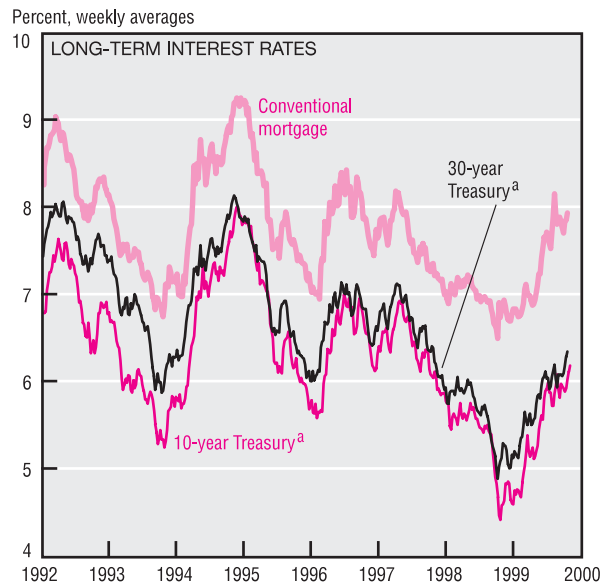
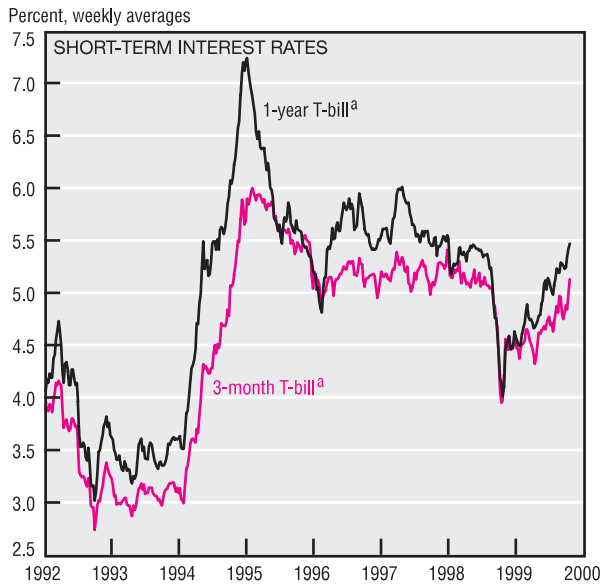
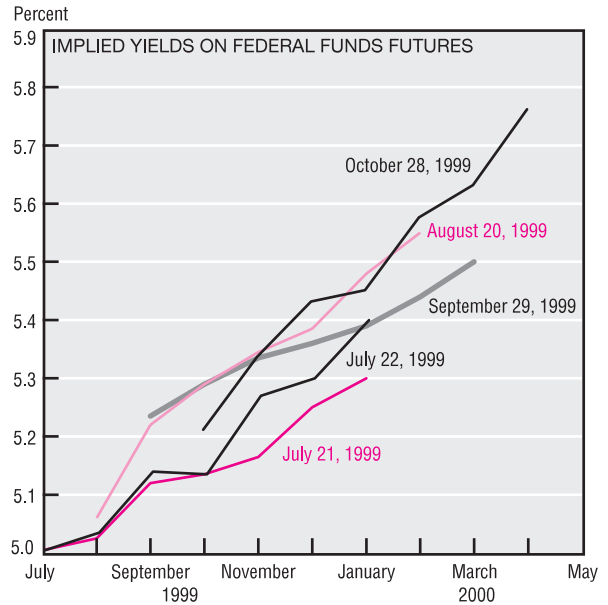
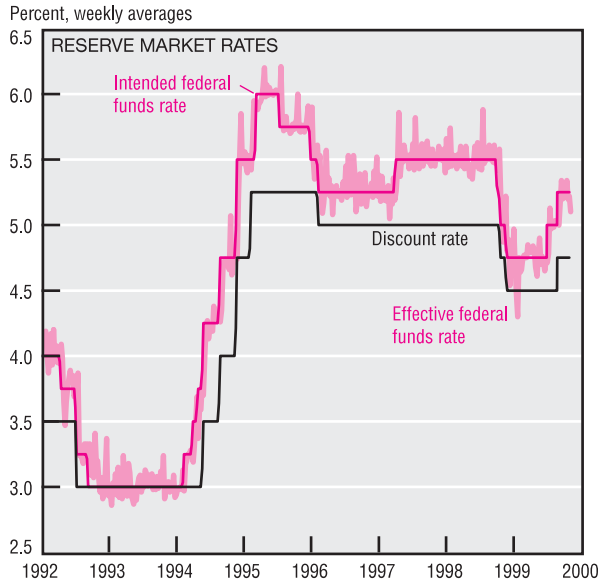


Monetary Policy



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

After raising the intended federal funds rate target 25 basis points in each of its two previous meetings, the Federal Open Market Committee (FOMC) left the rate unchanged at its October meeting. Nonetheless, many financial market participants expect the federal funds rate to increase further, exceeding the current 5.25% rate in the months ahead.

