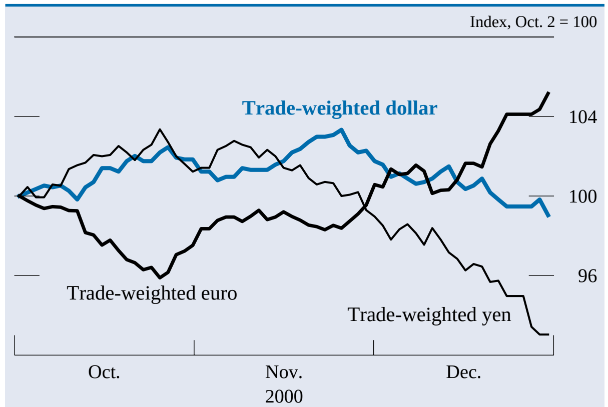
Treasury and Federal Reserve Foreign Exchange Operations

This report, presented by Peter R. Fisher, Executive Vice President, Federal Reserve Bank of New York, and Manager, System Open Market Account, describes the foreign exchange operations of the U.S. Department of the Treasury and the Federal Reserve System for the period from October 2000 through December 2000. Ryan Faulkner was primarily responsible for preparing the report.

During the fourth quarter of 2000, the dollar appreciated 5.7 percent against the yen and depreciated 6.4 percent against the euro. On a trade-weighted basis, the dollar ended the quarter 1.0 percent weaker against an index of major currencies. Movements in the major currency pairs were largely influenced by changes in market expectations for economic growth in the United States, Europe, and Japan. Questions about the pace of Japan's economic recovery pressured the yen against the major currencies, while the dollar declined against the euro in December amid signs of slower U.S. growth. U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

1. Trade-weighted G-3 currencies, 2000:Q4



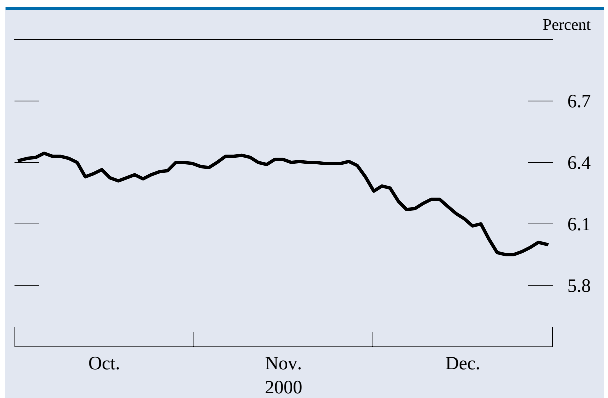
Note. In this and the charts that follow, the data are for business days except as noted.
Source. Bloomberg L.P. and the Bank of England.

Market Reaction to Changing Global Economic Growth Trends

During the fourth quarter, releases of economic data in the United States indicated continued low inflation and a slowdown in the pace of U.S. economic growth. Earlier in the quarter, market participants had expected a steady near-term U.S. interest rate policy, given the price pressures emanating from high energy prices and tight U.S. labor markets. On November 15, the Federal Open Market Committee (FOMC) left the target federal funds rate unchanged at 6.5 percent and maintained its statement that the balance of risks was weighted toward inflationary pressures.

By early December, however, there was a sharp downward shift in U.S. interest rate expectations, prompted by (1) increasing signs of slower U.S. growth, (2) comments by Federal Reserve Chairman Alan Greenspan that were interpreted as suggesting the possibility of lower rates, and (3) weaker financial market conditions. Among the economic data released during this period were weaker-than-expected third-quarter GDP data (advance release), November consumer confidence and National Association of Purchasing Managers (NAPM) surveys, October durable goods data, and November retail sales figures. As expectations for more moderate growth solidified, many market participants also continued to lower their U.S. earn-

