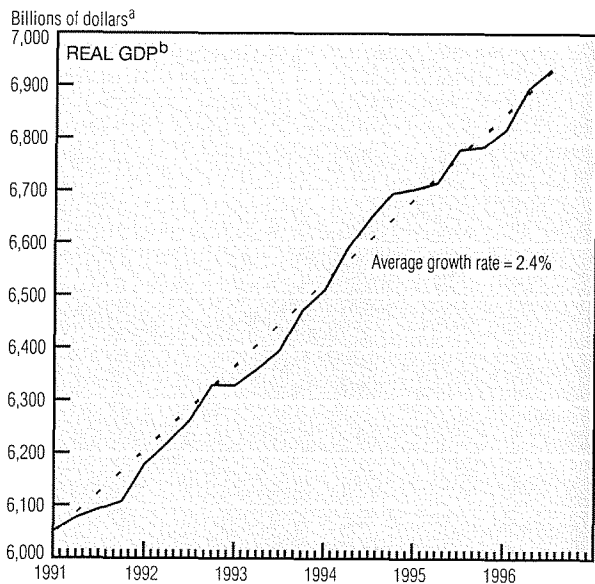
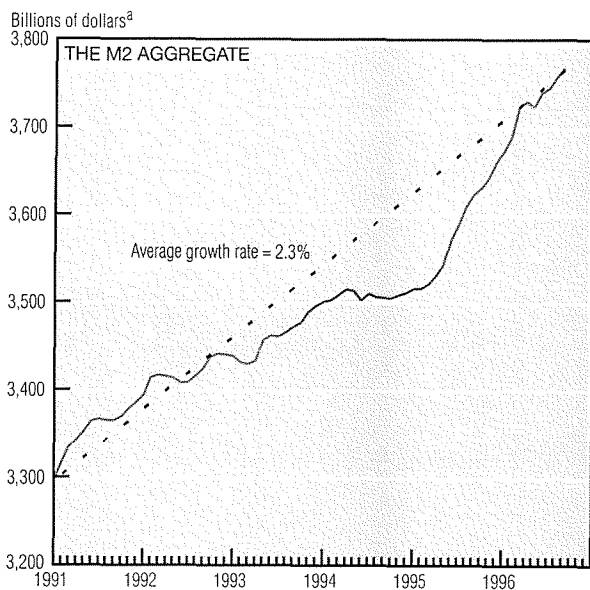
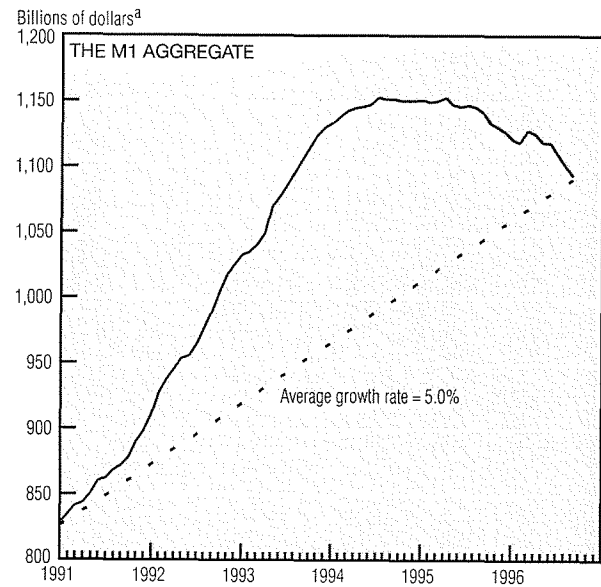
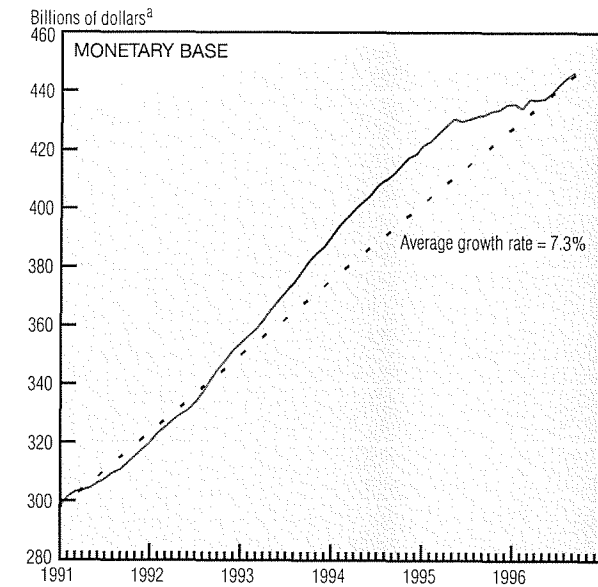


Monetary Policy



a. Seasonally adjusted.

b. Chain-weighted 1992 dollars.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; and Board of Governors of the Federal Reserve System.

