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 through December 1999. Deborah L. Leonard was primarily responsible for preparation of the report.

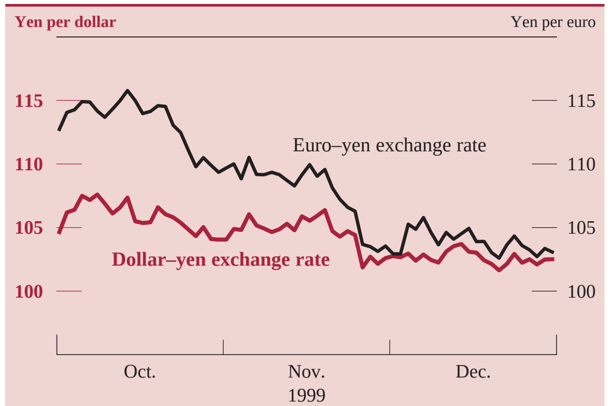
During the fourth quarter of 1999, the dollar depreciated 3.7 percent against the yen and appreciated 6.2 percent against the euro. On an effective trade-weighted basis, the dollar appreciated 0.8 percent. Market expectations for sustained economic growth in the United States provided underlying support for the dollar and U.S. equity markets. Changes in the dollar's value were also influenced by portfolio flows that contributed to the continued appreciation of the yen and depreciation of the euro. Daily foreign exchange trading volumes fell sharply toward the very end of the quarter, although financial markets demonstrated no discernible signs of dislocation before the century date change. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

Currency Movements Dominated by Yen Strength and Euro Weakness

Over the course of the fourth quarter, the yen rose steadily to a four-year high of ¥101.64 against the dollar and an all-time high of ¥102.60 against the euro. The yen's appreciation accompanied continued perceptions of economic improvement in Japan, capital flows into Japanese assets, and uncertainty regarding the prospects for additional stimulus by the Bank of Japan. The movement prompted several publicly confirmed interventions in the foreign exchange markets by the Japanese monetary authorities.

Market participants cited modest signs of improvement in several key Japanese economic data reports and revisions to previous reports as evidence that Japan's economic cycle was turning. Tankan business sentiment indexes in September and December of −22 and −17, respectively, reached the survey's highest levels in two years, although the improvement mainly reflected the results for large manufacturing firms. On November 15, Japan's third-quarter industrial production was reported to have risen 3.9 percent since the previous quarter. On December 6, Japan's third-quarter gross domestic product was reported to have contracted 1.0 percent for the quarter; second-quarter GDP growth, however, was revised upward from 0.1 to 1.0 percent. Market participants also noted three consecutive positive reports of the Economic Planning Agency's monthly leading and coincident diffusion indexes. The Japanese government's November 11 announcement of an ¥18 trillion supplementary spending package, including an expected ¥6.5 trillion of actual spending, was perceived as demonstrating an ongoing government commitment to employing fiscal stimulus measures.

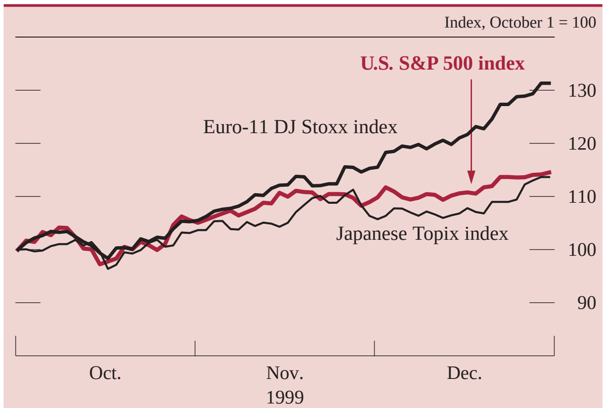
1. The dollar and the euro against the Japanese yen, 1999:Q4



Note. The data are daily.
Source. Bloomberg L.P.

