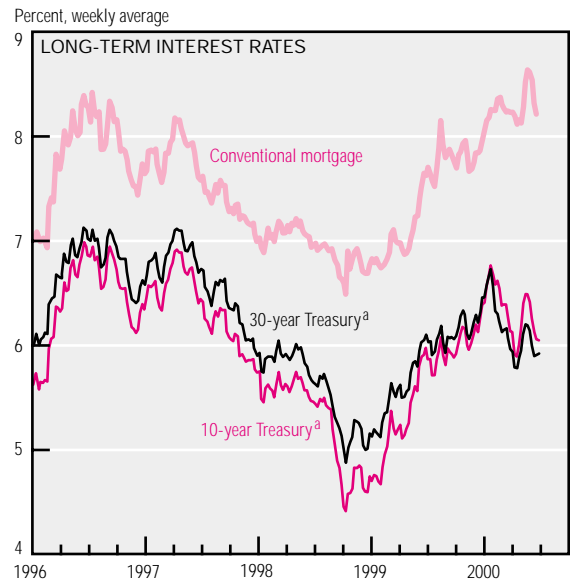
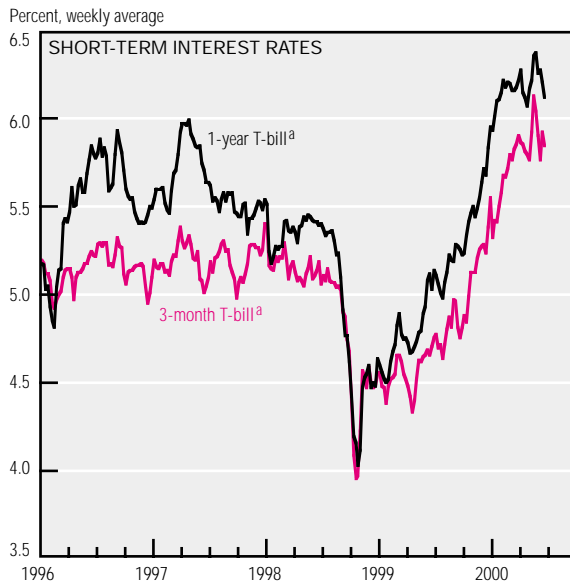
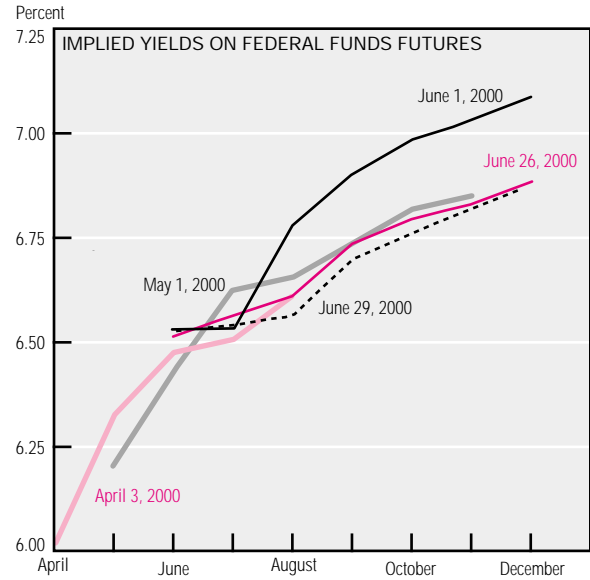
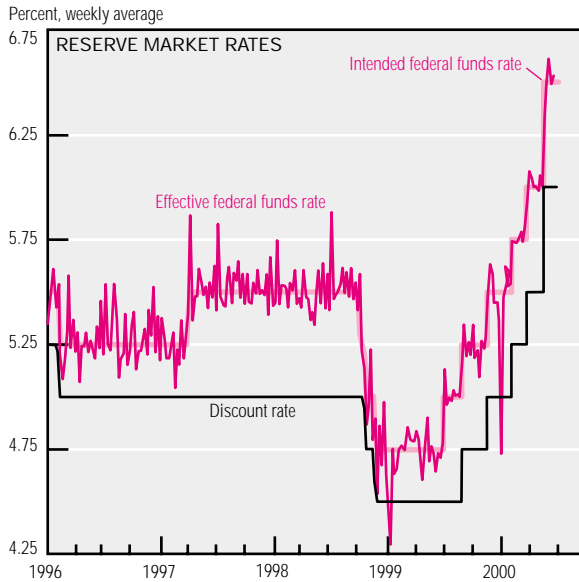


Monetary Policy



a. Constant maturity.

