

## TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

*July-September 2001*

During the third quarter of 2001, the dollar depreciated 7.3 percent against the euro and 4.1 percent against the yen. On a trade-weighted basis, the dollar ended the quarter 2.6 percent lower. Shifting expectations about the pace of the U.S. economic recovery influenced changes in the exchange value of the dollar. Economic data released even before the terrorist attacks on September 11 suggested that the U.S. economic slowdown would likely be more protracted than previously expected, which generally weighed on the dollar. The attacks heightened pre-existing concerns about the weakness of the U.S. economy and lent further momentum to the general trends that prevailed earlier in the quarter. The U.S. monetary authorities did not intervene in the foreign exchange markets during this quarter. Following the terrorist attacks, the Federal Reserve established 30-day reciprocal swap arrangements with the European Central Bank (ECB) and the Bank of England, and temporarily augmented its existing swap facility with the Bank of Canada. The ECB drew on the swap facility on three occasions.

### DOLLAR DEPRECIATES THROUGH EARLY SEPTEMBER AMID INCREASED UNCERTAINTY OVER THE PROSPECTS FOR U.S. ECONOMIC RECOVERY

After reaching new multiyear highs on a trade-weighted basis early in the quarter, the exchange value of the dollar declined amid increased expectations for a more protracted economic slowdown in the United States and a broad retrenchment from risk positions. The euro appreciated against the dollar early in the quarter, rising as high as \$0.9182 on August 21, as shifting expectations for relative growth differentials between the U.S. and the euro-area economies prompted investors to expand their long euro

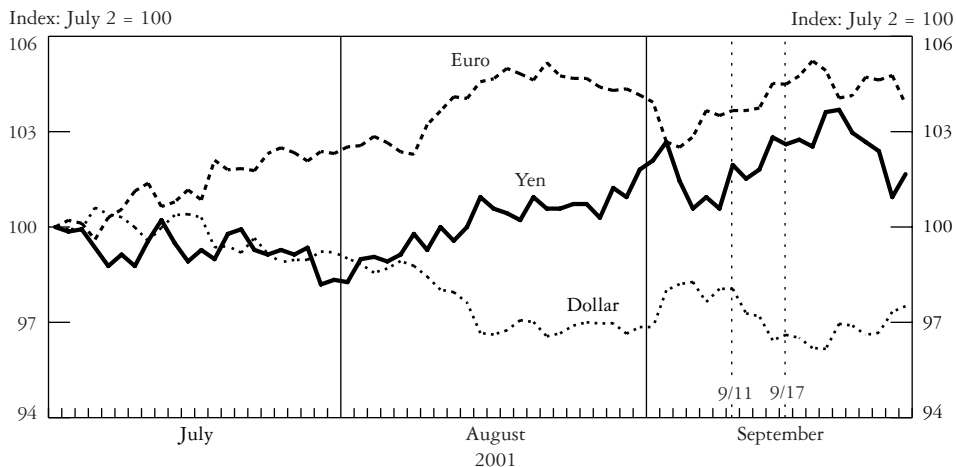
*This report, presented by Dino Kos, Executive Vice President, Federal Reserve Bank of New York, and Manager, System Open Market Account, describes the foreign exchange operations of the U.S. Department of the Treasury and the Federal Reserve System for the period from July 2001 through September 2001. Evangeline Sophia Drossos was primarily responsible for preparation of the report.*

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positions. The euro's initial appreciation coincided with reports of shorter-term investors establishing long positions in the euro. According to Commodity Futures Trading Commission (CFTC) data, net noncommercial long euro positions on the International Money Market futures exchange rose steadily over the quarter and on August 28 reached their highest levels since the inception of the euro. However, market participants suggested that these net long euro positions may have limited the euro's gains somewhat later in the quarter, as investors were reluctant to extend positions further.

The dollar also depreciated against the yen, which strengthened against a wide range of currencies. Investors bought yen to cover short positions amid expectations that Japanese accounts would repatriate funds from overseas investments ahead of the Japanese fiscal half-year-end. CFTC data indicated that noncommercial accounts reported net short yen positions against the dollar through the end of July, but these were reversed in August. In early September, the number of net long yen positions reached its highest level in almost two years.

