# TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

*July – September 2010*

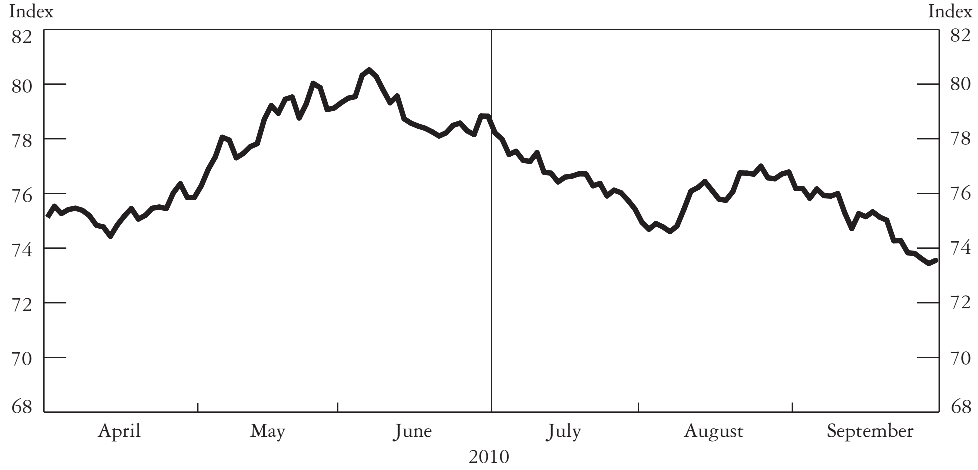
During the third quarter of 2010, the U.S. dollar's trade-weighted exchange value declined 6.7 percent, as measured by the Federal Reserve Board's major currencies index. The dollar depreciated 10.2 percent against the euro and 5.5 percent against the Japanese yen. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

The U.S. dollar depreciated against most major and emerging-market currencies throughout the quarter, as softening U.S. economic data and growing expectations for possible further monetary policy accommodation prompted some investors to reallocate capital from the United States to overseas markets. These developments primarily reflected a reassessment of relative growth prospects across economies, which were reflected in changes in interest rate differentials. Additionally, concerns over peripheral European sovereign debt generally stabilized during the quarter, supporting the euro.

*This report, presented by Brian Sack, Executive Vice President, Federal Reserve Bank of New York, and Manager of the 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 through September 2010. Alex Cohen was primarily responsible for preparation of the report.*

*Chart 1*

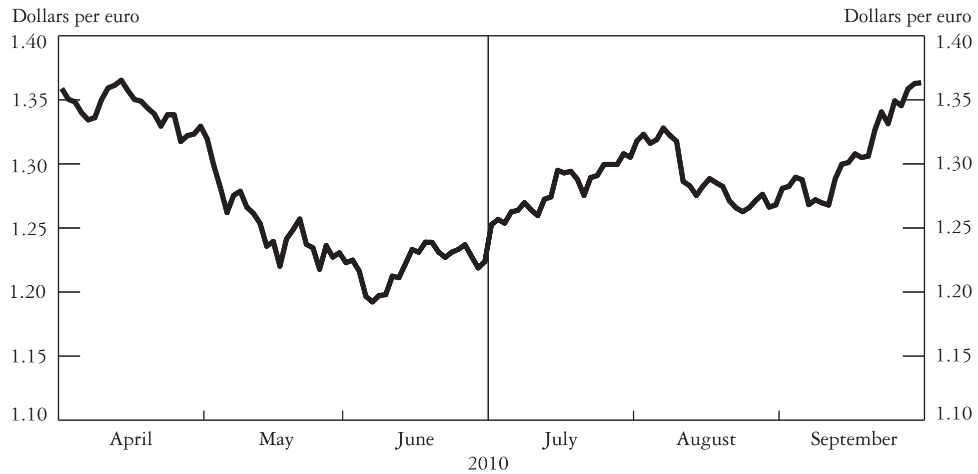
TRADE-WEIGHTED U.S. DOLLAR




Sources: Board of Governors of the Federal Reserve System; Bloomberg L.P.