SOURCES: Board of Governors of the Federal Reserve System; and Chicago Board of Trade.

The Federal Open Market Committee (FOMC) left the intended federal funds rate unchanged at 6.5% at its June 27–28 meeting, the first this year at which the target rate was not increased. The FOMC cited “signs that growth in demand is moving toward a sustainable pace” as the basis for maintaining the current stance of monetary policy. However, the Committee also cautioned that such signs “are still tentative and preliminary,” noting that “the risks continue to be weighted mainly toward conditions that may generate height-

ened inflation pressures.”

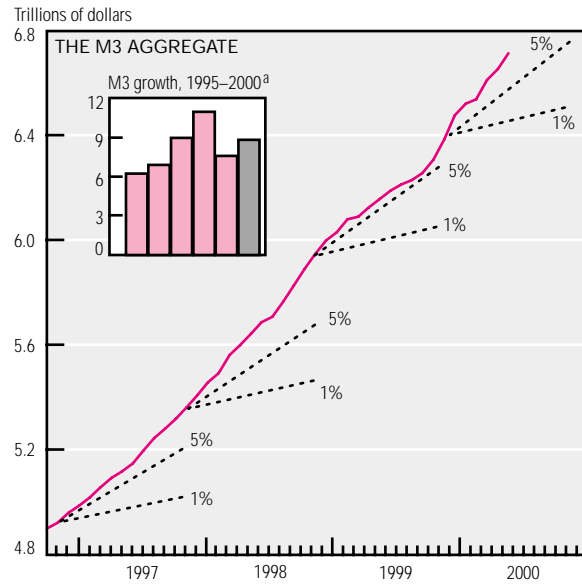
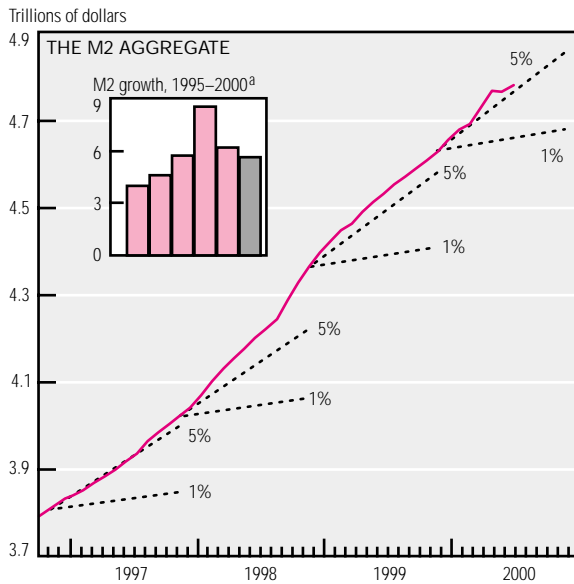
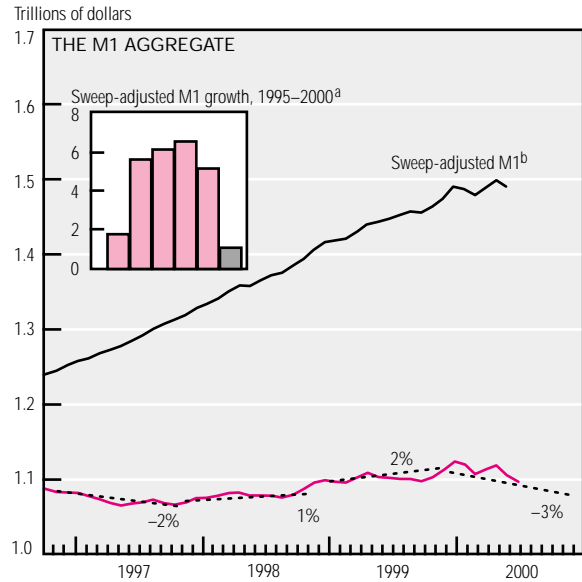
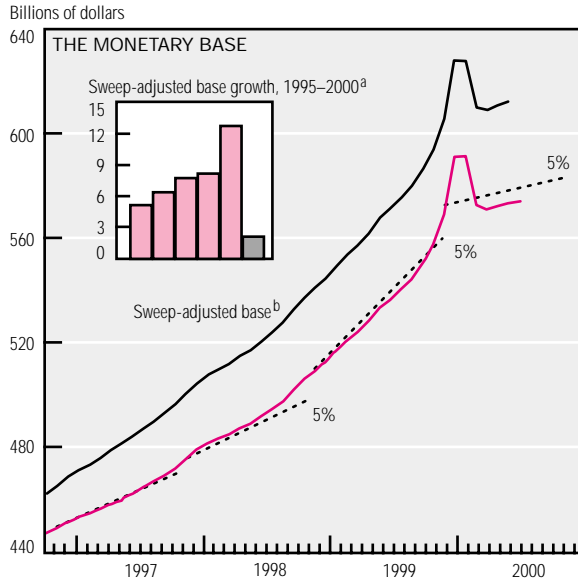
Implied yields on federal funds futures are often used as a proxy for the expected future path of policy. The implied yields of slightly above 6.5% on June and July federal funds futures contracts prior to the meeting indicate that market participants were not surprised by the FOMC’s decision—they had assigned a low probability to a rate increase. Furthermore, there was little change in the implied yields following the meeting. Although traders have lowered their estimates for the year-end