Over the last five years, the narrower monetary aggregates have tended to grow more rapidly than their more broadly defined counterparts. In particular, the monetary base grew faster than M1, which in turn grew faster than M2. One contributor to this phenomenon may have been the rapid increase in the amount of currency held outside the U.S. over this period. Since currency represents a larger fraction of the monetary base than, say, M2, rapid growth in currency will have a more

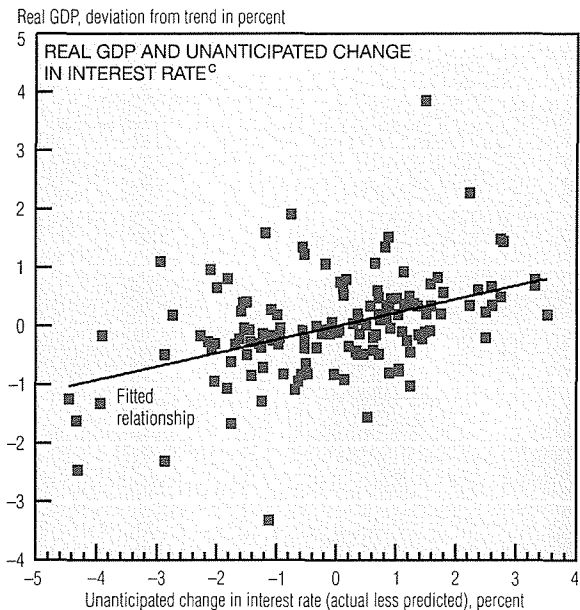
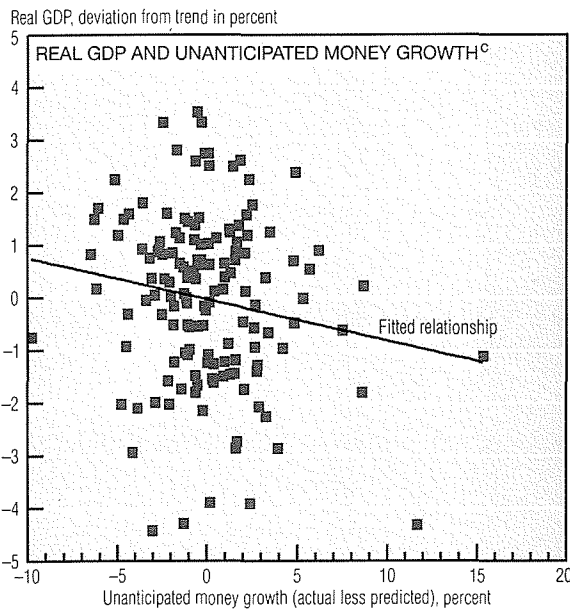
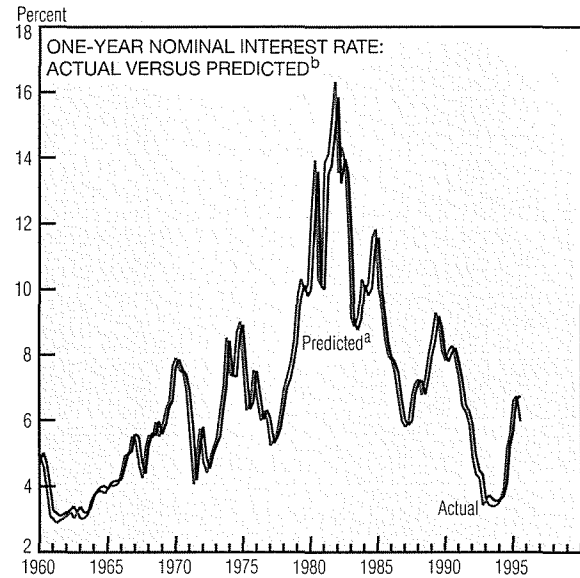
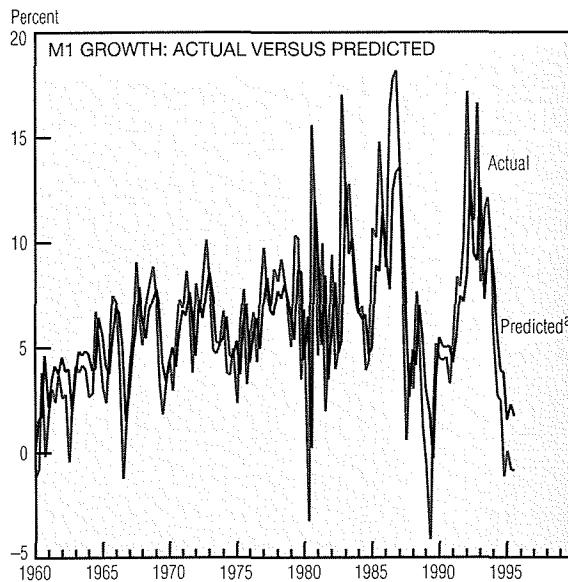
noticeable impact on the narrower aggregates.