At the outset of the quarter, attention focused on the prospects for the Bank of Japan to adopt "quantitative easing" measures to invigorate Japan's economy further. The Bank of Japan's announcements of measures aimed at improving the flexibility of its operations and at providing ample liquidity over the turn of the year were perceived as introducing technical changes that did not alter the stance of Japanese monetary policy. Short-term interest rates in Japan

2. Global benchmark stock indexes, 1999:Q4



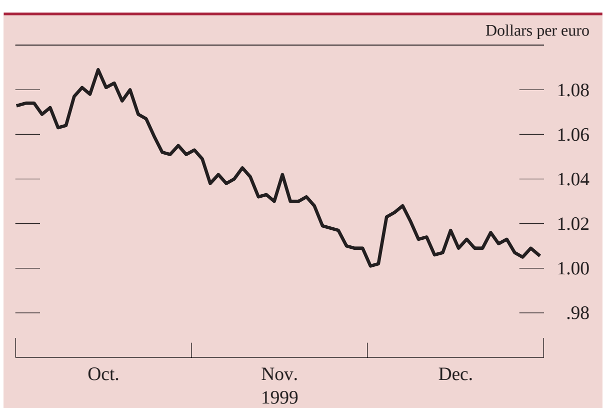
NOTE. The data are daily.
SOURCE. Bloomberg, L.P.

rose marginally over the quarter, at times affected by continued evidence of improving economic conditions, strength in the equity markets, and comments from Bank of Japan officials regarding the extraordinary nature of the zero interest rate policy.

Expressing growing confidence in prospects for an upswing in Japan's economy, foreign investors increased their direct and portfolio capital investments in Japan. The Nikkei rose to a two-year high while broader Japanese equity indexes rose even more sharply, buoyed by evidence of corporate restructuring and the global rally in the equity markets. As foreign portfolio inflows continued, the Ministry of Finance reported that foreign direct investment rose to ¥1.3 trillion during the first half of 1999, more than twice the amount during the same period in 1998. In the meantime, the yen's persistent appreciation continued to reduce the value of unhedged foreign assets for Japanese investors, further encouraging hedging or liquidation of those positions. Some Japanese investors who were reluctant to maintain large overseas exposures amid year-end uncertainty, reportedly repatriated capital or curtailed investment outflows before the century date change, thus creating additional demand for yen.

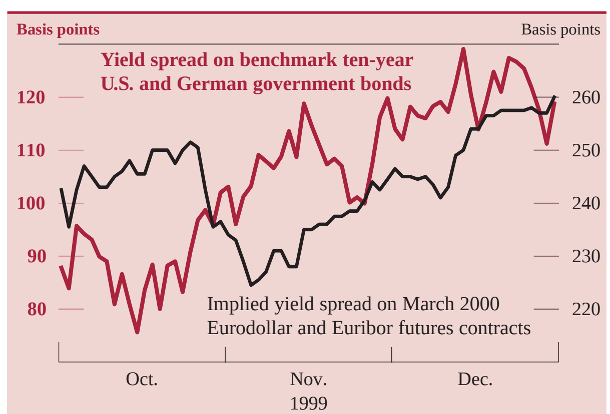
In Europe, perceptions that the euro-area economic outlook had improved, views that there were upside risks of inflation, and commentary from European Central Bank (ECB) officials prompted heightened expectations of an interest rate hike by the ECB during the fourth quarter. Expectations solidified after October 27, when year-on-year M3 money supply in the euro area was reported to have grown 6.1 percent in September, outpacing the ECB's target rate of 4.5 percent. On November 4, the ECB raised its two-week refinancing rate 50 basis points, to 3.00 percent. Commenting after the action, ECB President Duisenberg said that the "timely rise [in interest rates] will avoid the need for a bigger rise later." After the move, the yield implied by the March 2000 Euribor futures contract fell to its period low of 3.46 percent, and European sovereign bond yields fell, as market participants noted that the rate rise helped to mitigate expectations of a sustained cycle of monetary tightening in Europe. Yields rebounded in the second half of the quarter, with ten-year sovereign benchmark bond yields rising approximately 50 basis points but remaining below their period highs, amid global declines in bond prices and as economic data pointed to stronger European growth. Germany's 3.2 percent rise in October manufacturing orders, 1.7 percent rise in industrial production the same month, and a better-than-expected November business climate survey by the German IFO Institute all supported the improved