*Chart 2*

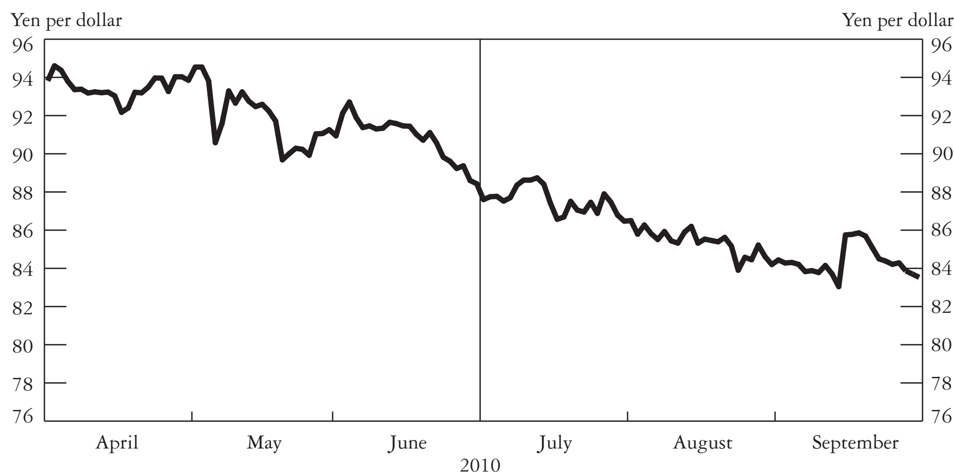
EURO–U.S. DOLLAR EXCHANGE RATE




Source: Bloomberg L.P.

*Chart 3*

U.S. DOLLAR–YEN EXCHANGE RATE

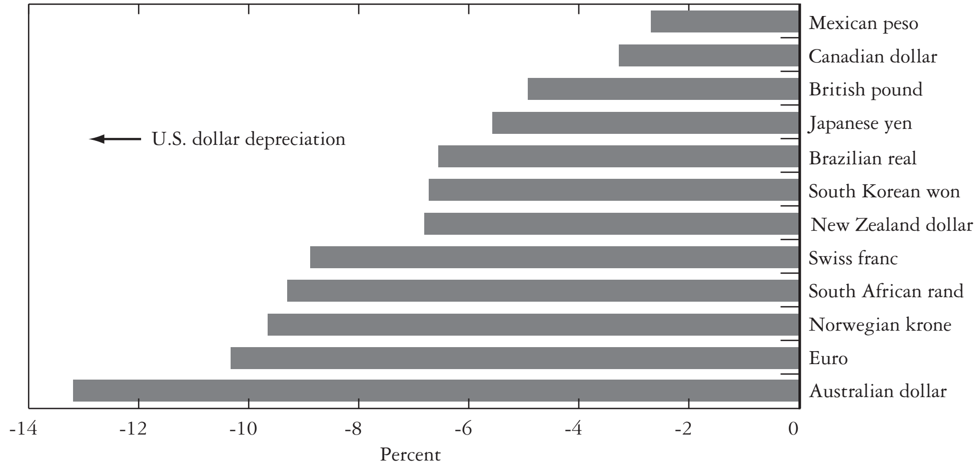



Source: Bloomberg L.P.

## DOLLAR DEPRECIATES ON SOFTENING U.S. ECONOMIC OUTLOOK

Throughout the quarter, the U.S. dollar depreciated against nearly all major and emerging-market currencies, depreciating 10.2 percent against the euro and 5.5 percent against the Japanese yen. The dollar was driven primarily by concerns about the relative U.S. growth outlook. Investors remained somewhat more sanguine about global growth prospects during the period. The divergence in the underlying strength of the U.S. and global outlooks and the associated yield differential across those markets prompted some investors to reallocate capital away from the United States, putting downward pressure on the dollar. The depreciation of the U.S. dollar was also pronounced against currencies closely linked to commodities and the global growth cycle, such as the Australian dollar, Norwegian krone, and South African rand.

*Chart 4*
U.S. DOLLAR AGAINST SELECTED CURRENCIES DURING THIRD QUARTER




Source: Bloomberg L.P.