*Chart 1*  
TRADE-WEIGHTED G-3 CURRENCIES



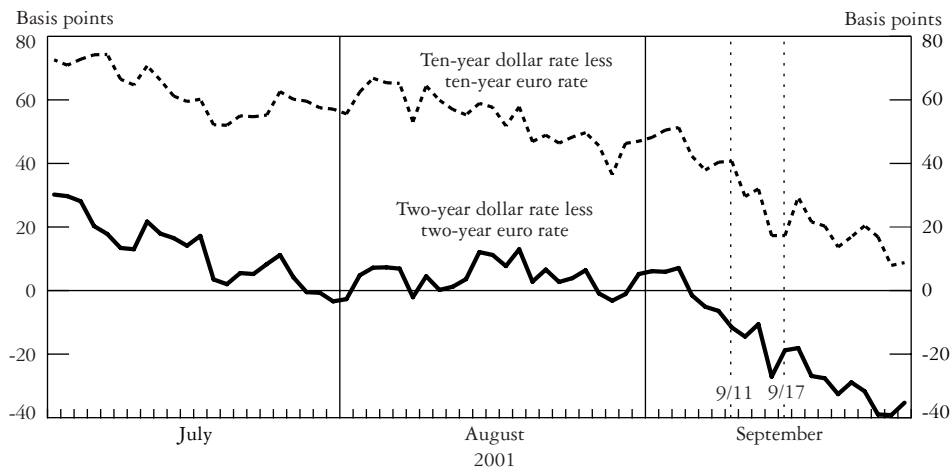
Source: Board of Governors of the Federal Reserve System, Bank of England.

U.S. economic data reported early in the quarter showed weakness in both the nonmanufacturing and manufacturing sectors, as well as an increase in the rate of unemployment, and suggested that the U.S. economic slowdown could be more prolonged. Among these data reports were the larger-than-expected declines in the June and August U.S. nonfarm payrolls. Regional economic surveys, such as the July Chicago Purchasing Managers Index and the August Philadelphia Business Outlook Survey,

also pointed to ongoing contraction in manufacturing activity. The August 8 release of the Federal Reserve's Beige Book was interpreted by many as suggesting that weakness in the manufacturing sector had spilled over into the broader economy. Indications of a nascent stabilization in the U.S. manufacturing sector, represented by modest increases in the July and August National Association of Purchasing Managers surveys, were overshadowed by ongoing concerns about U.S. corporate profitability as analysts continued to lower their earnings forecasts.

Concerns about the U.S. economic outlook were mirrored in other economies as euro-area and Japanese economic data indicated further deterioration. In the euro-area countries, data showed continued declines in the manufacturing sector, particularly in Germany where factory orders fell sharply in July. Data released in August indicated the slowing pace of economic activity as second-quarter German GDP data was flat and showed its lowest year-on-year growth rate since 1998. In Japan, economic growth was negative in the second quarter as consumer spending and business investment remained stagnant. In this environment, many central banks eased monetary policy; from the beginning of the quarter through early September, the Federal Reserve, the ECB, and the Reserve Bank of Australia all lowered their policy rates 25 basis points. The Bank of Canada lowered its policy rate by 50 basis points. Implied yields on global interest rate futures contracts fell in response to the policy rate cuts by central banks and the heightened expectations of additional easing. Over this period, interest rate differentials between the U.S. and the euro area narrowed. The sharpest declines in U.S.-euro area swap spreads occurred in the short end of the curve, with the two-year U.S. swap rate falling below the two-year euro swap rate for the first time since the inception of the euro.