2. Yield implied by the March federal funds futures contract, 2000:Q4



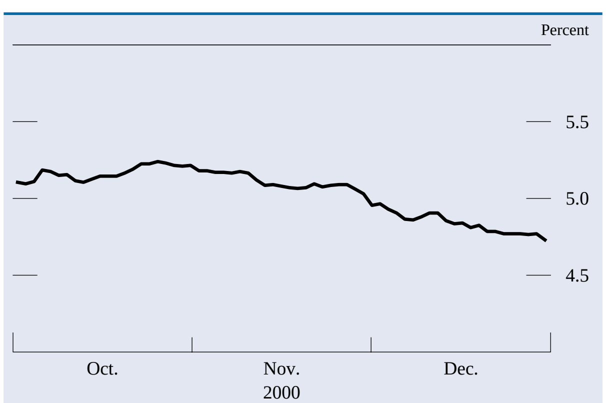
Source. Bloomberg L.P.

ings forecasts. During the fourth quarter, the S&P 500 and Nasdaq Composite equity indexes, on balance, fell 8.1 percent and 32.7 percent, respectively, with some of their sharpest daily losses occurring in December.

From November 28 to the end of the quarter, the implied yield on the March federal funds futures contract declined 40 basis points to 6.0 percent. Over the same period, the yields on the two-year Treasury note and thirty-year Treasury bond fell 76 and 24 basis points, respectively, leading the two- to thirty-year coupon curve to return to a positive spread for the first time since January 2000. On December 19, the FOMC left its target for the federal funds rate unchanged, while moving its assessment of the balance of risks away from inflationary pressures and to one "weighted toward conditions that may generate economic weakness."

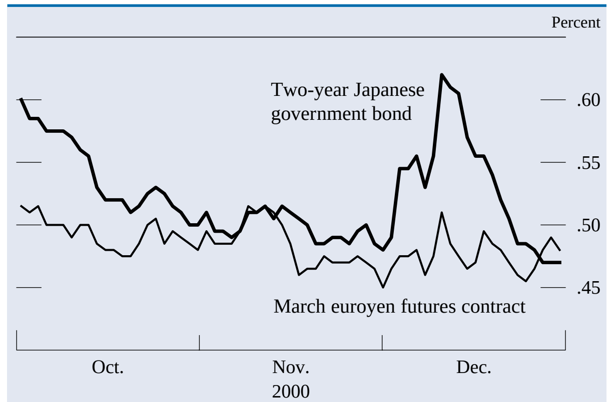
In Europe, expectations for further interest rate increases moderated over the period, in response to signs of slower euro-area growth, the recovery of the euro's exchange value, and a decline in oil prices. At the outset of the quarter, on October 5, the European Central Bank (ECB) raised its minimum bid on its refinancing operations 25 basis points to 4.75 percent. In the press conference that followed the rate announcement, ECB President Duisenberg explained that the rate hike was aimed at containing inflationary pressures "stemming from oil prices and the foreign exchange rate of the euro." After this decision, market participants were divided over the possibility of additional rate hikes by the ECB. German and Italian business confidence surveys for September and October suggested a modest decline in industrial production, but euro-area aggregate inflation and money supply reports over the same period continued to show modest upward pressure on prices. In addition,

3. Yield implied by the March euribor contract, 2000:Q4



Source. Bloomberg L.P.

4. Yields on short-term Japanese fixed-income securities, 2000:Q4



Source. Bloomberg L.P.

the euro remained at relatively low levels against other major currencies, and oil prices continued to climb.

During the second half of the quarter, the implied yield on the three-month March euribor futures contract fell 35 basis points to 4.73 percent, coincident with the appreciation of the euro against most major currencies and the decline in oil prices that began in late November. Market participants also reduced their expectations for additional ECB tightening as signs of a modest slowdown in euro-area industrial activity emerged. The November industrial confidence survey for the euro area declined for the first time in three months to levels last seen in May 2000.

In Japan, reports on economic activity during the quarter increased speculation that Japan's economic recovery was slowing. A report by the Economic Planning Agency on November 10 and the release of Japan's third-quarter GDP report on December 4 indicated that although investment by large manufacturing firms remained strong, consumer spending and export growth appeared to be stagnating. The yield on the two-year Japanese government bond (JGB) fell 13 basis points over the first two months of the quarter to 0.48 percent. During the first two weeks of December, short-dated Japanese yields briefly moved higher in response to funding pressures ahead of the year-end and amid related concerns about the transition to the real-time gross settlement system in January 2001. However, yields later declined after the release of the December Tankan report and the government's announcement of a smaller-than-expected 2001 fiscal budget. On balance, two-year and ten-year JGB yields ended the quarter 14 and 22 basis points lower respectively.