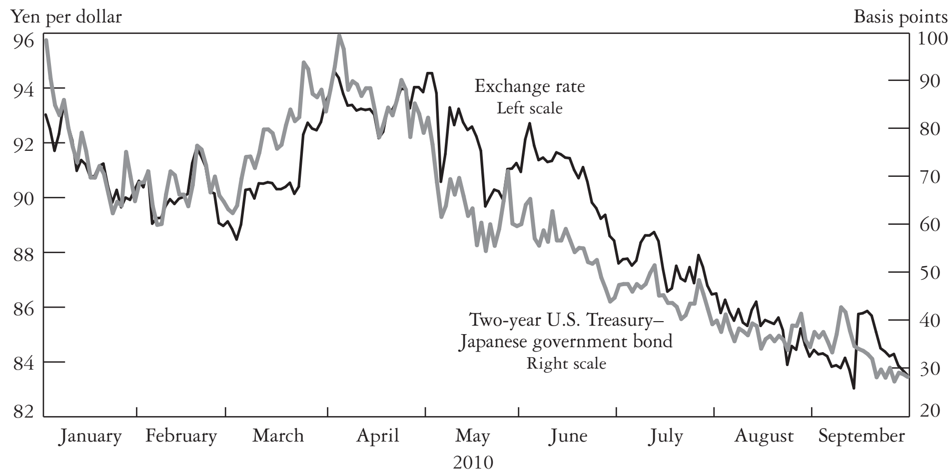
Early in the quarter, U.S. economic data releases presented generally lower-than-expected results, signaling a marked decline in the U.S. outlook. This development continued a trend observed toward the end of the second quarter. Market participants noted a series of worse-than-expected results in housing and employment data in July and August, while various measures of manufacturing data and consumer confidence also came in below expectations. At the end of the quarter, second-quarter real GDP increased 1.7 percent (annualized), down from 3.7 percent in the first quarter, while the unemployment rate remained at 9.6 percent. Meanwhile, European economic data, particularly Germany's, tended to beat expectations, supporting the euro early in the quarter.

Expectations that the Federal Reserve could adopt additional easing measures steadily increased throughout the third quarter, as a result of the waning economic sentiment in the United States. Early in the quarter, the release of the Federal Open Market Committee's (FOMC) June meeting minutes contained a slight downward revision to the Committee's central tendency projections for real GDP and core PCE inflation for 2010 and 2011, in addition to a slight upgrade of the unemployment projection. At the FOMC's August 10 meeting, the Federal Reserve announced that it would maintain its holdings of securities by reinvesting principal payments from agency debt and agency mortgage-backed securities into longer term Treasury securities. Market participants interpreted the decision as a way to prevent the passive tightening of monetary policy that was occurring with the natural reduction in these mortgage-related holdings. Furthermore, market participants suggested that the statement's economic assessment represented a more pessimistic shift in tone from previous statements, noting specific language that "the pace of economic recovery is likely to be more modest in the near term than had been anticipated."

The FOMC decision to maintain its holdings of securities, along with commentary from some Federal Reserve officials expressing concerns over downside risks to inflation, raised market expectations about the possibility of future easing measures. These expectations became further entrenched following the FOMC's September 21 statement, which was interpreted as suggesting that the Committee had growing concerns with the low readings of inflation. Around this time, market participants increasingly assumed that possible easing measures would most likely be in the form of additional balance sheet expansion through purchases of Treasury securities, similar to policies enacted in 2009. The dollar's depreciation accelerated toward the end of the quarter, as investors sought greater returns abroad.

Declining U.S. interest rates were contestant with the depreciation of the dollar against the Japanese yen, with repatriation of capital by Japanese investors reportedly also affecting the currency pair. During the quarter, the dollar–yen currency pair reached a fifteen-year low of just below ¥83 per dollar. In response to the strength of the yen, Japanese authorities intervened in the currency pair for the first time since 2004. On September 15, officials from Japan's Ministry of Finance (MoF) confirmed that they had directed the Bank of Japan (BoJ) to unilaterally intervene in currency markets to purchase dollars against the sale of Japanese yen. The MoF later confirmed that it had purchased ¥2,124.9 billion (approximately $25.1 billion). Immediately following the intervention, the dollar–yen currency pair appreciated approximately 3 percent to around ¥86 per dollar, before resuming its depreciation path to end the quarter at ¥83.53 per dollar.

