Treasury and Federal Reserve Foreign Exchange Operations

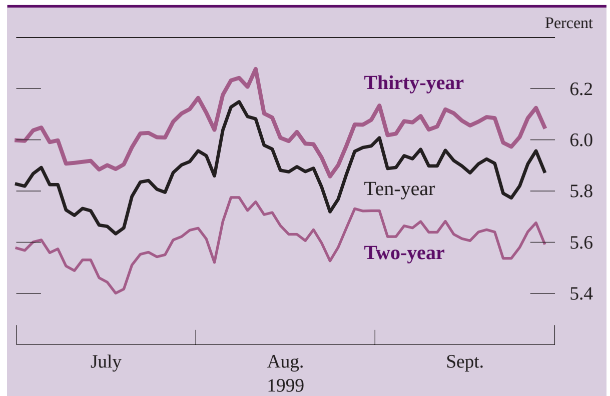
This quarterly report describes U.S. Treasury and System foreign exchange operations for the period from July through September 1999. It was presented by Peter R. Fisher, Executive Vice President, Federal Reserve Bank of New York, and Manager, System Open Market Account. Deborah L. Leonard was primarily responsible for preparation of the report.

During the third quarter of 1999, the dollar depreciated 12.1 percent against the yen and 3.2 percent against the euro. Dollar movements mainly reflected prospects for more balanced global growth, particularly among the major economies. The yen's substantial appreciation during the quarter against both the dollar and the euro was accompanied by sizable portfolio flows as international investors reassessed views of expected risk-adjusted returns in global capital markets. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

Improvement in the Outlook for Global Economic Growth

The U.S. economy continued to show buoyant activity in the third quarter, although its pace of growth appeared to slow. Expectations for aggressive monetary policy tightening in the United States waned in the initial weeks of the quarter after the Federal Open Market Committee (FOMC) raised the federal funds target rate from 4.75 to 5.00 percent and adopted a neutral policy stance on June 30. Many market participants posited that benign price data and forecasts of slower growth made further near-term policy changes less likely. Nevertheless, yields on U.S. Treasury securities rose to fifteen-month highs after Chairman Greenspan warned in his July 22 Humphrey–Hawkins testimony that the FOMC would act ''promptly and forcefully'' should inflationary pressures emerge. Rising commodity prices, particularly for oil, also raised some concerns about the outlook for inflation. The subsequent release of lower-than-expected second-quarter GDP growth of 2.3 percent on July 29 and subdued consumer and

1. Yields on U.S. Treasury securities, 1999:Q3

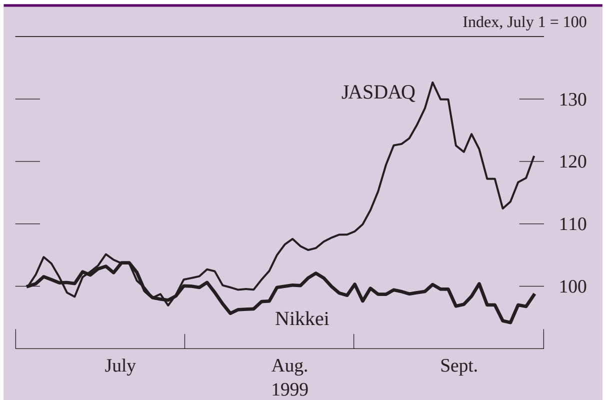


NOTE. The data are daily.
SOURCE. Bloomberg L.P.

producer price reports shortly after that date supported the view that further tightening might not be imminent, even though labor markets remained taut and the manufacturing sector remained strong. The FOMC raised the federal funds target rate 25 basis points, to 5.25 percent on August 24, with an accompanying statement that the two recent rate increases should ''markedly diminish the risk of rising inflation going forward.'' A weaker-than-expected report on nonfarm payrolls on September 3 and moderate consumer price data on September 15 bolstered this sentiment.

