

## Has Expected Inflation Decreased?

During 1998, the U.S. economy's inflation rate decreased for a second consecutive year. Consumer prices, as measured by the all-items CPI, increased only about half as rapidly as two years earlier. An important question for policymakers is how much of this deceleration reflects a change in the permanent, or trend, component of inflation and how much may be due to temporarily depressed world prices for energy and agricultural products. Measured by the CPI excluding food and energy, inflation in the United States last year was only slightly lower than in 1997 or 1996. This issue is made more compelling by last year's acceleration of money growth. The growth rate of M2, for example, increased to more than 8 percent, suggesting higher future inflation if velocity has not permanently shifted downward. But does more rapid money growth necessarily portend higher future inflation? Perhaps not. If the perceived opportunity cost of holding money decreases with lower expected inflation, then more rapid money growth may be solely an interim adjustment toward a lower equilibrium level of velocity, with no implications for a future rebound of inflation.

Expected inflation may be measured in two ways: by direct surveys and by observing changes in the prices of financial assets. Policymakers must approach both measures with caution because expectations of future inflation are necessarily intertwined with those of future monetary policy. Moreover, asset prices sometimes are distorted by extraordinary events, such as the flight to quality during the latter half of 1998. Qualifications aside, these indicators suggest that, on balance, expected inflation decreased only slightly during 1998 despite the further slowing of actual inflation.

Two survey measures of expected annual inflation the quarterly survey of professional forecasters conducted by the Federal Reserve Bank of Philadelphia and the monthly survey of consumers conducted by the University of Michigan—are shown on page 8. For reference, Federal Reserve projections for inflation as reported in the February Humphrey-Hawkins Act testimony also are shown. Each survey observation is plotted as-of the ending date of a one-year forecast period. During 1997, both surveys drifted downward such that by year-end, expected annual inflation for 1998 was about one-half percentage point lower than at the end of 1996. During 1998, despite December-to-December CPI inflation of only 1.6 percent, no significant further decrease of expected inflation seems to have occurred. Survey results suggest that inflation expectations for 1999 remain at about 2.5 percent.

Financial markets tell a similar tale. Yields on longer-term nominal Treasury securities and on corporate bonds fell little during 1998 except for flight-toquality effects on Treasuries after mid-year. Unfortunately, the Treasury security that some analysts had predicted would furnish an early warning signal of inflationary pressures-Treasury inflation-protected securities, or TIPS-seems to have furnished little information. The spread between yields on TIPS and on nominal securities narrowed during 1998, and, in ordinary circumstances, one might take this to indicate a decrease in expected inflation. But last year's narrowing occurred in unusual circumstances. While the prices of nominal Treasury securities rose and their yields decreased, prices of TIPS fell, apparently reflecting an increase in the liquidity premium required by investors to hold TIPS. This unusual change suggests caution in interpreting the change in yield spreads between TIPS and other securities. TIPS aside, consumers, forecasters and market participants seem to expect that inflation will be higher in the future than it was in 1998.

-Richard G. Anderson