In a growing economy, the amount of money in circulation must expand over time to facilitate the increasing number of transactions between buyers and sellers. In any given year, the total value of final goods and services transactions is measured by real GDP. Over long periods, therefore, we would expect the growth rate of the monetary aggregates to be at least as large as the growth rate of real GDP. However, if the monetary aggregates grow faster

than real GDP over sustained periods, then there is a danger of "too much money chasing too few goods." This can lead to an erosion in the purchasing power of money—otherwise known as inflation. Notice that the average annual compound growth rate of M2 over the last five years (2.3%) is very close to the average growth rate of real GDP (2.4%). This may help to explain the low levels of inflation experienced over this period.

(continued on next page)

Monetary Policy (cont.)



- a. Predicted values are constructed by regressing each variable on its own lagged value and a constant term over the entire sample period.
b. One-year nominal interest rate is the nominal one-year Treasury yield.
c. Real growth is measured in chain-weighted 1992 dollars, seasonally adjusted.

SOURCES: Board of Governors of the Federal Reserve System; and the Federal Reserve Bank of Cleveland.

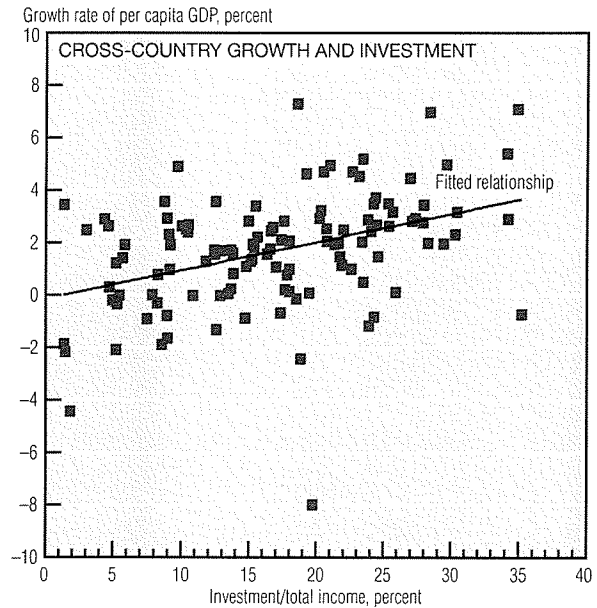
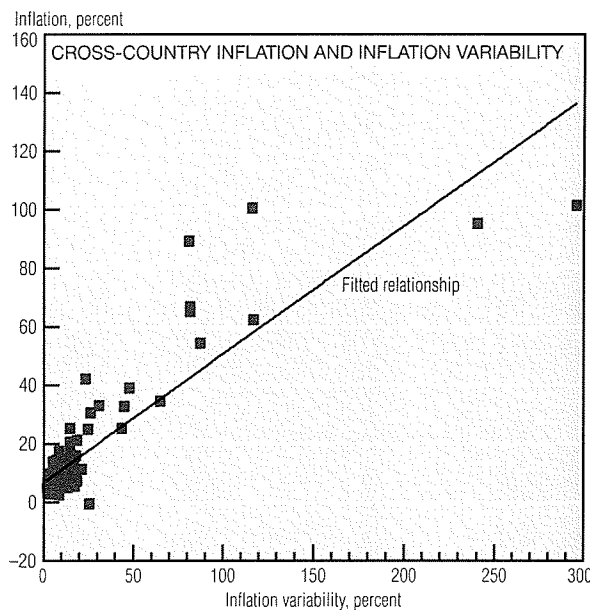
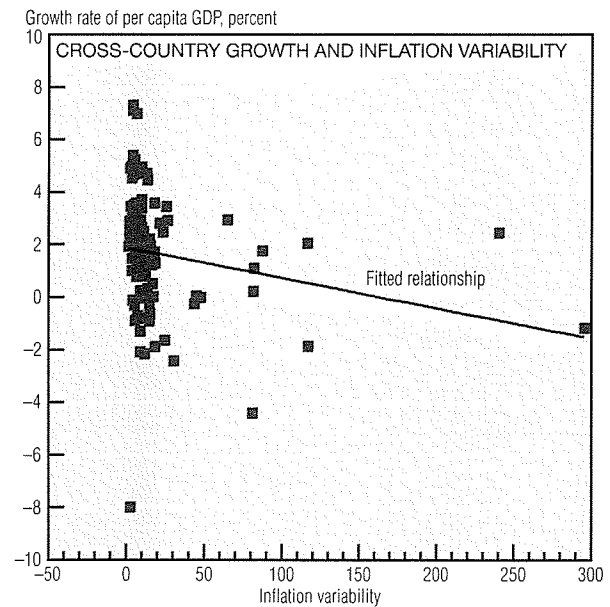
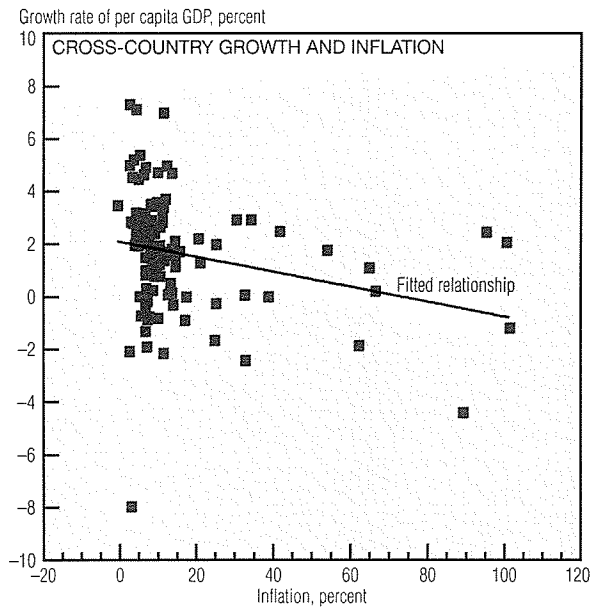
Monetary policy is thought to influence the level of real economic activity over the course of the business cycle. In this regard, two principal tools that the Federal Reserve has at its disposal are the growth rate of the money stock and the level of short-term nominal interest rates. By regressing the growth rate of the M1 money stock on its lagged value and a constant term, we can construct a simple one-quarter-ahead forecast for predicted M1 growth. A plot of predicted versus