Signs of ongoing economic stabilization in Japan were reflected in data releases throughout the third quarter. Strong industrial production figures released on July 29 showing a 3.0 percent rise in output for June were followed on August 13 by a slight upward revision to the already surprisingly strong reading for first-quarter GDP growth, from 1.9 percent to 2.0 percent over the fourth quarter of 1998. Second-quarter GDP data released on September 9, also surprisingly strong, showed growth of 0.2 percent compared with market expectations for a contraction of 0.3 percent. Several market participants cited gains in Japanese equities as a reflection of growing confidence in Japan's recovery, as the small-capitalization JASDAQ index soared 26 percent during the quarter; however, the Nikkei index traded in a narrower range

2. Japanese equity prices, 1999:Q3



NOTE. The data are daily.
SOURCE. Bloomberg L.P.

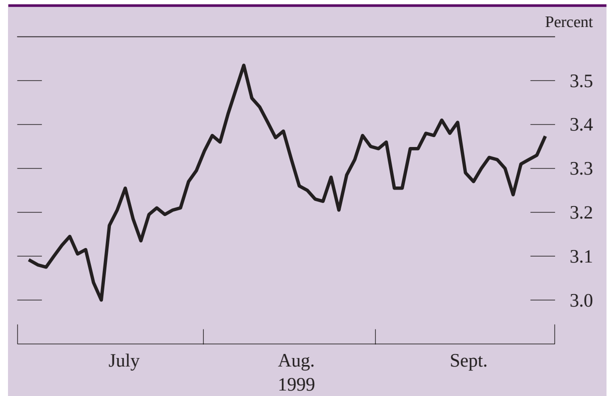
amid the uncertain effect of a stronger yen on shares of large-capitalization exporters.

Improving economic indicators across Europe provided mounting evidence of a cyclical recovery in the euro area. Throughout the quarter, many private and multilateral institutions revised upward their forecasts of economic growth. Data releases early in the quarter were inconclusive, but a marked improvement in surveys of German and French business sentiment and manufacturing orders later in the period led to growing expectations for an upswing in industrial activity across Europe. On July 15, European Central Bank (ECB) President Duisenberg suggested that a "[tightening] bias was gradually creeping" into the ECB's policy considerations. Toward the end of the quarter, expectations for a near-term tightening solidified as producer prices rose across Europe, surveys of purchasing managers indicated higher prices paid for inputs, and senior ECB officials highlighted the risks of inflation in their public comments.

EXPECTATIONS FOR MONETARY POLICY ACTIONS SHIFT

Fundamental economic developments and comments from public officials in the United States, Japan, and Europe contributed to changing expectations for monetary policy actions throughout the quarter. In the United States, the FOMC's choice of a symmetric policy outlook after monetary policy tightenings on June 30 and again on August 24 encouraged market participants to carefully evaluate new information for potential signs of near-term policy direction. Early in the quarter, the implied yield on the December federal funds futures contract fell 16 basis points, as

3. Implied yield on March 2000 euribor futures contract, 1999:Q3

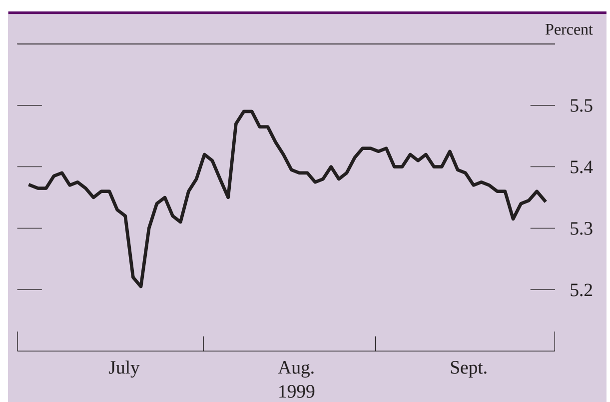


NOTE. The data are daily. The euribor rate is the European interbank offered rate for euro deposits.
SOURCE. Bloomberg L.P.

market participants responded to the neutral bias, and then rose 28 basis points after Chairman Greenspan's Humphrey–Hawkins testimony. However, the implied yield then fell 14 basis points from its period high of 5.49 percent, to end the quarter relatively unchanged. In Europe, forecasts of stronger growth, rising inflation, and comments from ECB officials contributed to the view that the balance of risks implied a tightening of European monetary policy sooner rather than later.