The yield on federal funds futures provides a measure of what market

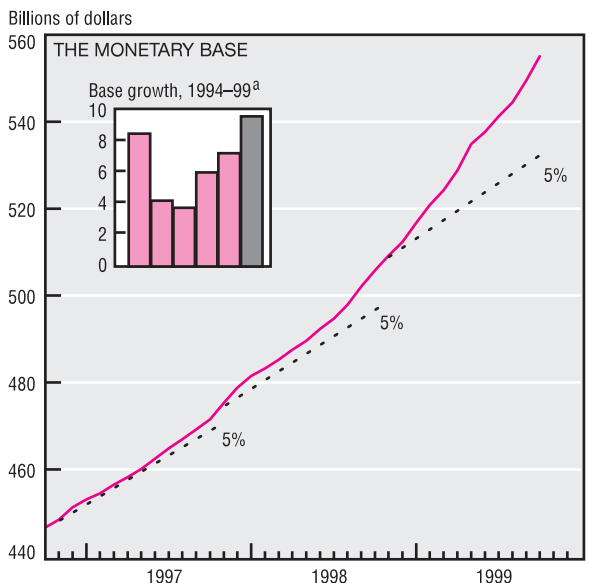
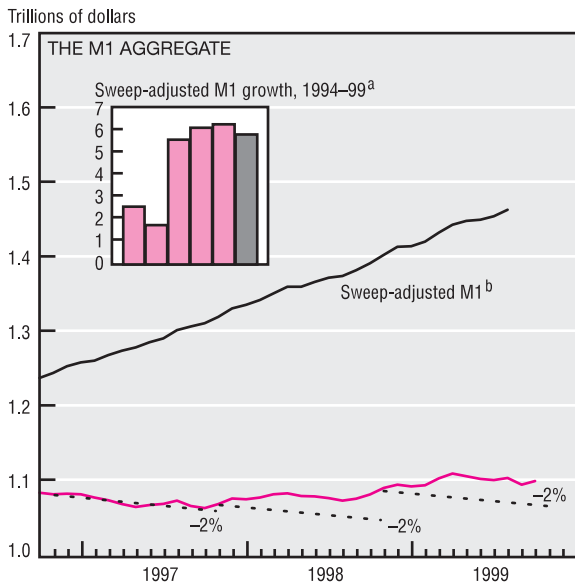
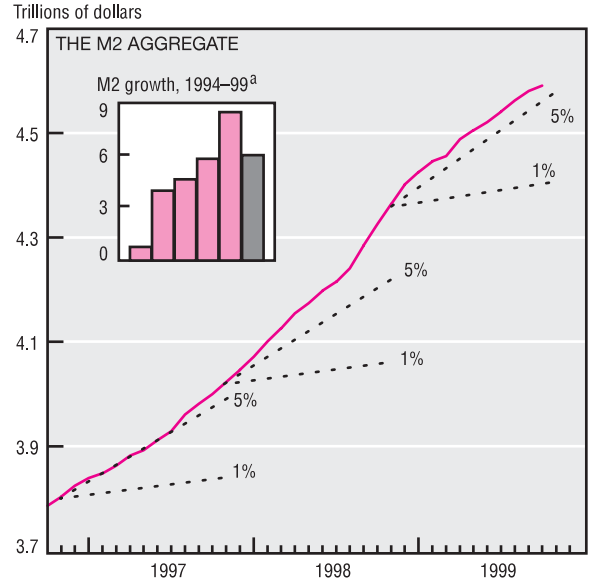
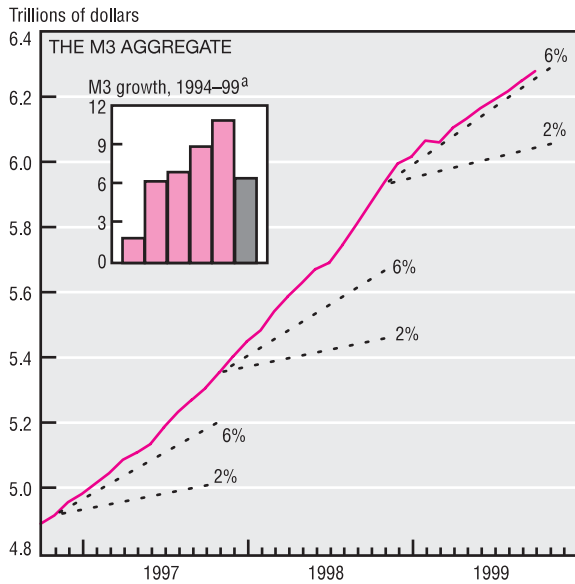
participants believe the average federal funds rate will be in the coming months. As of October 28, these futures were trading at 5.43% for December 1999 and 5.78% for April 2000. The April yield reflects an expected increase of roughly 50 basis points (bp). Market observers point to the U.S. economy's continued strength, as well as signs of accelerating inflation in September's Producer Price Index (13.4%) and