federal funds rates since early June, the June 29 contract for December is still trading nearly 40 basis points (bp) above the current target rate.

Both long- and short-term interest rates have decreased notably since mid-May. This is particularly noteworthy, given the 50 bp increase in the intended federal funds rate in May 16. It is commonly reported that increases in the federal funds rate lead to increases in all other market interest rates. Clearly, such reporting is not always accurate.

(continued on next page)

Monetary Policy (cont.)



a. Growth rates are percentage rates calculated on a fourth-quarter over fourth-quarter basis. The 2000 growth rates for M2 and M3 are calculated on an estimated June over 1999:IVQ basis. The 2000 growth rates for the sweep-adjusted monetary base and sweep-adjusted M1 are calculated on a May over 1999:IVQ basis.

b. Sweep-adjusted M1 contains an estimate of balances temporarily moved from M1 to non-M1 accounts. The sweep-adjusted base contains an estimate of required reserves saved when balances are shifted from reservable to nonreservable accounts.

NOTE: Data are seasonally adjusted. Last plots for base, M1, M2, and M3 are estimated for June 2000. Last plots for the sweep-adjusted monetary base and sweep-adjusted M1 are May 2000. Dotted lines for M2 and M3 are FOMC-determined provisional ranges. All other dotted lines are for reference only.

SOURCE: Board of Governors of the Federal Reserve System.

One explanation for the decline in interest rates is that by acting aggressively, the FOMC credibly signaled to these markets that it will not tolerate rising inflation. This would induce a decline in nominal interest rates by lowering the inflationary expectations that are built into nominal rates. Data that suggest a slowing economy may also have contributed to the rate decline.