In Japan, the yield on Japan's ten-year benchmark government bond rose as high as 2.00 percent. Stronger economic data and Bank of Japan Governor Hayami's June 30 testimony that Japan's zero interest rate policy was "extraordinary," led some market participants to expect that the Bank of Japan might

4. Implied yield on December 1999 federal funds futures contract, 1999:Q3



NOTE. The data are daily.
SOURCE. Bloomberg L.P.

5. Implied yield on March 2000 Euroyen futures contract, 1999:Q3

NOTE. The data are daily.
SOURCE. Bloomberg L.P.

abandon its loose monetary policy sooner than previously expected. Ongoing discussion about additional fiscal stimulus measures further weighed on bond prices. However, the implied yield on the December euroyen futures contract fell steadily, from 0.54 percent to 0.18 percent, amid subsequent reassurances that the current zero interest rate policy would remain intact until signs of deflation had dissipated. In addition, the yen's persistent strength and domestic and international political pressures directed attention to the possibility that the Bank of Japan would provide further monetary stimulus to the economy.

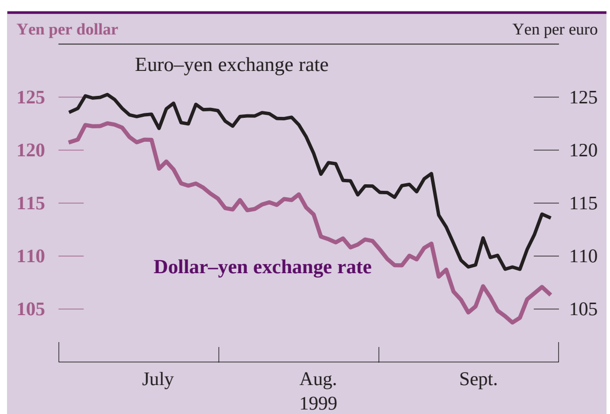
Throughout September, market discussion focused on calls by some observers in Japan and in the markets for the Bank of Japan to adopt ''quantitative easing'' measures, including unsterilized intervention, to invigorate Japan's economy. At its September 21 meeting, the decision by the Bank of Japan's Policy Board to maintain its zero interest rate policy was accompanied by a statement emphasizing the central bank's belief that it was already supplying ample liquidity to the money market. The Bank of Japan further stated that the ''foreign exchange rate in itself is not a direct objective of monetary policy,'' but also that the Bank ''considers it is important to carefully monitor the development of the foreign exchange rate from the viewpoint of how it affects the economy and prices.'' Market participants perceived a greater willingness by the Bank of Japan to consider additional stimulus measures after the September 25 meeting of the Group of Seven finance ministers and central bank heads, who expressed shared concern with Japan about the potential effect of the yen's appreciation. After the meeting, Bank of Japan Governor Hayami issued a statement that the Bank shared the Japanese government's concern about yen appreciation; that it was prepared to respond to developments in the economy as well as in the financial markets, including the foreign exchange market; and that it was exploring ways to ensure that liquidity further permeated the money markets in Japan.

Domination of Currency Movements by Portfolio Flows

A reassessment of economic fundamentals and changing policy expectations among the Group of Three was also reflected in portfolio flows during the quarter, particularly with respect to the yen. The yen steadily appreciated to a three-and-a-half-year low of ¥103.72 against the dollar and an all-time low of ¥108.70 against the euro on September 23 and 24 respectively. Shifts in portfolio flows in favor of Japanese assets took place as Japanese and foreign investors re-evaluated their perceived risk-adjusted returns on capital in global markets.