Consumer Price Index (5.1%), as contributing to expectations of further rate increases.

Interest rates, which have been rising throughout the year, continued to climb in October. The 3-month Treasury bill rate reached 5.13% for the week ending October 22, up 25 bp from four weeks earlier and up 55 bp from the beginning of the year. Similarly, the 1-year

(continued on next page)

Monetary Policy (cont.)



a. Growth rates are percentage rates calculated on a fourth-quarter over fourth-quarter basis. The 1999 growth rates for M2, M3, and the monetary base are calculated on a September over 1998:IVQ basis. The 1999 growth rate for sweep-adjusted M1 is calculated on an August over 1998:IVQ basis.
 b. Sweep-adjusted M1 includes an estimate of balances temporarily moved from M1 to non-M1 accounts.
 NOTE: Data are seasonally adjusted. Last plots for M1, M2, M3, and the monetary base are September 1999. Last plot for sweep-adjusted M1 is August 1999. Dotted lines for M2 and M3 are FOMC-determined provisional ranges. All other dotted lines represent growth in levels and are for reference only.
 SOURCE: Board of Governors of the Federal Reserve System.

Treasury-bill rate rose to 5.47%, up 24 bp from a month earlier and 88 bp from the beginning of the year.

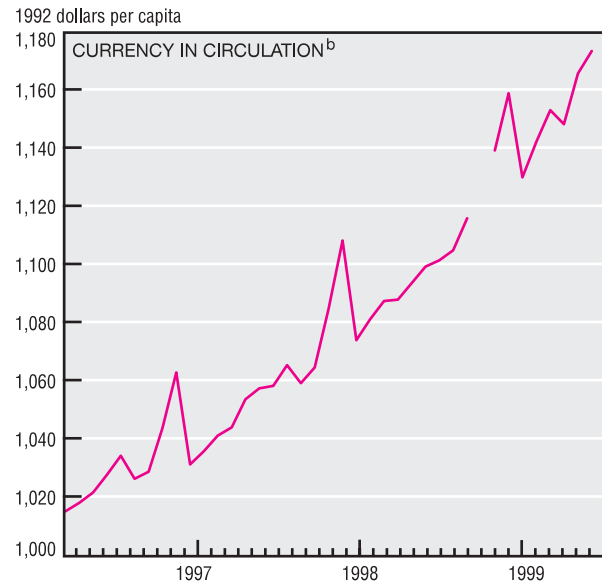
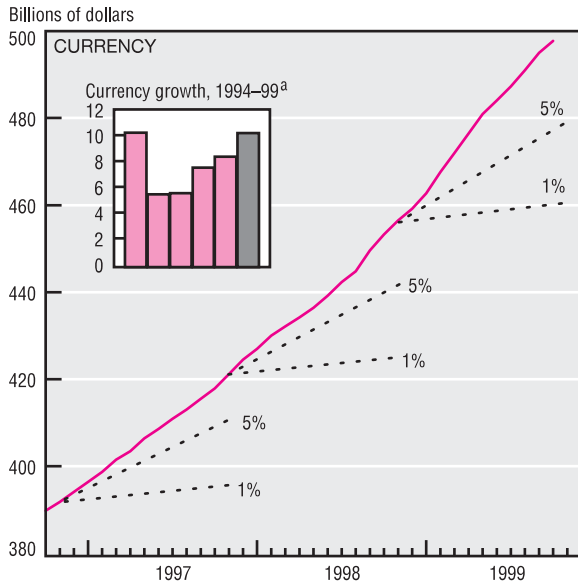
Long-term rates have also continued to rise. The 10-year and 30-year Treasury constant-maturity rates now stand at 6.18% and 6.34%, up 30 and 28 bp from four weeks earlier and 148 and 122 bp from the beginning of the year. Constant-maturity rates of longer than one year all have increased by more than 100 bp since last December.