Decline of Risk Appetite during the Fourth Quarter

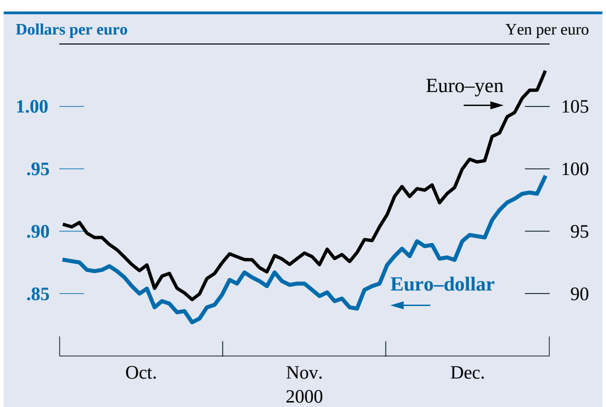
In response to the initial shift in growth expectations for the Group of Three (G-3) economies and an overall increase in market volatility, investors reportedly adopted somewhat more neutral currency positions and were generally more risk averse during the first half of the quarter. Net speculative positions in currency futures on the International Monetary Market (IMM), as well as flow survey data, suggested that investors maintained a relatively small net long position in euros and a substantial net short position in yen.

Although there was little change in the reported net speculative euro position, the euro area continued to register net cross-border investment outflows but in lower amounts than previous months. According to the ECB, the net outflow of direct investment and portfolio investment from the euro area totaled €15.7 billion and €1.7 billion, respectively, in October, which was less than half the total net outflows recorded in September.

Against the dollar, the euro fell to $0.825 on October 25, a new low, but then rebounded the following week, as the ECB entered the market to buy euros on November 3, 6, and 9, pushing the exchange rate to close as high as $0.876. Against the yen, the euro declined 2.4 percent during the first half of the quarter. The dollar–yen exchange rate, meanwhile, did not exhibit a noticeable trend and traded in a relatively tight range, between ¥109.30 and ¥107.00, over the first half of the quarter.

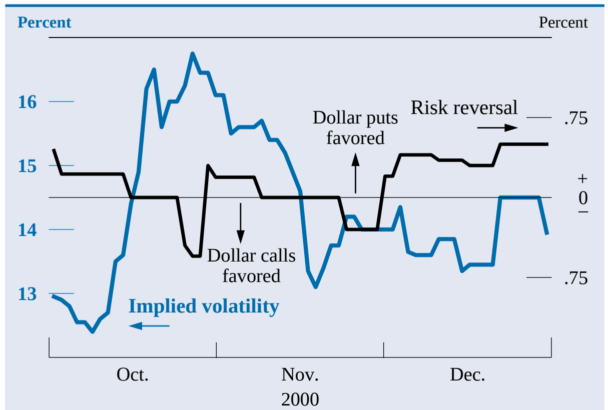
Implied volatility for one-month euro–dollar options, which had increased to as high as 16.9 percent on October 27, also declined after the ECB's interventions. Although the euro once again declined

5. The euro against the dollar and the yen, 2000:Q4



Source. Bloomberg L.P.

6. One-month euro–dollar option implied volatility and risk reversals, 2000:Q4



Source. Bloomberg L.P.