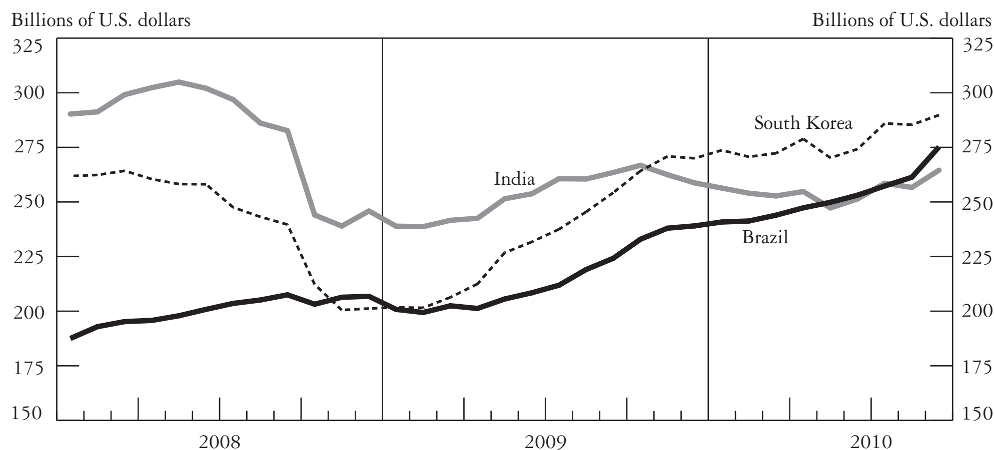
*Chart 5*
U.S. DOLLAR–YEN EXCHANGE RATE AND TWO-YEAR INTEREST RATE DIFFERENTIALS




Source: Bloomberg L.P.

Around this time, dealers also reported continued intervention activity among several emerging-market central banks, as many of them sought to stem the pace of their domestic currency's appreciation in response to increasing capital inflows. As a result, many emerging-market central banks, particularly in Asia and Latin America, reported continued accumulation of dollar reserves during the quarter. For example, Brazil, South Korea, and India reported their reserve balances increasing between $13 billion and $22 billion.

*Chart 6*
SELECTED FOREIGN INTERNATIONAL RESERVES




Source: Bloomberg L.P.

Some market commentators suggested interest among many of these reserve managers in selling the dollar against other major currencies. This activity was characterized as routine reserve rebalancing activity by the central banks, as they sought to sell a portion of the dollars acquired during their domestic currency interventions in order to maintain a relatively steady currency allocation in their reserve holdings. Still, some suggested that potential interest by certain emerging-market central banks in selling the dollar against other major currencies weighed on broader investor sentiment toward the dollar.

## SOME RISKS ASSOCIATED WITH PERIPHERAL EUROPEAN FISCAL OUTLOOK ABATE, YET CONCERNS REMAIN

Early in the quarter, market participants noted a continuing yet cautious reduction in concerns about the sovereign debt challenges facing some European countries. This shift in sentiment from earlier in the year supported the exchange value of the euro and other European financial markets, prompting investors to cover previously established short euro positions. From the beginning of the quarter to early August, the euro appreciated to a three-month high of around $1.33 per euro.

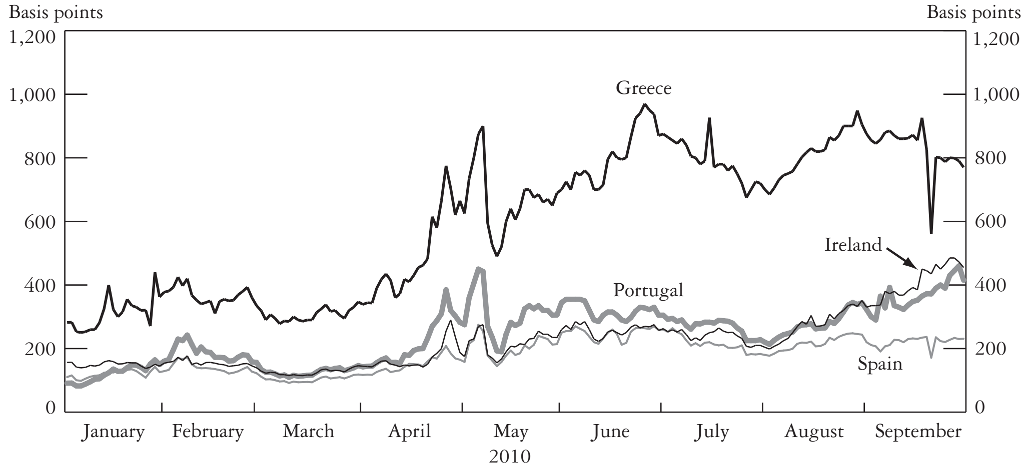
Market participants attributed more positive investor sentiment toward the euro area to a variety of factors and events during the quarter. First, investors continued to be encouraged by joint support measures from the European Commission, International Monetary Fund, and European Central Bank (ECB), which were announced in the second quarter. Second, the smooth expiration of the ECB's one-year Long-Term Refinancing Operation suggested that euro-area funding markets were less strained than some had anticipated. Third, the results of the Committee of European Banking Supervisors' stress tests on July 23 were generally well received, particularly because they provided increased transparency on the European banking sector. Finally, peripheral European sovereign debt auctions during the quarter continued to be well received on balance, allaying some concerns of near-term rollover risk. These factors also contributed to a broad stabilization of other European financial markets. During July, peripheral sovereign debt and credit default swap (CDS) spreads narrowed markedly, while European equity indexes rose. For example, five-year CDS spreads for Greece, Spain, Portugal, and Ireland declined between 47 and 150 basis points in July.