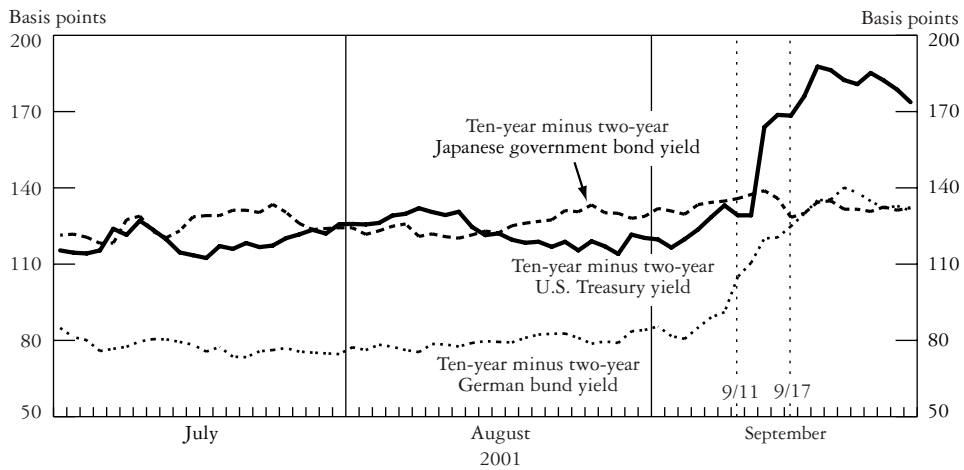
*Chart 2*  
DOLLAR-EURO SWAP DIFFERENTIALS



Source: Bloomberg L.P.

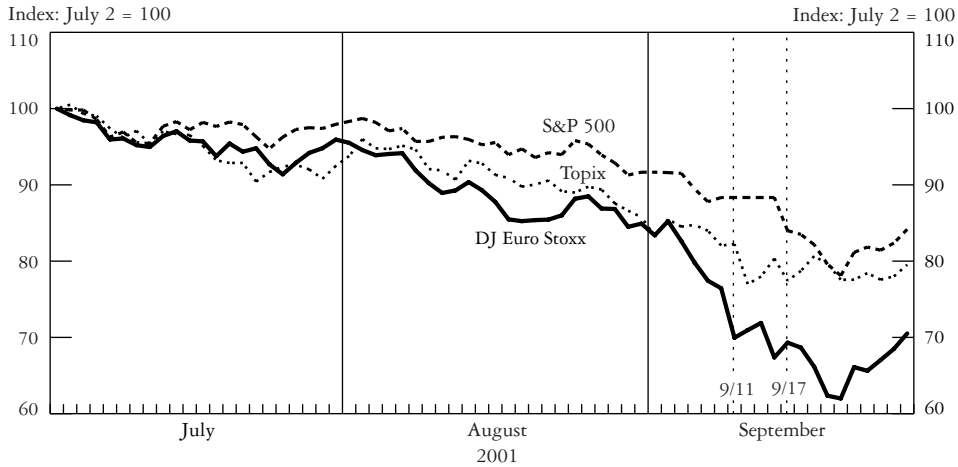
Increased expectations for slowing global growth prompted investors to pull back from higher-risk assets. Global equity indexes and prices on corporate debt declined broadly amid increasing pessimism about corporate profitability worldwide. These factors, as well as the rate cuts by central banks, contributed to declines in short-dated sovereign debt yields and the steepening of sovereign yield curves as investors shifted from nongovernment fixed income and equities, into safer, more liquid assets.

Chart 3  
G-3 GOVERNMENT YIELD CURVES



Source: Bloomberg L.P.

Chart 4  
GLOBAL BENCHMARK EQUITY INDEXES



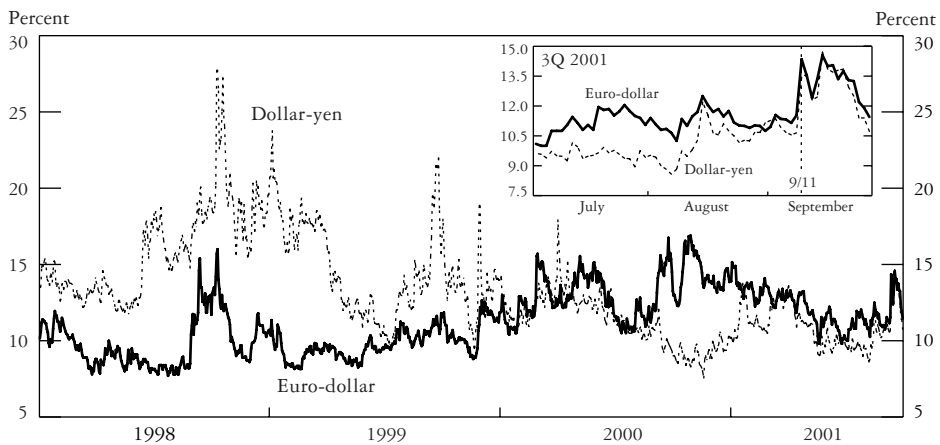
Source: Bloomberg L.P.