3. The euro against the dollar, 1999:Q4



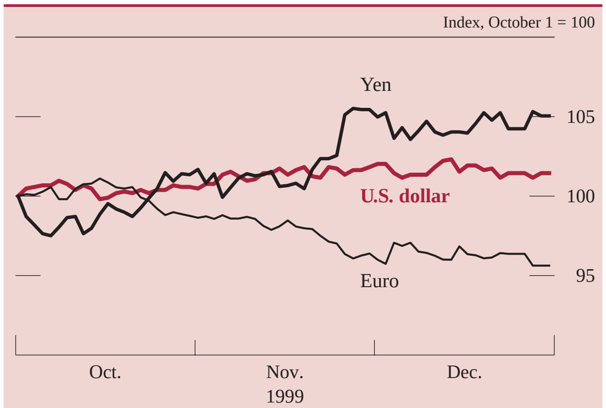
NOTE. The data are daily.
SOURCE. Bloomberg L.P.

4. Spreads between U.S. and European yields, 1999:Q4



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

5. Trade-weighted values for Group of Three currencies, 1999:Q4



NOTE. The data are daily.
SOURCE. Bank of England.

expectations for growth. Annualized third-quarter growth in the euro area of 2.3 percent also exceeded consensus forecasts.

Despite higher domestic interest rates and economic growth prospects, the euro weakened steadily against the dollar and the yen. On December 2 and 3, the euro briefly dipped below $1.00. Throughout the quarter, the effect on the euro of widening U.S.-European yield differentials and reported global portfolio reallocations appeared to outweigh Europe's improving growth outlook and robust gains in its equity markets. In the first half of the quarter, market participants noted sizable euro sales as portfolio managers—who reportedly had relatively high euro weightings relative to their benchmarks—moved toward more neutral currency positions in early preparation for the year-end. Net speculative positions on currency futures exchanges, as well as survey flow data, appeared to show similar patterns. Japanese investors reportedly continued to hedge their European investments to protect against foreign exchange losses on capital investments.

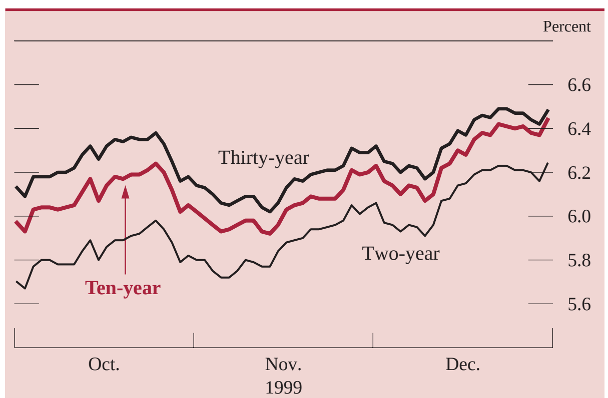
Market participants also noted the resilience of U.S. asset markets and widening yield differentials as factors weighing on the euro. The annualized yield spread between the benchmark ten-year U.S. Treasury and German bund widened from 89 to 119 basis points by the end of the quarter. European sovereign bonds outperformed U.S. Treasury securities as market participants estimated that (1) inflation in Europe would remain relatively low, (2) that moderate European rate hikes in the future were already reflected in prices, and (3) that a more pronounced cycle of monetary tightening in the United States was under way. Lastly, some cited concerns that intervention by European governments in mergers and acquisitions and bankruptcy proceedings could signal a slowing in corporate restructuring efforts in the euro area.

DOLLAR SUPPORTED BY EXPECTATIONS FOR SUSTAINED U.S. GROWTH

Despite its mixed performance against the euro and the yen, the dollar's value remained relatively stable on a trade-weighted basis. When measured broadly against the currencies of major trading partners, the dollar appreciated 0.8 percent, while the yen appreciated 6.3 percent, and the euro depreciated 4.4 percent during the fourth quarter. The relative resilience of U.S. asset markets amid tightening monetary conditions in the United States provided underlying support for the dollar.