In light of the sizeable increase in market interest rates this year, the 50 bp increase in the federal funds rate over the summer may seem relatively modest. Although any increase in the intended federal funds rate is often thought to represent a "tightening" of monetary policy, such simple analysis ignores the complexities inherent in conducting monetary policy in a dynamic economy where factors are constantly changing for reasons unrelated to Federal Reserve policy.

Turning to money, the monetary aggregates continue to increase robustly, at least relative to the provisional ranges provided by the FOMC for the broader aggregates. While growth in M3 and M2 is slower this year than last, both measures remain above their provisional ranges. Growth in sweep-adjusted M1 and the monetary base also continues at a vigorous pace.

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Monetary Policy (cont.)



Bills in Circulation, September 1999

Denomination	Total	Percent of value of all bills	Percent of number of bills
\$1	\$6,581,059,983	1.4	36.3
\$2	\$1,142,057,766	0.2	3.1
\$5	\$7,540,869,430	1.6	8.3
\$10	\$13,421,048,600	2.9	7.4
\$20	\$84,376,713,040	18.4	23.2
\$50	\$47,388,748,450	10.3	5.2
\$100	\$298,359,410,900	65.0	16.4
\$500	\$144,307,000	0.1	0.1
\$1,000	\$167,307,000	0.1	0.1
\$5,000	\$1,755,000	0.1	0.1
\$10,000	\$3,450,000	0.1	0.1
Total currency	\$459,126,498,260	100	100

a. Growth rates are percentage rates calculated on a fourth-quarter over fourth-quarter basis. The 1999 growth rates for currency are calculated on a September over 1998:IVQ basis.

b. Break in line indicates missing data.

NOTE: Currency data are seasonally adjusted. Last plot for currency is September 1999. Dotted lines for currency represent growth in levels and are for reference only. Currency refers to notes outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions.

SOURCES: Board of Governors of the Federal Reserve System; and U.S. Department of the Treasury, Financial Management Service.