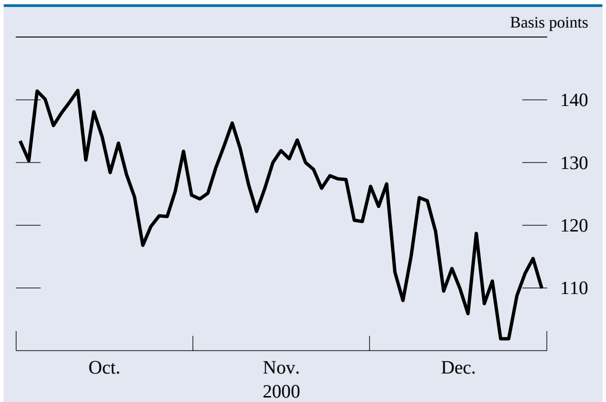
against the dollar in mid-November, to as low as $0.838 on November 24, market anxiety over further euro depreciation remained relatively low, with one-month euro–dollar option implied volatility fluctuating between 13 percent and 15 percent from mid-November to the end of the quarter. The premium for one-month euro put options over one-month euro call options, as measured by risk reversals, also declined after the ECB interventions. The premium for euro puts briefly rose as high as 0.6 percent in volatility terms on October 26 and 27. However, during much of November and throughout December, there was a premium for one-month euro call options over one-month euro put options.

Currency Movements Dominated by Euro Strength and Yen Weakness in the Second Half of the Quarter

The second half of the quarter coincided with a sharp appreciation of the euro and depreciation of the yen, with investors taking more aggressive currency positions as growth and interest expectations for the G-3 economies solidified. According to data from the IMM, the number of speculative net long euro positions increased nearly three-fold in mid-December to reach its highest level since October 1999. The number of short speculative yen positions rose modestly in mid-December to its highest level since February 2000. Against the dollar, the euro appreciated 9.9 percent and the yen depreciated 4.8 percent during the second half of the fourth quarter.

Against the dollar, the euro was largely supported by reports of a narrowing in U.S.–euro-area growth and interest rate differentials after the release of

7. Spread of two-year dollar swap rate over two-year euro swap rate, 2000:Q4



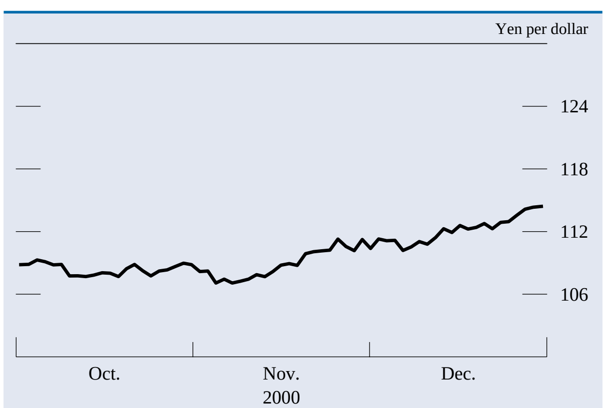
Source. Bloomberg L.P.

weaker-than-expected U.S. economic data at the end of November. After declining just 3 basis points over the first half of the quarter, from mid-November to the end of December, the spread of the two-year dollar swap rate over the two-year euro swap rate declined 21 basis points to a spread of 110 basis points.

The yen, meanwhile, weakened sharply against the major currencies, falling 13.4 percent against the euro. The yen's depreciation reflected the growing speculation surrounding the pace of the country's economic recovery, as well as uncertainty about the future of Prime Minister Mori's administration. Although Prime Minister Mori won a no-confidence vote by the parliament in late November, market participants commented that Mori's low popularity ratings continued to cloud the political outlook.

The yen was also pressured by reported portfolio reallocations away from Japan by domestic and foreign investors. Japanese institutional investors reportedly maintained, and in some cases increased, dollar and euro investments ahead of the year-end. In addition, foreign investors were net sellers of Japanese equities for most of the fourth quarter. According to the Ministry of Finance, Japanese investors bought ¥1.9 trillion in foreign stocks and bonds in the fourth quarter, more than double the net amount purchased during the third quarter. Over the same period, foreign investors sold ¥20.9 billion in Japanese stocks.

8. The dollar against the yen, 2000:Q4



Source. Bloomberg L.P.

Treasury and Federal Reserve Foreign Exchange Reserves

At the end of the quarter, the current values of the euro and yen reserve holdings totaled $15.7 billion for the Federal Reserve System and $15.7 billion for the Treasury's Exchange Stabilization Fund. 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 extent practicable, the investments are split evenly between the Federal Reserve System and the Exchange Stabilization Fund.

