
FRBSF WEEKLY LETTER

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A Primer on Monetary Policy Part I: Goals and Instruments

Recent interest rate increases have focused the public's attention on the conduct of monetary policy and the role of the Federal Reserve. In February, the Fed's policymaking body, the Federal Open Market Committee (FOMC), raised the federal funds rate a quarter of a percentage point, the first such increase since 1989. The FOMC voted again for two more 25 basis point increases in March and April, and at the May 17th meeting the federal funds rate was pushed up another half a percentage point.

These actions were designed to prevent inflation from rising above its current annual rate of under 3 percent. The interest rate hikes were consistent with the Fed's desire to move the economy gradually towards even lower rates of inflation in order to achieve price stability. Because these actions occurred before any actual increase in inflation, the FOMC's policy has generated wide debate among economists and in the popular press.

In order to grasp the issues at the heart of the recent debates, it is helpful to understand some of the elements involved in setting monetary policy. This *Weekly Letter* provides the first of a two-part primer designed to give an overview of issues in how monetary policy is conducted. Part one reviews the goals of monetary policy and the basic instruments the Fed can use to conduct policy. The next *Weekly Letter* will discuss the role of intermediate targets, indicators, rules and forecasts in the implementation of monetary policy.

The goals of monetary policy

In the lobby of the Federal Reserve Bank of San Francisco, visitors are exposed to the difficulties of implementing monetary policy through an electronic video game. The object is to time the release of a dart from a moving arm in order to hit the bull's-eye of a moving target. The moving bull's-eye reflects, in a graphic manner, the uncertainty that exists over the appropriate goals of monetary policy, and the changing values of these goals as a result of developments both in the economy and in our understanding of the economy.

The "official" goals of monetary policy, enshrined in the Federal Reserve Act (Section 2A(1)), are to "promote . . . maximum employment, stable prices, and moderate long-term interest rates." If maximum employment is interpreted as that level of employment consistent with the numerical goal of 4 percent unemployment established by the Humphrey-Hawkins "Full Employment and Balanced Growth Act of 1978," then few economists believe it is possible to achieve all these goals at once in the U.S. economy.

The belief that 4 percent unemployment and stable prices are inconsistent is shaped by the widely accepted "natural rate hypothesis." It argues that the economy's average equilibrium unemployment rate, often called the natural rate of unemployment, is independent of monetary policy. Most current estimates of the natural rate place it in the range of 6 to 6½ percent. Taken together, these imply that the unemployment rate will tend to average around the 6 to 6½ percent range in the long run, regardless of the conduct of monetary policy.

What if the Federal Reserve tried to achieve 4 percent unemployment in the long run? *Consistent* attempts to expand the economy beyond its potential for production will result in higher inflation while ultimately failing to produce lower average unemployment. In fact, extreme rates of inflation (or deflation) may so disrupt the role of the price system in directing resources in a market economy that the result could be slower average growth and higher average unemployment. Although economists continue to debate whether reducing inflation from moderate to low rates would significantly improve the long-run performance of the economy, most believe that there are no long-term gains from consistently pursuing expansionary policies.

While the Fed has little effect on the natural rate of unemployment, the Fed can determine the economy's average rate of inflation. Thus, many recent commentators have emphasized the need to define the goals of monetary policy in terms

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of low or zero inflation, which is achievable. In 1989, Representative Neal (D, NC) actually introduced a bill in Congress that would have amended the Federal Reserve Act to make price stability the sole goal of U.S. monetary policy. The idea that central banks should have goals defined only in terms of price stability or low inflation is not new. John Maynard Keynes wrote in 1924 that "... they (Treasury and Bank of England) should adopt the stability of sterling prices as their primary objective" (p. 202).

In practice, the Fed, like most central banks, cares about both inflation and measures of the short-run cyclical performance of the economy. However, pursuing multiple goals can create conflicts for policy; for example, the desire to mitigate short-run downturns raises the issue of whether this goal should take precedence over a low-inflation goal at any particular point in time. Thus, it is important to avoid allowing short-run, temporary successes in preventing employment losses during recessions from leading to longer-run failures in maintaining low inflation. Proponents of more activist policy argue, however, that monetary policy can help to stabilize the economy and should act to offset temporary downturns in economic activity. They argue that responding to temporary, cyclical fluctuations need not be inconsistent with maintaining a firm commitment to low average inflation.