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Developments in Latin America may also have contributed to heightened risk aversion early in the quarter as investors expressed ongoing concern about the ability of Argentina to meet its debt servicing obligations. The EMBI+ sovereign spread over comparable U.S. Treasuries, which had already widened considerably earlier in the year, spiked higher in July.

**RISK AVERSION HEIGHTENS FURTHER AFTER SEPTEMBER 11 TERRORIST ATTACKS**  
The September 11 terrorist attacks heightened concern about the risks to the U.S. economy, prompting further reductions in risk positions. Against this backdrop, foreign exchange trading volumes declined as investors were reluctant to establish new positions. Nevertheless, trading in the currency markets appeared orderly but subdued, as many New York dealers moved their activities to local contingency sites and overseas offices in the days immediately following the attacks. In addition, implied volatility on G-3 currency options spiked following the attacks, but within days quickly declined, reflecting the relatively stable behavior of spot currency rates. At the same time, market participants continued to protect against the risk of dollar depreciation as one-month risk reversals showed a preference for dollar puts against the euro and the yen.

*Chart 5*  
**VOLATILITY IMPLIED BY ONE-MONTH CURRENCY OPTION PRICES**

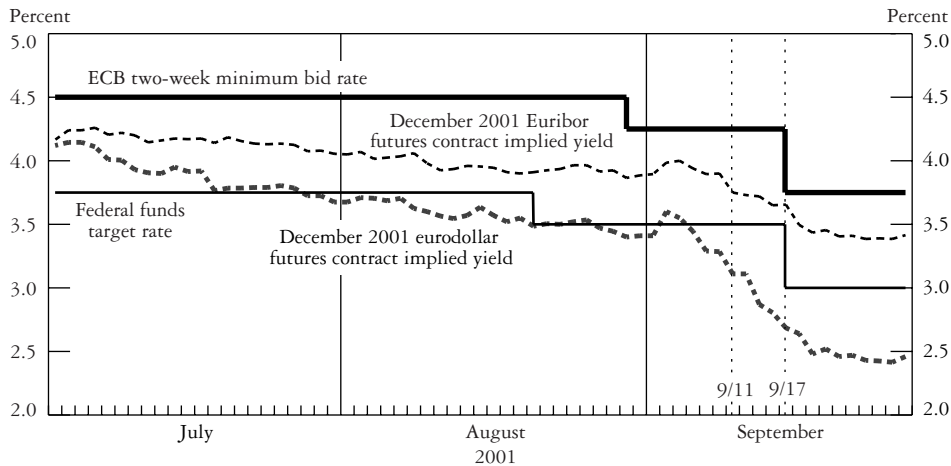


Source: J.P. Morgan Chase & Co.

Expectations for near-term interest rate cuts increased after September 11, as market participants anticipated that the short-term economic impact of the attacks on the U.S. economy would generate sizeable disruptions in business activity and sharp declines in consumer confidence. In response to the

increased uncertainty generated by the attacks, many central banks lowered their policy rates. On the morning of September 17, before U.S. equity markets resumed trading after four days of closure, the Federal Open Market Committee lowered the Federal funds target rate by 50 basis points. Later that day, the Bank of Canada, the ECB, and the Swiss National Bank also cut rates by 50 basis points. The next day, the Bank of Japan lowered its discount rate 15 basis points and announced an increase in its target for current account bank reserves, and the Bank of England lowered its repo rate 25 basis points.