Growth rates of the narrow monetary aggregates have fallen off

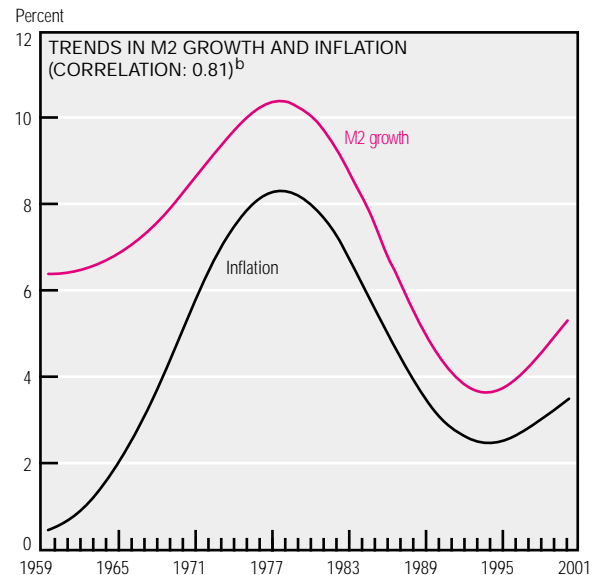
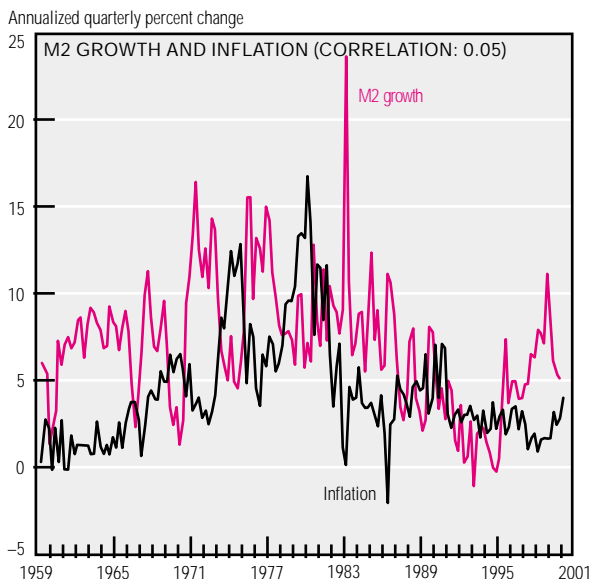
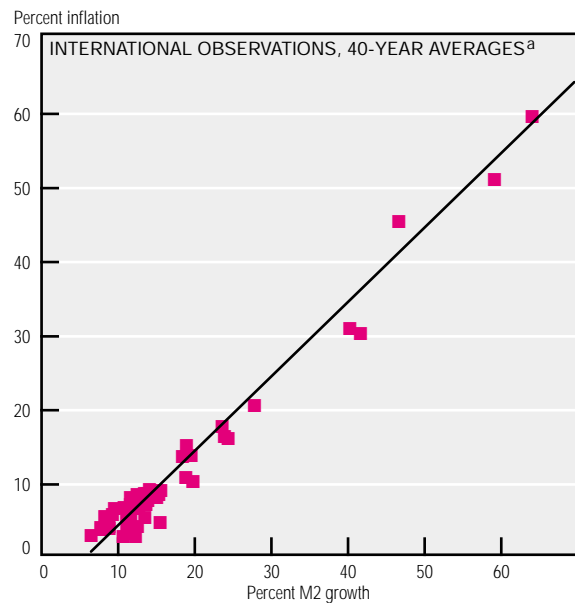
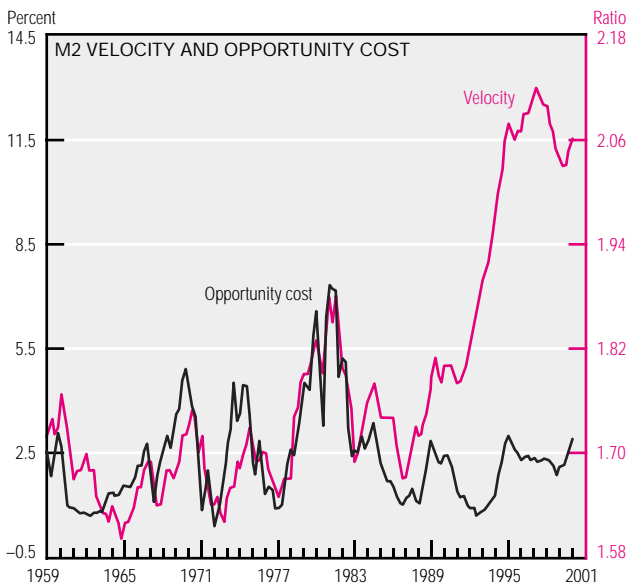
sharply from last year. Annualized year-to-date rates for the sweep-adjusted base and sweep-adjusted M1 were 1.9% and 1.0% through May, compared to 12.7% and 6.5% (fourth-quarter over fourth-quarter basis) in 1999, respectively. In contrast, the broad monetary aggregates are growing at a pace near or above their 1999 rates.

Regular readers of these pages will surely notice the growth rates of various monetary aggregates are always

reported. At the same time, it is often reported that the relationship between money growth and inflation has become substantially less reliable in recent years; the shift in M2 velocity is a frequently cited example. Furthermore (and somewhat ironically), the FOMC appears to place relatively little emphasis on money in conducting monetary policy.