actual M1 growth shows that large forecast errors occur whenever the actual series experiences a sudden upward or downward movement. These errors can be interpreted as a measure of "unanticipated" money growth. An analogous procedure can be used to construct a measure of unanticipated changes in the one-year nominal interest rate.

The deviation of real GDP from its trend line provides a measure of the business cycle component of real economic activity. A scatterplot

of this measure versus the level of unanticipated money growth reveals a weak negative relationship between the two variables, but one that is extremely imprecise. From this evidence, it does not appear that unanticipated money growth exerts an important influence on real economic activity. In contrast, there seems to be a positive relationship between the business cycle component of real GDP and unanticipated changes in the one-year
(continued on next page)

Monetary Policy (cont.)



NOTE: Data for Brazil were removed from the data set. Inflation variability is defined as the standard deviation of inflation within a given year, averaged over the time period of the sample.

SOURCE: Ruth Judson and Athanasios Orphanides, "Inflation, Volatility, and Growth," Board of Governors of the Federal Reserve System, Finance and Economics Discussion Series No. 96-19, May 1996, pp. 15-17.

nominal interest rate. However, this picture may simply reflect the Federal Reserve's response to cyclical changes in nominal rates. Thus, causation may run from real GDP to unanticipated changes in interest rates, rather than vice versa.

Some policymakers believe that high and variable rates of inflation are detrimental to economic growth. A cross-country comparison shows that very high levels of inflation tend to be associated with lower growth

rates. However, at lower levels of inflation, there does not seem to be much of a link between the two variables. A similar story applies to the relationship between growth and inflation variability. There appears to be a positive relationship between the level of inflation and its variability. One possible explanation is that governments which undertake ill-advised monetary policies that lead to high and variable rates of inflation are also more likely to enact fiscal and regulatory policies that are

harmful to growth. Fiscal policy can influence growth through channels such as tax rates, which affect people's incentives to work, save, invest, and take entrepreneurial risks. There is a positive relationship between the share of income devoted to capital investment and economic growth. This suggests that policies which encourage investment—such as tax policies that remove disincentives for private saving—will stimulate economic growth.