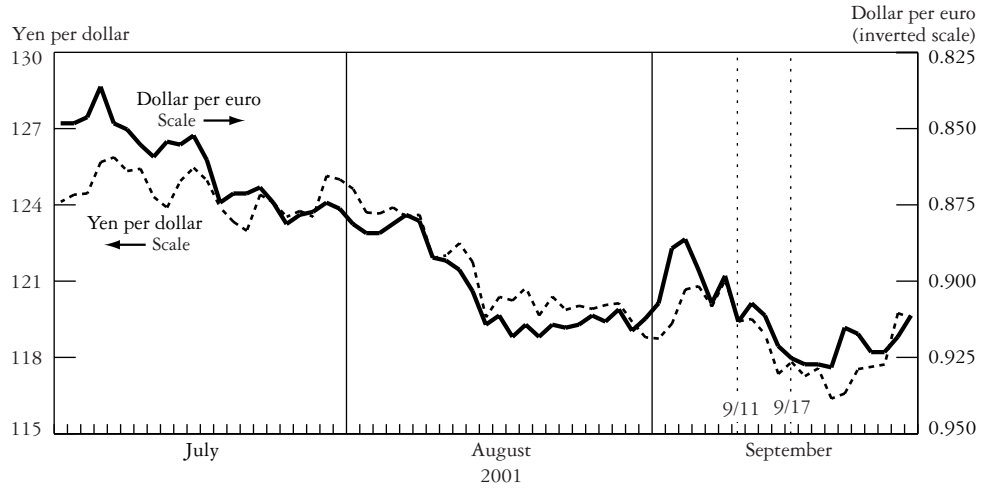
*Chart 6*  
**U.S. AND EURO-AREA POLICY RATES AND IMPLIED YIELDS  
 ON INTEREST RATE FUTURES CONTRACTS**



Source: Bloomberg L.P.

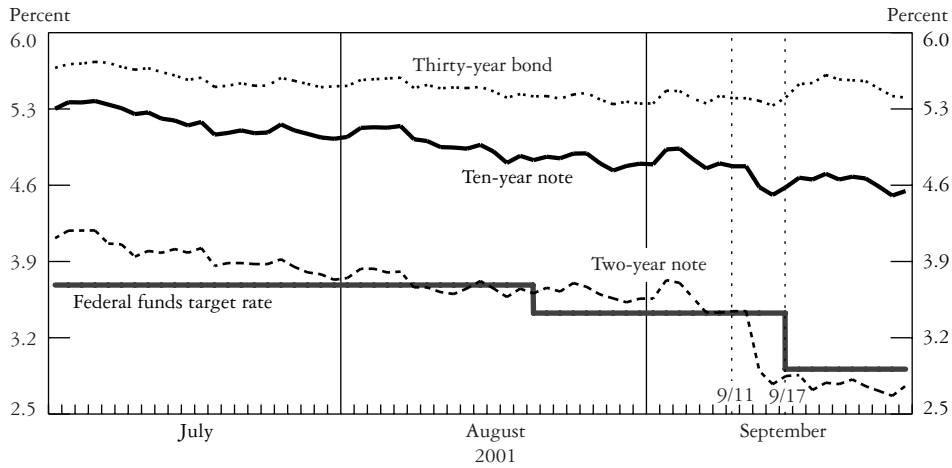
In contrast to the sharp price action in some other asset markets, the dollar traded within a relatively narrow range from September 11 to the end of the quarter. The dollar was little changed on balance against the euro after the attacks, despite the increased uncertainty about the U.S. economic outlook. Increased demand among global investors for the relative safety and liquidity of shorter-dated U.S. Treasury securities helped the dollar partially retrace earlier declines. The yen initially continued to appreciate against other major currencies, ahead of the Japanese fiscal half-year-end, reaching a high of 116.38 yen per dollar on September 20. The exchange rate closed the quarter at 119.56 yen per dollar, however, following intervention activity by the Japanese monetary authorities late in the quarter aimed at weakening the yen. Japanese monetary authorities publicly confirmed sales of yen against dollars on September 17 and additional sales of yen on six subsequent occasions through the end of the quarter.

Chart 7  
THE DOLLAR AGAINST THE EURO AND THE YEN



Source: Bloomberg L.P.