In August, however, investors began to refocus on developments in some peripheral euro-area countries, after a brief reprieve from market scrutiny earlier in the quarter. These concerns revolved primarily around the financial sector and contributed to a pause in the euro's appreciation during the quarter, along with a rewidening of some peripheral sovereign debt and CDS spreads. Nevertheless, price action attributable to these concerns appeared to be generally contained to some specific countries, in contrast to the broader effects observed in the second quarter.

Concerns about the health of the Irish banking sector generated much attention around this time. In August, the European Commission approved a greater-than-expected additional capital injection of up to €10 billion for one of Ireland's nationalized banks, while comments from other Irish officials suggested that there could be greater capital needs in the future. These concerns, coupled with weaker-than-expected earnings reports from several Irish banks, increased the uncertainty over the ultimate cost of official financial sector support in Ireland and its potential impact on sovereign finances. Additionally, reports from euro-area national central banks suggested that use of the ECB's liquidity facility by banks in a few particular countries was increasing, causing some concern among investors about the financial-sector health of these countries. Sovereign debt and CDS spreads of some peripheral euro-area countries widened toward the second half of the quarter, before stabilizing in September. The euro resumed its appreciation trend in September as investor focus shifted back toward the U.S. economic and policy outlook, closing the quarter at around $1.3634 per euro.

*Chart 7*

SOVEREIGN FIVE-YEAR CREDIT DEFAULT SWAP SPREADS

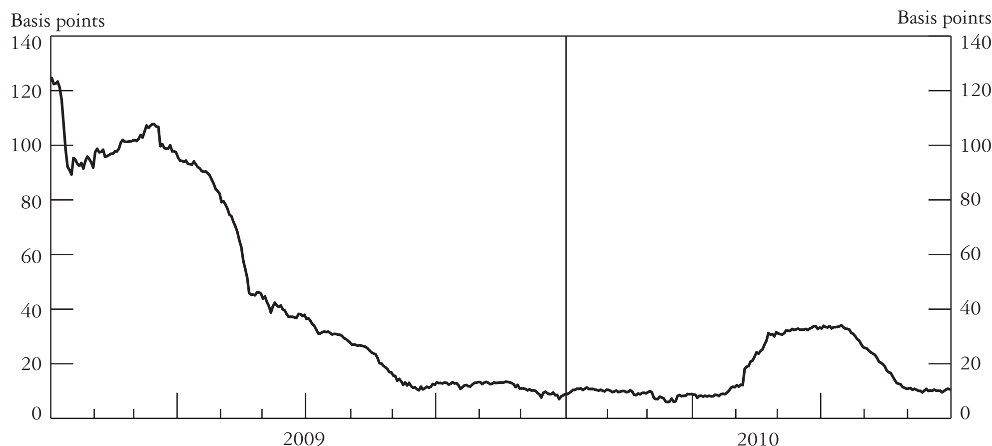



Source: Bloomberg L.P.

## LIQUIDITY CONDITIONS IN DOLLAR FUNDING MARKETS STABILIZE

Liquidity conditions in international U.S. dollar funding markets continued to improve over the course of the quarter. Spreads between U.S. dollar Libor (London interbank offered rate) and OIS (overnight index swaps) narrowed markedly. Three-month Libor–OIS spreads narrowed from 33 to 11 basis points during this time, returning to ranges observed in fourth-quarter 2009 and first-quarter 2010. Market participants attributed a portion of the narrowing in spreads to improved sentiment toward the European banking sector and a reduction in systemic risks due to the cumulative effect of several international policy measures announced in the spring and summer.