Yields on U.S. Treasury securities rose to their highest levels in more than two years after the Federal Open Market Committee's (FOMC) adoption of a tightening bias at its October 5 meeting and its decision to raise the federal funds target rate from 5.25 to 5.50 percent on November 16. Data releases throughout the quarter were perceived to show strong, non-inflationary U.S. growth that contributed to a 20-basis-point flattening of the two-to-thirty-year Treasury coupon curve to a fifteen-month low of 23 basis points. While data continued to show somewhat modest upward pressures on earnings, producer prices, and consumer prices, stronger-than-expected growth, and consumption data raised market expectations that subsequent rate hikes would moderate the pace of U.S. growth. The third-quarter employment cost index, reported on October 28, fell from 1.1 percent in the second quarter to 0.8 percent in the fourth quarter. Employment reports released during the quarter generally showed lower-than-expected gains

6. Yields on U.S. Treasury securities, 1999:Q4



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

in nonfarm payrolls and average hourly earnings. However, third-quarter GDP growth of 4.8 percent and a deflator of 0.9 percent, reported on October 28, were revised upward to 5.5 percent and 1.1 percent, respectively, on November 24. September and October retail sales figures, excluding autos, were also higher than expected. Market participants perceived that the tone of the FOMC's December 21 directive was relatively hawkish, even though the Committee maintained its symmetric directive ''in light of market uncertainties associated with the century date change.'' By the end of the quarter, the implied yield on the February federal funds futures contract had risen 37 basis points, to 5.79 percent.

Despite rising bond yields, U.S. and global equity markets surged to record highs as market participants expressed increased confidence in the prospects for sustained global growth and as global liquidity remained high. The Dow Jones Industrial Average and the S&P 500 indexes rose 11.2 and 14.5 percent, respectively, while the Nasdaq skyrocketed 48.2 percent. The momentum contributing to the Nasdaq's performance accelerated after the October 28 release of third-quarter GDP and employment cost figures, as well as Chairman Greenspan's speech on the same day noting the contributions that technology has made to U.S. productivity and recent economic performance.

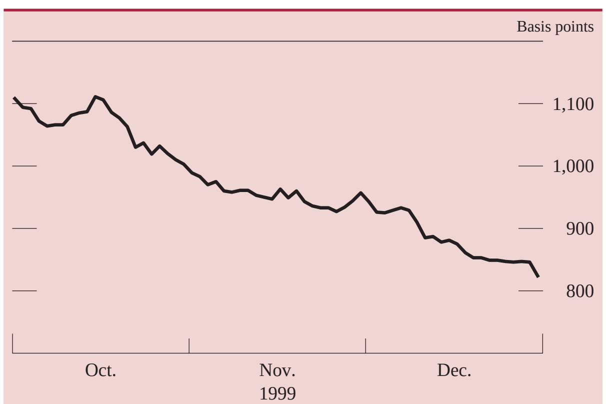
Higher interest rates in the United States did not appear to weigh negatively on sentiment toward emerging-market assets. On the contrary, confidence in global growth prospects fueled investor interest in emerging-market assets throughout the quarter. Spreads between emerging-market sovereign debt and comparable U.S. Treasury securities narrowed, with the spread between J.P. Morgan's Emerging Market Bond Index (EMBI+) sovereign yield and U.S. Treasury securities having fallen 274 basis points, to 824 basis points—its lowest level since August 1998. Moreover, Latin American and Asian telecommunication stocks rallied along with other global technology shares, as growth in those regions continued to improve from technology exports and gains in productivity.

Orderly Financial Markets Before the Y2K Turn

As the year's end approached, uncertainties associated with the century date change did not create any visible distress in the foreign exchange market. Overall, trading volumes reportedly remained within their average ranges for 1999 until well into December—longer than many would have predicted earlier in the year. By December 31, however, trading volumes had ground nearly to a halt as market participants postponed all but absolutely necessary transactions until the new year.