Chart 8  
U.S. TREASURY COUPON YIELDS AND FEDERAL FUNDS TARGET RATE

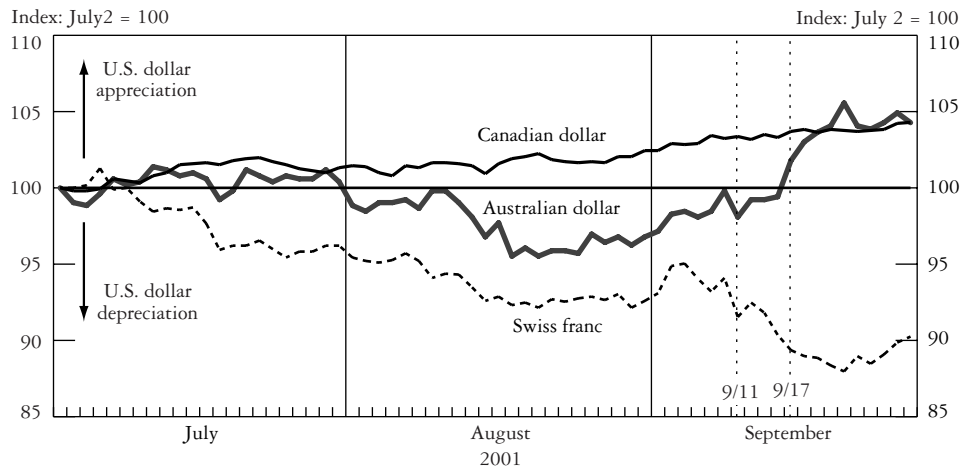


Source: Bloomberg L.P.

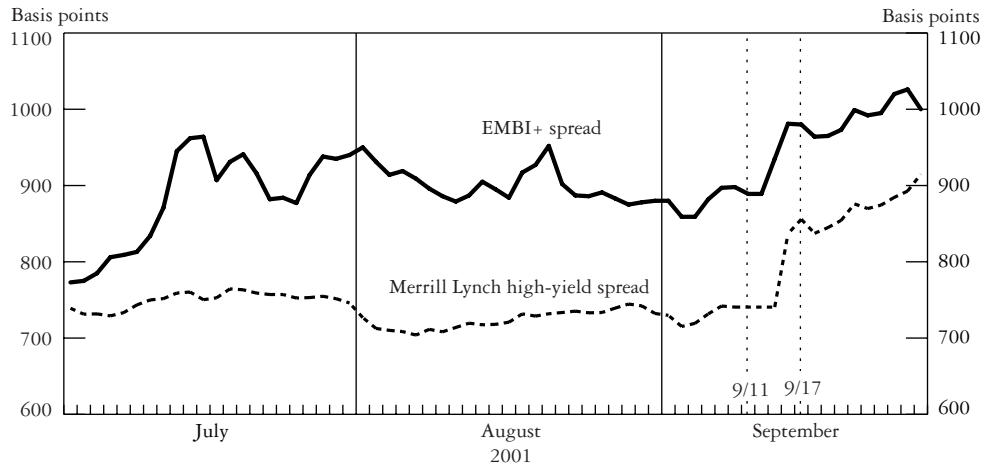
The shift out of higher-yielding markets into perceived safe-haven assets following the September 11 attacks pressured the Australian and New Zealand dollars, which depreciated broadly, while the Swiss franc strengthened against other major currencies. An additional factor that boosted demand for Swiss francs was position-covering, in anticipation of Swiss franc appreciation, by investors who had borrowed

the currency to fund positions in higher-yielding assets. Investors' broad-based reductions in risk positions also prompted sharp declines in emerging market and noninvestment-grade corporate debt. The EMBI+ sovereign spread over comparable U.S. Treasuries reached its widest level in almost two years and U.S. high-risk corporate yield spreads reached their highest levels since 1991.