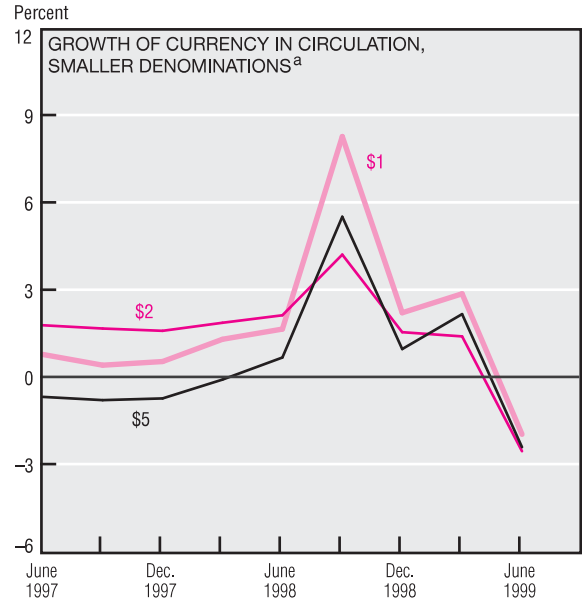
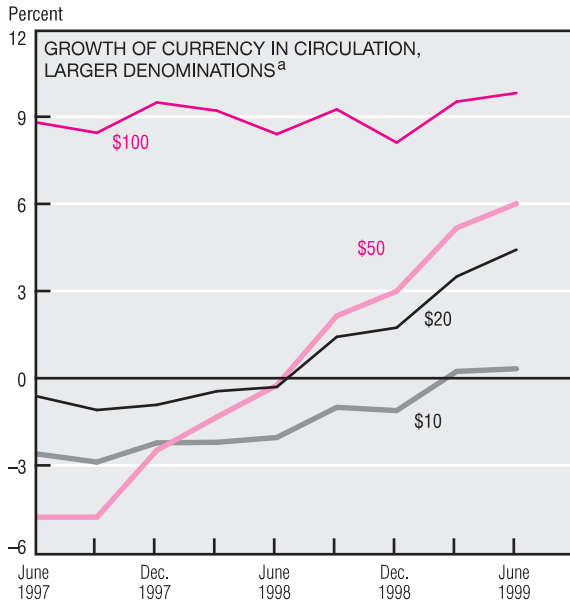
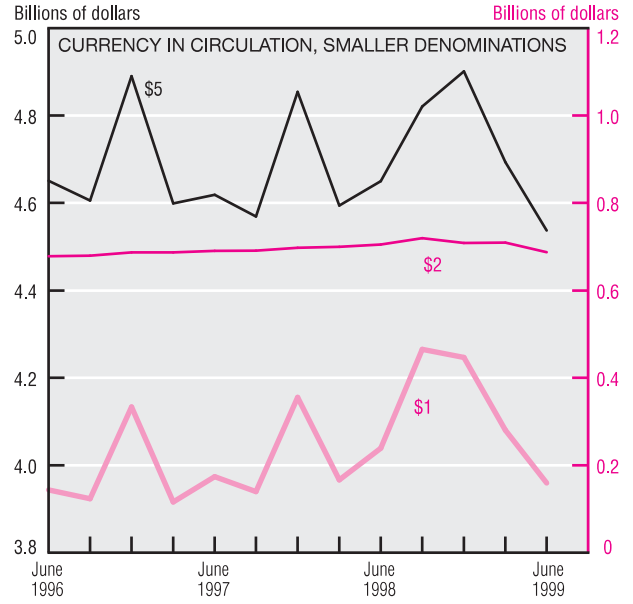
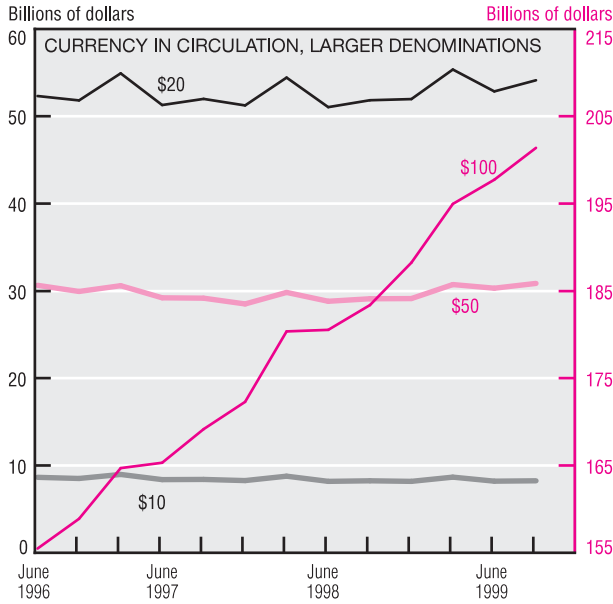
Not surprisingly, growth in the monetary base is driven by growth in currency, which makes up almost 90% of the base. Moreover, currency holdings have a distinct seasonal pattern reflecting the year-end holiday shopping season. Banks' customers make currency withdrawals and banks replenish their currency inventories by making currency withdrawals from their accounts at the

Federal Reserve Banks. The Reserve Banks, in turn, maintain sufficient inventories of both previously circulated and new, uncirculated currency to meet all demands. Whether there will be much additional demand this year created by Y2K concerns is not clear, but the Reserve Banks have taken extraordinary precautions to be able to supply almost any conceivable demands.

We would expect part of normal currency growth to result from inflation and population growth. Beyond that, however, it is curious to note that real currency per capita has been increasing substantially. Average real cash holdings per capita now exceed \$1,160 per person.

But how can this number be so large, particularly in light of survey
(continued on next page)

Monetary Policy



a. Growth rates are percentage changes from four previous quarters.
SOURCE: U.S. Department of the Treasury, Financial Management Service.

data indicating that the average American holds roughly \$100 in cash? Part of the explanation is that many foreign countries use the dollar as a store of value and a medium of exchange. An estimated one-half to two-thirds of the total currency stock is held abroad, where demand for U.S. currency is growing faster than domestic demand. This heavy foreign demand is important in analyzing currency growth.

How do total currency holdings break down into bills of different denominations, and which denominations contribute most to overall currency growth? Almost two-thirds of the value of currency outstanding is in \$100 dollar bills. Furthermore, there are twice as many \$100 bills outstanding as there are \$5 or \$10 bills. Again, this fact reflects foreign demand, which comes mainly in the form of demand for large-denomination bills, and the fact that

no denomination higher than \$100 has been printed since 1946.

So it is not surprising that growth in \$100 bills is driving growth in total currency outstanding. However, while growth in \$100 bills has been consistently strong over the past three years, growth in \$50, \$20, and \$10 bills has been increasing. Growth in \$5, \$2, and \$1 bills spiked in the third quarter of 1998, but has fallen off again in 1999.