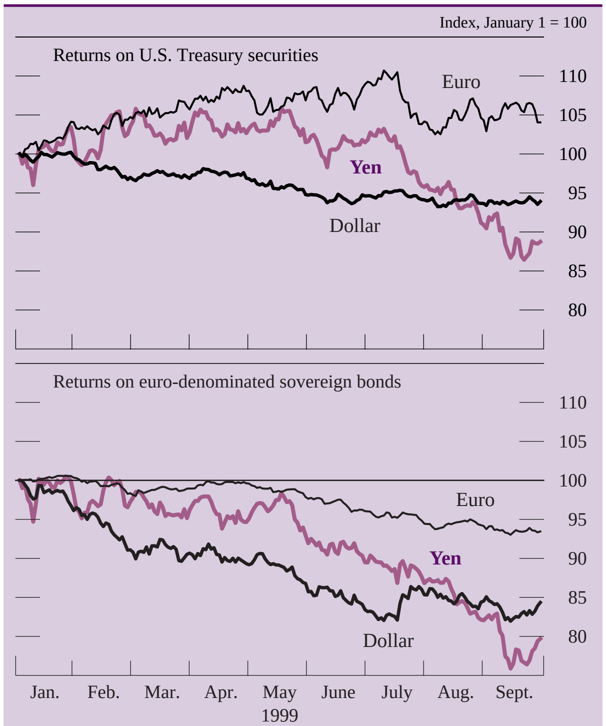
For Japanese investors, the yen's rise substantially reduced the value of unhedged foreign assets. In yen terms, the price return on an index of euro-denominated sovereign bonds, which already had fallen 11 percent from the beginning of 1999 to July 1, fell as much as 24 percent toward the end of September. Year-to-date, yen-adjusted price returns on an index of U.S. Treasury notes and bonds had gained 3 percent as the third quarter began but fell 12 percent by September 30. Although the U.S. S&P 500 equity index declined 6.6 percent in the third quarter, it fell approximately 18 percent in yen terms. Such losses reportedly encouraged Japanese investors to hedge or liquidate overseas positions

6. The dollar and the euro against the Japanese yen, 1999:Q3



NOTE. The data are daily.
SOURCE. Reuters.

7. Currency-adjusted price returns on U.S. and European government bond indexes, January 1999–September 1999



NOTE. The data are daily.
SOURCE. Merrill Lynch.

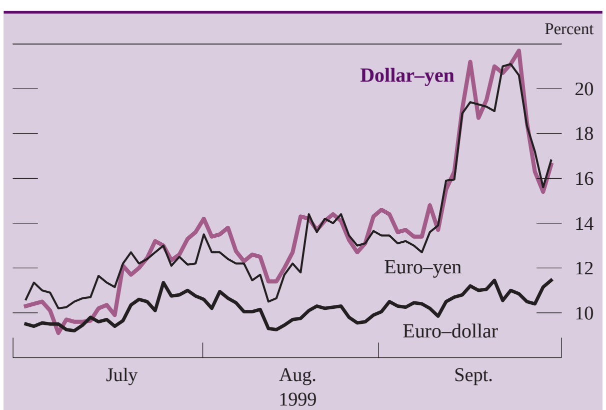
ahead of Japan's September 30 fiscal half-year-end book closings, thereby accelerating the yen's rise. Improved Japanese growth prospects also encouraged international investors to increase the share of Japanese equities in their portfolios. Such portfolio shifts were further encouraged by concerns about growing external imbalances, persistent questions about valuation levels for U.S. stocks, and prospects for higher interest rates in the United States and Europe.

On several occasions during the quarter, officials from the Japanese Ministry of Finance publicly stated that the Bank of Japan had intervened in the foreign exchange markets, buying dollars and selling yen. Although Japanese officials repeatedly expressed concern about a "premature" strengthening of the yen before economic recovery had been firmly established, some market participants noted that the interventions appeared to attempt to smooth the rate of the yen's appreciation rather than to roll it back. Nevertheless, uncertainty regarding Japan's foreign exchange policy objectives contributed to a sharp rise in market volatility. In the options market, one-month implied volatility for the dollar–yen exchange rate soared from around 10 percent to as high as 22 percent toward the end of the quarter, reflecting greater uncertainty among market participants about the yen's trading range.

Movements in the euro's value against the yen were also largely influenced by portfolio flows, as Japanese investors hedged or reduced their exposure to euro-denominated assets. In contrast to the dollar's steady decline against the yen, movements in the dollar–euro exchange rate reflected changing expectations regarding relative economic growth and interest rate prospects in the United States and Europe. After trading to a low of $1.0136 early in the quarter, the euro rebounded sharply in July in response to the rising momentum of European growth, President Duisenberg's intimation that a tightening bias was "creeping" into ECB policy considerations, and increased expectations of higher interest rates in Europe.