So why are money growth rates continually presented here? In large *(continued on next page)*

Monetary Policy (cont.)



a. Includes 49 nations. Each point shows 40-year averages of M2 growth and inflation for one country.

b. M2 growth and inflation are annualized quarterly percent changes in M2 and CPI (all items). Data are filtered using a band-pass filter to remove frequencies higher than 20 years.

SOURCES: U.S. Department of Commerce, Bureau of Labor Statistics; Board of Governors of the Federal Reserve System; International Monetary Fund, *International Financial Statistics*; and Lawrence J. Christiano and Terry J. Fitzgerald, "The Band-Pass Filter," National Bureau of Economic Research, Working Paper no. 7257, July 1999.

part, it is because the preponderance of evidence suggests that eventually money growth and inflation are very closely associated. Over relatively short time periods, such as a few months or even a year, however, the association between money growth and inflation is quite uncertain.

The lack of a clear short-term relationship to inflation is not unique to money growth. Other statistics that are sometimes used to gauge

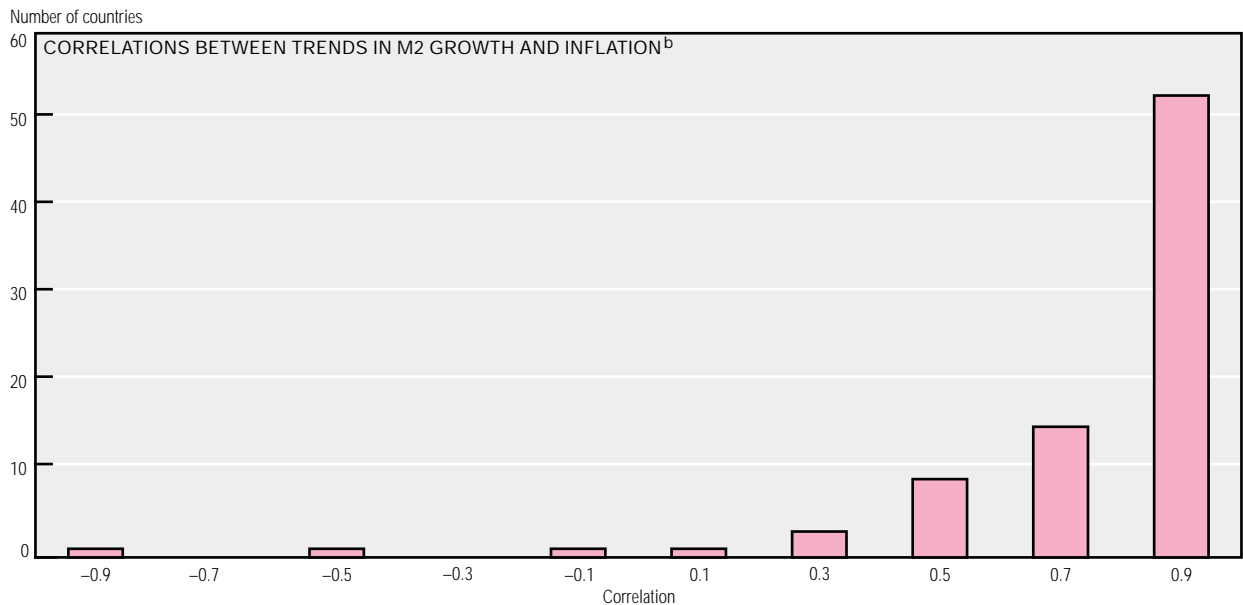
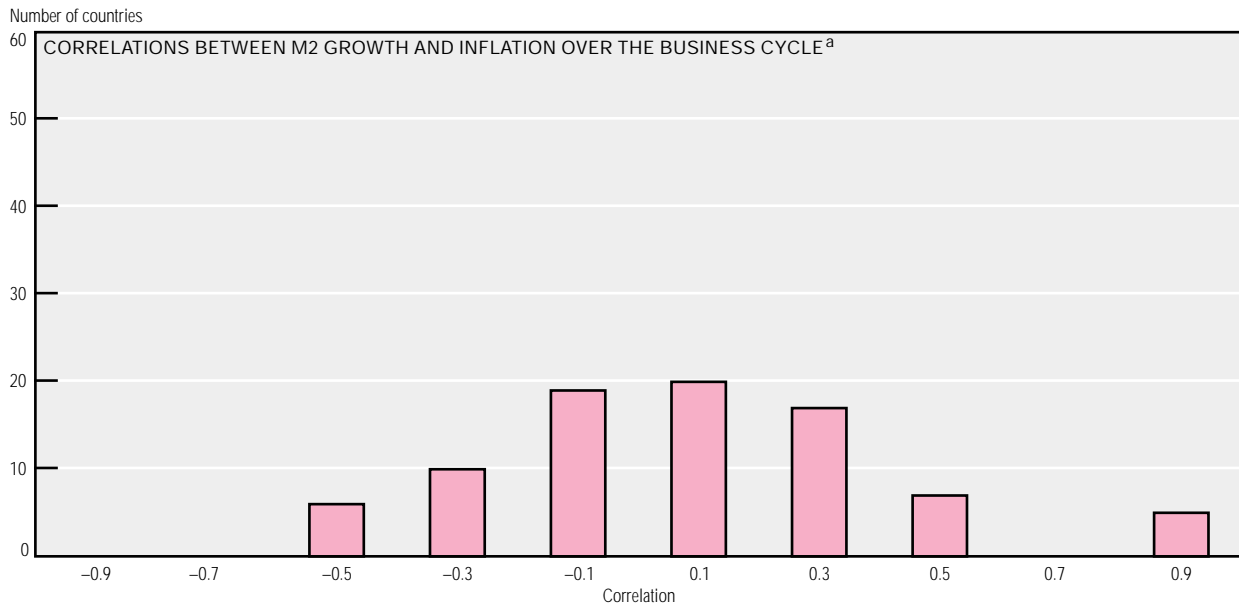
inflationary pressures, such as unemployment or real output growth, have the same shortcoming. That is why Fed policymakers must examine a broad range of indicators in formulating policy.