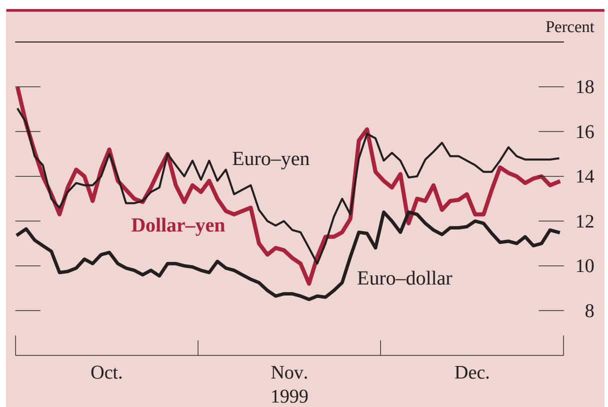
Trading activity appeared orderly throughout the period, although bid–ask spreads on major currency pairs more than doubled in the last trading days of the year. However, volatility implied by currency options remained in recent ranges in the final weeks of the year as spot market activity diminished. Although some portfolio managers who were concerned about year-end liquidity reportedly moved toward more neutral positions relative to their benchmarks early in the period, other indications by the end of the quarter suggested that broadly based risk aversion was not prevalent in the financial markets. Global stock markets rallied amid relatively heavy trading vol-

7. Emerging market bond index (EMBI+) sovereign spread over comparable U.S. Treasury securities, 1999:Q4



NOTE. The data are daily.
SOURCE. J.P. Morgan.

8. Volatility implied by one-month option prices, 1999:Q4



NOTE. The data are daily.
SOURCE. Reuters.

ume through December, confidence in prospects for emerging-market growth prospects improved, and credit and swap spreads narrowed.

TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE RESERVES

The U.S. monetary authorities did not undertake any intervention operations during the quarter. At the end of the quarter, the current values of euro and Japanese yen reserve holdings totaled $16.1 billion for the Federal Reserve System and $16.2 billion for the 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 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 facilities at other official institutions. As of December 31, direct holdings of foreign government securities totaled $9.2 billion, split evenly between the two authorities. Foreign government securities held under repurchase agreement totaled $13.7 billion at the end of the quarter and were also split evenly between the two authorities. □

1. Foreign currency holdings of U.S. monetary authorities based on current exchange rates, 1999:Q4

Millions of dollars

Item	Balance, Sept. 30, 1999[1]	Quarterly changes in balances, by source					Balance, Dec. 31, 1999
		Net purchases and sales[2]	Effect of sales[3]	Investment income	Currency valuation adjustments[4]	Interest accrual and other	
FEDERAL RESERVE SYSTEM OPEN MARKET ACCOUNT (SOMA)							
EMU euro	7,221.8	0.0	0.0	38.9	–390.1	0.0	6,870.6
Japanese yen	8,831.9	0.0	0.0	0.7	388.9	0.0	9,221.5
Total	16,053.7	0.0	0.0	39.6	–1.2	0.0	16,092.1
Interest receivables, net[5]	64.5	. . .	. . .	. . .	. . .	–16.5	48.0
Total	**16,118.2**	**0.0**	**0.0**	**39.6**	**–1.2**	**–16.5**	**16,140.1**
U.S. TREASURY EXCHANGE STABILIZATION FUND (ESF)							
EMU euro	7,219.1	0.0	0.0	39.4	–390.0	0.0	6,868.5
Japanese yen	8,831.8	0.0	0.0	0.7	389.0	0.0	9,221.5
Total	16,050.9	0.0	0.0	40.1	–1.0	0.0	16,090.0
Interest receivables[5]	66.2	. . .	. . .	. . .	. . .	12.4	78.6
Total	**16,117.1**	**0.0**	**0.0**	**40.1**	**–1.0**	**12.4**	**16,168.6**

NOTE. Earlier period figures have been reclassified to the current presentation.

1. Unearned interest collected in the amounts of $13.4 million and $13.3 million for the Federal Reserve and ESF, respectively, are not included. These amounts are cash flow differences from payment and collection of funds between quarters.

2. 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.

3. 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.

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

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. Interest receivables for the Federal Reserve System are net of unearned interest collected.

. . . 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: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, 1999		
EMU euro	–119.9	–336.9
Japanese yen	1,775.8	1,988.0
Total	**1,655.9**	**1,651.1**
Realized profits and losses from foreign currency sales, Sept. 30, 1999–Dec. 31, 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, Dec. 31, 1999		
EMU euro	–510.0	–726.9
Japanese yen	2,178.1	2,390.2
Total	**1,668.0**	**1,663.4**

NOTE. Components may not sum to totals because of rounding.

3. Currency arrangements, December 31, 1999

Millions of dollars

Institution	Amount of facility	Outstanding, Dec. 31, 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**