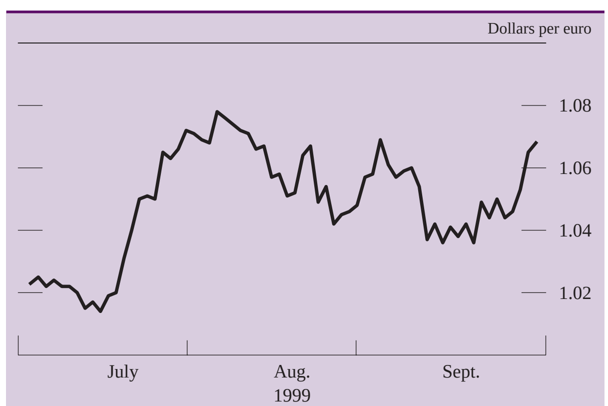
The euro reversed some of its gains after benign U.S. price data supported a short-lived rally in U.S.

8. Volatility implied by one-month option prices, 1999:Q3



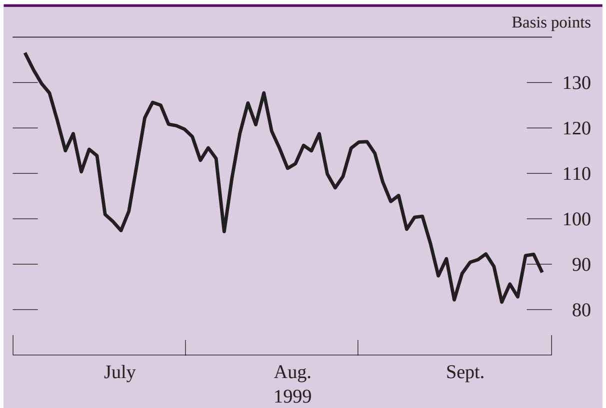
NOTE. The data are daily.
SOURCE. Reuters.

9. The euro against the dollar, 1999:Q3



NOTE. The data are daily.
SOURCE. Bloomberg L.P.

10. Spread between ten-year U.S. Treasury and German government bond yields, 1999:Q3



NOTE. The data are daily.
SOURCE. Bloomberg L.P.

asset markets in August but subsequently rose in response to European price and manufacturing data that was interpreted as increasing the possibility of near-term interest rate hikes. The euro again pared its gains at the beginning of September, when U.S. producer price and employment data made additional interest rate increases in the United States appear less imminent, and after Germany's ruling Social Democratic Party suffered widespread losses in regional elections. However, the European currency again rose at the end of the quarter, after strong U.S. retail sales and trade data showing a rising deficit weighed heavily on U.S. equity markets. More generally, the euro's appreciation against the dollar this quarter reflected the broader trend of narrowing U.S. and European yield spreads. Euro-area sovereign bonds underperformed U.S. Treasury securities, with the spread between ten-year U.S. and German government bond yields narrowing 46 basis points over the quarter and reaching a low of 82 basis points on September 23, its lowest level since January.

TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

The U.S. monetary authorities did not undertake any intervention operations during the quarter. At the end of the quarter, the current values of reserve holdings of euros and Japanese yen totaled $16.1 billion for the Federal Reserve System and $16.1 billion for the Exchange Stabilization Fund.[1] The U.S. monetary authorities invest all of their foreign currency balances in a variety of instruments that yield market-related rates of return and have a high degree of liquidity and credit quality. To the greatest extent practicable, these investments are split evenly between the Federal Reserve System and the Exchange Stabilization Fund.