A portion of the U.S. monetary authorities' foreign exchange reserves are presently invested in government securities held outright or under repurchase agreement. Foreign currency reserves are also invested in deposits at the Bank for International Settlements and in facilities at other official institutions. As of December 29, direct holdings of foreign government securities totaled $13.9 billion, split evenly between the two authorities. Foreign government securities held under repurchase agreement totaled $2.8 billion at the end of the quarter and were also split evenly between the two authorities.

The U.S. monetary authorities' investments in marketable securities have been limited to obligations of the sovereign issuer of the underlying currency; for example, the securities previously denominated in duetsche marks have been obligations of the German government. Given the introduction of the euro, the U.S. monetary authorities now expect to diversify their euro-denominated holdings of government securities to include the obligations of additional euro-area sovereigns. This diversification will be gradual and will apply to holdings of securities on an outright basis and under repurchase agreements. The government securities eligible for investment must meet the highest standards of protection against credit, liquidity, and operational risks. In the assessment of credit quality within the euro area, the U.S. monetary authorities take into account the public credit ratings of each sovereign, as well as other institutional standards that afford a high level of safety. The assessment of liquidity and operational risks includes the analysis of secondary market factors, such as bid–ask spreads, average trade size, and the regularity and size of issuance. □

1. Foreign currency holdings of U.S. monetary authorities based on current exchange rates, 2000:Q4

Millions of dollars

Item	Balance, Sept. 30, 2000	Quarterly changes in balances, by source					Balance, Dec. 31, 2000
		Net purchases and sales [1]	Effect of sales [2]	Investment income	Currency valuation adjustments [3]	Interest accrual and other [4]	
FEDERAL RESERVE SYSTEM OPEN MARKET ACCOUNT (SOMA)							
Euro	6,872.1	0.0	0.0	69.5	434.3	. . .	7,375.9
Japanese yen	8,733.7	0.0	0.0	3.7	–492.8	. . .	8,244.6
Total	15,605.8	0.0	0.0	73.2	–58.5	. . .	15,620.5
Interest receivables (net) [5]	66.8	. . .	. . .	. . .	. . .	9.7	76.5
Other cash flow from investments [4]	0.0	. . .	. . .	. . .	. . .	0.0	0.0
Total	**15,672.6**	**0.0**	**0.0**	**73.2**	**–58.5**	**9.7**	**15,697.0**
U.S. TREASURY EXCHANGE STABILIZATION FUND (ESF)							
Euro	6,869.5	0.0	0.0	69.6	434.0	. . .	7,373.1
Japanese yen	8,733.8	0.0	0.0	3.7	–492.8	. . .	8,244.7
Total	15,603.3	0.0	0.0	73.3	–58.8	. . .	15,617.8
Interest receivables [5]	57.6	. . .	. . .	. . .	. . .	3.6	61.2
Other cash flow from investments [4]	0.0	. . .	. . .	. . .	. . .	. . .	0.0
Total	**15,660.9**	**0.0**	**0.0**	**73.3**	**–58.8**	**–3.6**	**15,679.0**

NOTE. Figures 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 historical 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. Values are cash flow differences from payments and collection of funds between quarters.

5. 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.

. . . 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, 2000:Q4

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, Sept. 30, 2000		
Euro	–1,370.9	–1,587.3
Japanese yen	1,687.5	1,899.7
Total	**316.6**	**312.4**
Realized profits and losses from foreign currency sales, Sept. 30, 2000–Dec. 31, 2000		
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, Dec. 31, 2000		
Euro	–936.6	–1,153.3
Japanese yen	1,194.7	1,406.9
Total	**258.1**	**253.6**

3. Reciprocal currency arrangements, December 31, 2000

Millions of dollars

Institution	Amount of facility	Outstanding, Dec. 31, 2000
	Reciprocal currency arrangements	
Bank of Canada	2,000	0.0
Bank of Mexico	3,000	0.0
Total	**5,000**	**0.0**
	Federal Reserve and U.S. Treasury Exchange Stabilization Fund currency arrangements	
Bank of Mexico	3,000	0.0
Total	**3,000**	**0.0**