*Chart 9*  
FOREIGN CURRENCY PER U.S. DOLLAR



*Chart 10*  
EMERGING MARKET AND U.S. HIGH-YIELD SPREADS  
OVER U.S. TREASURIES





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#### TEMPORARY SWAP LINES ESTABLISHED WITH OTHER CENTRAL BANKS

To facilitate the functioning of financial markets and provide liquidity in U.S. dollars, the Federal Reserve approved the establishment of temporary reciprocal swap arrangements with the ECB and the Bank of England on September 12 and September 14, respectively. Additionally, on September 13, the Federal Reserve and the Bank of Canada agreed to a temporary augmentation of the swap facility already in place. Under the terms of these agreements, the ECB, the Bank of England, and the Bank of Canada would be able to draw up to \$50 billion, \$30 billion and \$10 billion, respectively, in exchange for local currency. These arrangements allowed the central banks to provide dollar proceeds of the swaps to be temporarily lent to local banks in order to facilitate the settlement of their dollar transactions. The temporary swap arrangements with the ECB and the Bank of England, as well as the augmentation with the Bank of Canada, expired after thirty days.

The ECB drew on its swap line on September 12, 13, and 14. The net amount drawn totaled \$5.4 billion on September 12, \$14.1 billion on September 13, and \$3.9 billion on September 14 (Table 4). As of September 17, the net amount outstanding fell to zero and there was no further swap activity through the end of the quarter. The Bank of England and the Bank of Canada did not draw on their respective swap lines during the quarter.

#### 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 the euro and yen reserve holdings totaled \$15.4 billion for the Federal Reserve's System Open Market Account and \$15.4 billion for the Treasury's Exchange Stabilization Fund. The U.S. monetary authorities invest 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 possible, these investments are split evenly between the Federal Reserve and the Treasury.

A significant portion of the U.S. monetary authorities' foreign exchange reserves is invested in European and Japanese government securities held outright or under repurchase agreement. Under euro-denominated repurchase agreements, the U.S. monetary authorities accept sovereign debt backed by the full faith and credit of the following governments: Germany, Belgium, France, Italy, the Netherlands, and Spain. Foreign currency reserves are also invested in deposits at the Bank for International Settlements and in facilities at other official institutions. As of September 28, direct holdings of foreign government securities totaled \$13.6 billion, split evenly between the Federal Reserve and the Treasury. 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.

Table 1

FOREIGN CURRENCY HOLDINGS OF U.S. MONETARY AUTHORITIES  
BASED ON CURRENT EXCHANGE RATES

Millions of Dollars

|                                  | Changes in Balances by Source  |   |                                 |                                    |                          |                               | Balance as of<br>September 28, 2001 |
|----------------------------------|--------------------------------|---|---------------------------------|------------------------------------|--------------------------|-------------------------------|-------------------------------------|
|                                  | Balance as of<br>June 29, 2001 | Net Purchases<br>and Sales <sup>a</sup> | Impact of<br>Sales <sup>b</sup> | Interest<br>Collected <sup>c</sup> | Revaluation <sup>d</sup> | Interest Accrual<br>and Other |                                     |
| <b>Federal Reserve System</b>    |                                |   |                                 |                                    |                          |                               |                                     |
| <b>Open Market Account</b>       |                                |   |                                 |                                    |                          |                               |                                     |
| Euro                             | 6,792.0                        | 0.0                                     | 0.0                             | 87.6                               | 501.0                    | 0.0                           | 7,380.6                             |
| Japanese yen                     | 7,570.2                        | 0.0                                     | 0.0                             | 0.6                                | 349.2                    | 0.0                           | 7,920.0                             |
| Subtotal                         | 14,362.2                       | 0.0                                     | 0.0                             | 88.2                               | 850.2                    | 0.0                           | 15,300.6                            |
| Interest receivable              | 67.1                           |   |                                 |                                    | 4.9                      | (6.6)                         | 65.4                                |
| Total                            | 14,429.3                       | 0.0                                     | 0.0                             | 88.2                               | 855.1                    | (6.6)                         | 15,366.0                            |
| <b>U.S. Treasury Exchange</b>    |                                |   |                                 |                                    |                          |                               |                                     |
| <b>Stabilization Fund</b>        |                                |   |                                 |                                    |                          |                               |                                     |
| Euro                             | 6,787.0                        | 0.0                                     | 0.0                             | 86.3                               | 500.6                    |                               | 7,373.9                             |
| Japanese yen                     | 7,570.3                        | 0.0                                     | 0.0                             | 0.6                                | 349.2                    |                               | 7,920.1                             |
| Subtotal                         | 14,357.3                       | 0.0                                     | 0.0                             | 86.9                               | 849.8                    |                               | 15,294.0                            |
| Interest receivable <sup>d</sup> | 66.4                           |   |                                 |                                    | 4.9                      | (5.9)                         | 65.4                                |
| Total                            | 14,423.7                       | 0.0                                     | 0.0                             | 86.9                               | 854.7                    | (5.9)                         | 15,359.4                            |