A portion of the balances is invested in German and Japanese government securities held directly or under repurchase agreement. Government securities held under repurchase agreement are arranged either through transactions executed directly in the market or through agreements with official institutions. Foreign currency reserves are also invested in deposits at the Bank for International Settlements and in facilities at other official institutions. As of September 30, direct holdings of foreign government securities totaled $9.1 billion—split evenly between the two authorities. Foreign government securities held under repurchase agreement totaled $13.2 billion at the end of the quarter and were also split evenly between the two authorities. □

1. Amounts are based on carrying value and September 30 exchange rates.

1. Foreign currency holdings of U.S. monetary authorities based on current exchange rates, 1999:Q3

Millions of dollars

Item	Balance, June 30, 1999	Quarterly changes in balances, by source					Balance, Sept. 30, 1999
		Net purchases and sales[1]	Effect of sales[2]	Investment income	Currency valuation adjustments[3]	Interest accrual (net) and other	
FEDERAL RESERVE SYSTEM OPEN MARKET ACCOUNT (SOMA)							
EMU euro	6,943.7	0.0	0.0	53.0	225.1	0.0	7,221.8
Japanese yen	7,786.9	0.0	0.0	2.0	1,043.0	0.0	8,831.9
Total	14,730.6	0.0	0.0	55.0	1,268.1	0.0	16,053.7
Interest receivables[4]	68.4	. . .	. . .	. . .	. . .	–17.3	51.1
Other cash flow from investments[5]	. . .	. . .	. . .	. . .	. . .	13.4	13.4
Total	**14,799.0**	**0.0**	**0.0**	**55.0**	**1,268.1**	**–3.9**	**16,118.2**
U.S. TREASURY EXCHANGE STABILIZATION FUND (ESF)							
EMU euro	6,944.6	0.0	0.0	49.3	225.2	0.0	7,219.1
Japanese yen	7,787.0	0.0	0.0	2.0	1,042.8	0.0	8,831.8
Total	14,731.6	0.0	0.0	51.3	1,268.0	0.0	16,050.9
Interest receivables[4]	45.5	. . .	. . .	. . .	. . .	20.7	66.2
Other cash flow from investments[5]	. . .	. . .	. . .	. . .	. . .	13.3	13.3
Total	**14,777.1**	**0.0**	**0.0**	**51.3**	**1,268.0**	**34.0**	**16,130.4**

NOTE. In this and subsequent tables, components may not sum to totals because of rounding.

1. Purchases and sales for the purpose of this table include foreign currency sales and purchases related to official activity, swap drawings and repayments, and warehousing.

2. This figure is calculated using marked-to-market exchange rates; it represents the difference between the sale exchange rate and the most recent revaluation exchange rate. Realized profits and losses on sales of foreign currencies, computed as the difference between the historic cost-of-acquisition exchange rate and the sale exchange rate, are reflected in table 2.

3. Foreign currency balances are marked-to-market monthly at month-end exchange rates.

4. Interest receivables for the ESF are revalued at month-end exchange rates. Interest receivables for the Federal Reserve System are carried at average cost of acquisition and are not marked to market until interest is paid. Interest receivables for the Federal Reserve System are net of unearned interest collected.

5. Values for cash flow differences from payment and collection of funds between quarters.

. . . Not applicable.

2. Net profits or losses (–) on U.S. Treasury and Federal Reserve foreign exchange operations, based on historical cost-of-acquisition exchange rates, 1999:Q3

Millions of dollars

Period and item	Federal Reserve System Open Market Account	U.S. Treasury Exchange Stabilization Fund
Valuation profits and losses on outstanding assets and liabilities, June 30, 1999		
EMU euro	–345.0	–562.0
Japanese yen	746.3	958.5
Total	**401.3**	**396.5**
Realized profits and losses from foreign currency sales, June 30, 1999–Sept. 30, 1999		
EMU euro	0.0	0.0
Japanese yen	0.0	0.0
Total	**0.0**	**0.0**
Valuation profits and losses on outstanding assets and liabilities, Sept. 30, 1999		
EMU euro	–119.9	–336.9
Japanese yen	1,775.8	1,988.0
Total	**1,655.9**	**1,651.1**

3. Currency arrangements, September 30, 1999

Millions of dollars

Institution	Amount of facility	Outstanding, Sept. 30, 1999
	Federal Reserve reciprocal currency arrangements	
Bank of Canada	2,000	0.0
Bank of Mexico	3,000	0.0
Total	**5,000**	**0.0**
	U.S. Treasury Exchange Stabilization Fund currency arrangements	
Bank of Mexico	3,000	0.0
Total	**3,000**	**0.0**