves a bank wants to hold may change as its deposits and transactions change. When a bank needs additional reserves on a short-term basis, it can borrow them from other banks that happen to have more reserves than they need. These loans take place in a private financial market called the federal funds market.

The interest rate on the overnight borrowing of reserves is called the federal funds rate or simply the "funds rate." It adjusts to balance the supply of and demand for reserves. For example, if the supply of reserves in the fed funds market is greater than the demand, then the funds rate falls, and if the supply of reserves is less than the demand, the funds rate rises.

What are open market operations?
The major tool the Fed uses to affect the supply of reserves in the banking system is open market operations—that is, the Fed buys and sells government securities on the open market. These operations are conducted by the Federal Reserve Bank of New York.

Suppose the Fed wants the funds rate to fall. To do this, it buys government securities from a bank. The Fed then pays for the securities by increasing that bank's reserves. As a result, the bank now has more reserves than it wants. So the bank can lend these unwanted reserves to another bank in the federal funds market. Thus, the Fed's open market purchase increases the supply of reserves to the banking system, and the federal funds rate falls.

When the Fed wants the funds rate to rise, it does the reverse, that is, it sells government securities. The Fed receives payment in reserves from banks, which lowers the supply of reserves in the banking system, and the funds rate rises.

What is the discount rate?

Banks also can borrow reserves directly from the Federal Reserve Banks at their "discount windows," and the discount rate is the rate that financially sound banks must pay for this "primary credit." The Boards of Directors of the Reserve Banks set these rates, subject to the review and determination of the Federal Reserve Board. ("Secondary credit" is offered at higher interest rates and on more restrictive terms to institutions that do not qualify for primary credit.) Since January 2003, the discount rate has been set 100 basis points above the funds rate target, though the difference between the two rates could vary in principle. Setting the discount rate higher than the funds rate is designed to keep banks from turning to this source before they have exhausted other less expensive alternatives. At the same time, the (relatively) easy availability of reserves at this rate effectively places a ceiling on the funds rate.

What about foreign currency operations?

Purchases and sales of foreign currency by the Fed are directed by the FOMC, acting in cooperation with the Treasury, which has overall responsibility for these operations. The Fed does not have targets, or desired levels, for the exchange rate. Instead, the Fed gets involved to counter disorderly movements in foreign exchange markets, such as speculative movements that may disrupt the efficient functioning of these markets or of financial markets in general. For example, during some periods of disorderly declines in the dollar, the Fed has purchased dollars (sold foreign currency) to absorb some of the selling pressure.

Intervention operations involving dollars, whether initiated by the Fed, the Treasury, or by a foreign authority, are not allowed to alter the supply of bank reserves or the funds rate. The process of keeping intervention from affecting reserves and the funds rate is called the "sterilization" of exchange market operations. As such, these operations are not used as a tool of monetary policy.

Suggested reading

For an overview of the Federal Reserve System and its functions, see:

The Federal Reserve System: Purposes and Functions, 8th ed. 1994. Washington, DC: Board of Governors, Federal Reserve System. http://www.federalreserve.gov/pf/pf.htm

The Federal Reserve System in Brief. Federal Reserve Bank of San Francisco. http://www.frbsf.org/publications/federalreserve/fedinbrief/index.html

For further discussion of the topics in this article, see the following issues of the *FRBSF Economic Letter*:

93-21 "Federal Reserve Independence and the Accord of 1951," by Carl Walsh. http://www.frbsf.org/publications/economics/letter/1993/el93-21.pdf

94-05 "Is There a Cost to Having an Independent Central Bank?" by Carl Walsh. http://www.frbsf.org/publications/economics/letter/1994/el94-05.pdf

94-27 "A Primer on Monetary Policy, Part I: Goals and Instruments," by Carl Walsh. http://www.frbsf.org/publications/economics/letter/1994/el94-27.pdf

95-16 "Central Bank Independence and Inflation," by Robert T. Parry. http://www.frbsf.org/publications/economics/letter/1995/el1995-16.pdf

2002-30 "Setting the Interest Rate," by Milton Marquis. http://www.frbsf.org/publications/economics/letter/2002/el2002-30.html

ECONOMIC RESEARCH

FEDERAL RESERVE BANK

OF SAN FRANCISCO

P.O. Box 7702
San Francisco, CA 94120
Address Service Requested

Index to Recent Issues of *FRBSF Economic Letter*

DATE	NUMBER	TITLE	AUTHOR
7/4	03-19	Pension Accounting and Reported Earnings	Kwan
7/18	03-20	Is Official Foreign Exchange Intervention Effective?	Hutchison
7/25	03-21	Bank Lending to Businesses in a Jobless Recovery	Marquis
8/1	03-22	Disclosure as a Supervisory Tool: Pillar 3 of Basel II	Lopez
8/15	03-23	Understanding State Budget Troubles	Daly
8/22	03-24	Improving the Way We Measure Consumer Prices	Wu
8/29	03-25	The Present and Future of Pension Insurance	Kwan
9/12	03-26	Are We Running out of New Ideas? A Look at Patents and R&D	Wilson
9/19	03-27	The Fiscal Problem of the 21st Century	Jones
9/26	03-28	Earnings Inequality and Earnings Mobility in the U.S.	Daly/Valletta
10/3	03-29	Mortgage Refinancing	Krainer/Marquis
10/10	03-30	Is Our IT Manufacturing Edge Drifting Overseas?	Valletta
10/24	03-31	Good News on Twelfth District Banking Market Concentration	Laderman
10/31	03-32	The Natural Rate of Interest	Williams
11/7	03-33	The Bay Area Economy: Down but Not Out	Daly/Doms
11/14	03-34	Should the Fed React to the Stock Market?	Lansing
11/28	03-35	Monitoring Debt Market Information for Bank Supervisory Purposes	Krainer/Lopez
12/12	03-36	Japanese Foreign Exchange Intervention	Spiegel
12/19	03-37	The Current Strength of the U.S. Banking Sector	Krainer/Lopez
12/26	03-38	Is There a Digital Divide?	Valletta/MacDonald

Opinions expressed in the *Economic Letter* do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco or of the Board of Governors of the Federal Reserve System. This publication is edited by Judith Goff, with the assistance of Anita Todd. Permission to reprint portions of articles or whole articles must be obtained in writing. Permission to photocopy is unrestricted. Please send editorial comments and requests for subscriptions, back copies, address changes, and reprint permission to: Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco, CA 94120, phone (415) 974-2163, fax (415) 974-3341, e-mail sf.pubs@sf.frb.org. **The *Economic Letter* and other publications and information are available on our website, http://www.frbsf.org.**