Note: Balances are now stated at amortized cost. Beginning balances have been restated to conform with the new presentation. Figures may not sum to totals because of rounding.

<sup>a</sup>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.

<sup>b</sup>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.

<sup>c</sup>This figure represents the current value change in foreign currency from interest collected on matured investments.

<sup>d</sup>Foreign currency and interest receivables are marked-to-market daily at prevailing rates.

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Table 2

NET PROFITS (LOSSES) ON U.S. TREASURY AND FEDERAL RESERVE  
FOREIGN EXCHANGE OPERATIONS BASED ON HISTORIC  
COST-OF-ACQUISITION EXCHANGE RATES

Millions of Dollars

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|   | Federal Reserve<br>System Open Market Account | U.S. Treasury<br>Exchange Stabilization Fund |
|---|---|--|
| Valuation profits and losses on outstanding<br>assets and liabilities as of June 29, 2001         |   |  |
| Euro  | (1,665.4)                                     | (1,881.8)                                    |
| Japanese yen  | <u>508.2</u>                                  | <u>720.4</u>                                 |
| Total   | <u>(1,157.2)</u>                              | <u>(1,161.4)</u>                             |
| Realized profits and losses<br>from foreign currency sales<br>June 29, 2001 to September 28, 2001 |   |  |
| Euro  | 0.0   | 0.0  |
| Japanese yen  | <u>0.0</u>                                    | <u>0.0</u>                                   |
| Total   | <u>0.0</u>                                    | <u>0.0</u>                                   |
| Valuation profits and losses on outstanding<br>assets and liabilities as of September 28, 2001    |   |  |
| Euro  | 505.9   | 505.5  |
| Japanese yen  | <u>349.2</u>                                  | <u>349.2</u>                                 |
| Total   | <u>855.1</u>                                  | <u>854.7</u>                                 |

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Table 3

FEDERAL RESERVE RECIPROCAL CURRENCY ARRANGEMENTS

Millions of Dollars

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| <u>Institution</u>    | <u>Amount of Facility</u> | <u>Outstanding as<br/>of September 28, 2001</u> |
|-----------------------|---------------------------|---|
| Bank of Canada        | 10,000 <sup>a</sup>       | 0   |
| Bank of Mexico        | 3,000                     | 0   |
| European Central Bank | 50,000 <sup>b</sup>       | 0   |
| Bank of England       | 30,000 <sup>b</sup>       | 0   |
| Total                 | <u>93,000</u>             | <u>0</u>  |

<sup>a</sup>Includes temporary augmentation of existing \$2 billion swap arrangement.

<sup>b</sup>Temporary thirty-day swap arrangement.

U.S. TREASURY EXCHANGE STABILIZATION FUND  
CURRENCY ARRANGEMENTS

Millions of Dollars

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| <u>Institution</u> | <u>Amount of Facility</u> | <u>Outstanding as<br/>of September 28, 2001</u> |
|--------------------|---------------------------|---|
| Bank of Mexico     | 3,000                     | 0   |
| Total              | <u>3,000</u>              | <u>0</u>  |

Table 4

DAILY ECB SWAP FACILITY ACTIVITY

Billions of Dollars

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| Date      | Drawings | Repayments | Amount Outstanding |
|-----------|----------|------------|--------------------|
| 9/12/2001 | 5.4      | 0          | 5.4                |
| 9/13/2001 | 14.147   | 0          | 19.547             |
| 9/14/2001 | 3.915    | 14.147     | 9.315              |
| 9/17/2001 | 0        | 9.315      | 0                  |

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