One effect of having multiple, conflicting goals is that it leads to political pressures on the Fed, varying in strength and intensity over time, for lower interest rates, for faster growth, or for lower inflation. Political pressure on monetary policy is usually criticized for its tendency to emphasize short-run considerations over longer-run objectives. For example, politicians who may have time horizons that extend only to the next election will be tempted to push for more expansionary policy, which may produce lower unemployment and faster real growth in the short run, even though in the long run it can only lead to higher inflation. Unless the central bank has sufficient independence from political institutions to resist such pressures, the result is likely to be higher average inflation with no appreciable effect on average unemployment or real growth. Alesina and Summers (1993) find that greater central bank independence is associated with lower average inflation, but they find no association with average real growth among the industrialized economies.

In sum, monetary policy is continually faced with a conflict between what it can temporarily achieve in the short run and what it can permanently achieve in the longer run. That is why even those economists who believe monetary policy has an important role to play in helping to stabilize short-run business cycle fluctuations also have, in recent years, increasingly emphasized the importance of maintaining a commitment to low average rates of inflation.

The instruments of monetary policy

The Fed does not control inflation or unemployment directly; instead, the Fed must decide on the settings for the tools, or instruments, of policy that it does control directly as it attempts to achieve its objectives of low inflation and stable economic growth. It is predominantly through *open market operations*—purchases and sales of government securities—that the Fed attempts to influence the economy and achieve its policy goals. Open market operations influence the level of bank reserves in the economy, which in turn influences the level of interest rates, the provision of money and credit, investment spending, and the pace of economic activity.

Banks are legally required to hold a fraction of certain types of deposit accounts that they issue as reserves. They keep these reserves in the form of vault cash or deposits with the Fed. When banks need additional reserves on a short-term basis, they can borrow them from other banks who happen to have more reserves than they need. The interest rate on the overnight borrowing of reserves is called the federal funds rate. The funds rate adjusts to balance the supply and demand for reserves.

Open market operations affect the supply of reserves in the banking system. If the Fed buys government securities, it pays for them by adding reserves to the banking system; this increases the supply of reserves, which lowers the cost of borrowing reserves—the federal funds rate falls. When the Fed sells government securities, the reverse happens: the supply of reserves falls, and the federal funds rate rises.

If the demand for reserves were perfectly predictable, the Fed could predict exactly the relationship between the quantity of reserves and the funds rate. In this case, it could use either reserves or the funds rate as its policy instrument

equally well. But, because reserve demand can fluctuate unpredictably, the choice between the use of a quantity and the use of an interest rate as the chief instrument of policy does make a difference. To see why, suppose the economy grows faster than predicted, putting upward pressure on interest rates as credit demand increases. If the Fed tries to control the quantity of reserves, it will not accommodate the greater demand for credit, and the funds rate will rise. This will tend to push up other interest rates and act as an automatic brake on the economy. If the Fed is using the funds rate as its instrument, this pressure for higher interest rates will automatically produce a rise in the supply of reserves as the Fed acts to prevent the funds rate from rising. In this example, policy that focuses on the quantity of reserves would be less likely to let inflation rise.

If, in contrast, pressures for higher interest rates came from a financial market development, such as tighter regulatory supervision of bank lending practices, a policy that acted to keep the quantity of reserves constant would lead some key lending rates to rise, which would tend to have a contractionary effect on the economy. If policy acted to keep the funds rate constant, then the supply of reserves would automatically increase to offset the contractionary effect of the financial disturbance. During most of the post-war era, the

interest rate approach to implementing policy—setting the level of the funds rate—provides a more accurate description of Fed operating procedures.

The link between open market activities and the federal funds rates is fairly straightforward. The other linkages between policy actions and the behavior of the economy are subject to more controversy. The roles played by intermediate targets, forecasts and policy rules in linking policy actions with the behavior of the economy will be discussed in the second part of this primer.

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