A striking characteristic of money growth as an indicator of inflationary pressures is its close association with inflation over long-enough time horizons. For example, 40-year averages of money growth and inflation rates in many different countries

exhibit a clear pattern. Countries with high money-growth rates have high inflation rates, and vice versa. However, the relationship becomes much less clear when several high-money-growth, high-inflation countries are excluded.

We gain further evidence on the relationship between money growth and inflation by examining their association within each of many countries. For example, trends in
(continued on next page)

Monetary Policy (cont.)



a. Distribution of correlations between M2 growth and inflation over the business cycle in 84 countries.

b. Distribution of correlations between trend M2 growth and trend inflation in 84 countries.

NOTE: Data are filtered using a band-pass filter. The business cycle contains frequencies between two and eight years; trends contain frequencies of 24 years and longer. The correlations are grouped into 10 equally spaced bins of width 0.20, centered on $-0.9, -0.7, \dots, 0.7, 0.9$.

SOURCES: Lawrence J. Christiano and Terry J. Fitzgerald, "The Band-Pass Filter," National Bureau of Economic Research, Working Paper no. 7257, July 1999; and Terry J. Fitzgerald, "International Facts on Money Prices and Output," March 2000, unpublished.

M2 growth and inflation over the past 40 years display a strong positive association in the U.S.—even though the raw quarterly growth rates display none. In fact, trends in money growth are highly correlated with trends in inflation in almost all countries, regardless of the specific policies. Furthermore, the close relationship holds even in countries with moderate rates of inflation.

Do short-term fluctuations in money growth and inflation—over

the business cycle, for instance—display a consistent positive relationship in different countries? No. The correlation is not consistently positive or negative. This result suggests that the lack of a clear short-term relationship is not unique to the U.S., but a property shared among many countries.

The combined weight of this evidence strongly suggests that over the long term, money growth is the key factor determining inflation. Over the short term, however, the

relationship is murky. One can debate the precise time horizon over which a clear association appears, but there is some evidence of a notable relationship for periods as short as two years. Reporting on the behavior of annual and year-to-date money growth rates is helpful in identifying changes in underlying trend growth rates. If such changes persist, the evidence suggests that changes in the underlying trend rate of inflation will follow.