

## Symmetric Inflation Risk

It is generally presumed that a reduction in the inflation rate, i.e., disinflation, is beneficial to the economy because high inflation raises the cost of holding money, increases the frequency of costly price changes, and lowers the value of nominal incomes. Disinflation can impose costs, however, and outright deflation—a sustained fall in the general price level—can be disastrous. A decrease in inflation causes real interest rates to rise, which can dissuade firms from committing to long-term investment spending and lead to lower output growth, which, in turn, can put further downward pressure on prices. Unanticipated disinflation is costly to bearers of long-term debt who, when borrowing, forecast higher inflation rates. These costs are incurred because disinflation increases the value of the dollars that borrowers must pay back relative to what borrowers had expected.

Policymakers all over the world have judged that the benefits of lower inflation outweigh the costs of a decline in the inflation rate when the rate is high. However, once price stability has been achieved—when the inflation rate is near zero—continued disinflation will result in deflation and impose significant costs on the economy. Recent experience in Japan (as well as historical experiences in the United States and elsewhere) illustrate the problems that can arise from sustained deflation. When inflation was low in Japan during the late 1970s and 1980s, output growth was smooth. The persistent deflation since the 1990s (Japan's average inflation rate between 1993 and 2002 was  $-0.2$  percent) has been combined with slow growth and volatile fluctuations in output.

The figure shows the rise and fall in U.S. inflation and interest (federal funds) rates since 1978. Economic theory tells us that there is a one-to-one positive relation-

ship between the inflation rate and the nominal interest rate. During the period 1978 through 1986, for example, the average inflation rate (measured by the GDP deflator) was 5.7 percent. Over that same period, the federal funds rate averaged 10.6 percent. Recently, however, the inflation rate and the federal funds rate have been considerably lower. Between 1995 and 2002, the average inflation rate was only 1.8 percent while the federal funds rate was 4.8 percent.

The current economic environment in the United States is one of low inflation and inconsistent output growth. To stimulate output growth, the FOMC has cut the federal funds rate to a historically low level. In the past, when inflation was high, such an expansionary monetary policy would have focused attention on the risk of an increase in inflation. Disinflation would not have been viewed as a potential problem. Yet, today's low inflation rate has some different implications for policy. With the inflation rate as low as it is now, the risk of sustained deflation cannot be discounted, especially because disinflation now would yield little offsetting benefit. In this environment of near price stability, inflation risks are symmetric—one must be wary not only of shocks that lead to inflation, but also of events that could create deflation.

—Abigail J. Chiodo and Michael T. Owyang