*Chart 8*
U.S. DOLLAR LIBOR–OVERNIGHT INDEX SWAP SPREAD




Source: Bloomberg L.P.

In early May, the Federal Reserve reestablished temporary U.S. dollar liquidity swap facilities with a number of foreign central banks in response to the reemergence of strains in offshore U.S. dollar short-term funding markets. Temporary swap arrangements, which had expired on February 1, 2010, were reestablished with the ECB, BoJ, Bank of Canada (BoC), Bank of England (BoE), and Swiss National Bank (SNB). The ECB, BoJ, BoE, and SNB have unlimited swap line amounts, while the BoC has a $30 billion swap line. As of September 30, the ECB had $60 million outstanding; the BoJ had $1 million outstanding; and the BoC, BoE, and SNB had not utilized their swap lines. These outstanding amounts represent a decrease from $1 billion outstanding with the ECB and $0.2 billion with the BoJ from the end of the second quarter.

## TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE HOLDINGS

The U.S. monetary authorities did not undertake any intervention operations during the quarter. As of September 30, 2010, the value of the foreign-currency-denominated assets in the U.S. Treasury's Exchange Stabilization Fund totaled $25.84 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account holdings of foreign-currency-denominated assets totaled $25.93 billion, comprised of $25.87 billion of foreign exchange reserve portfolio investments and $0.06 billion carrying value of outstanding swaps with authorized foreign central banks.

*Foreign Exchange Reserve Holdings*

The U.S. monetary authorities invest their foreign currency reserves in a variety of instruments that yield market rates of return and have a high degree of liquidity and credit quality. To the greatest extent practicable, the investments are split evenly between the System Open Market Account and the Exchange Stabilization Fund. A significant portion of the U.S. monetary authorities' foreign exchange reserves is invested on an outright basis in German, French, and Japanese government securities. Under euro-denominated repurchase agreements, the U.S. monetary authorities accept sovereign debt backed by the full faith and credit of the following governments: Belgium, France, Germany, Italy, the Netherlands, and Spain. Foreign currency reserves are also invested at the Bank for International Settlements and in facilities at other official institutions. As of September 30, direct holdings of foreign government securities totaled $24.8 billion, split evenly between the Federal Reserve System Open Market Account and the U.S. Treasury Exchange Stabilization Fund. Foreign government securities held under repurchase agreements totaled $5.0 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 U.S. Dollars

| | | Change in Balances by Source | | | | |
|---|---|---|---|---|---|---|
| | Carrying Value, June 30, 2010[a] | Net Purchases and Sales[b] | Investment Earnings[c] | Realized Gains/Losses on Sales[d] | Unrealized Gains/Losses on Foreign Currency Revaluation[e] | Carrying Value, September 30, 2010[a] |
| **Federal Reserve System** | | | | | | |
| **Open Market Account (SOMA)** | | | | | | |
| Euro | 12,880 | 0 | 44 | 0 | 1,374[f] | 14,299 |
| Japanese yen | 10,909 | 0 | 10 | 0 | 648[f] | 11,568 |
| Total | 23,789 | 0 | 55 | 0 | 2,022 | 25,866 |

| | Carrying Value, June 30, 2010[a] | Change in Swaps Outstanding | Change in Accrued Interest Receivable | Change in Exchange Translation Liability on Foreign Exchange Swaps | Carrying Value, September 30, 2010[a] |
|---|---|---|---|---|---|
| Reciprocal currency arrangements | | | | | |
| Euro | 1,026 | (972) | (1) | 8[f,g] | 60 |
| Japanese yen | 223 | (212) | (0) | (10)[f,g] | 1 |
| Total | 1,249 | (1,184) | (2) | (2) | 61 |

| | | Change in Balances by Source | | | | |
|---|---|---|---|---|---|---|
| | Carrying Value, June 30, 2010[a] | Net Purchases and Sales[b] | Investment Earnings[c] | Realized Gains/Losses on Sales[d] | Unrealized Gains/Losses on Foreign Currency Revaluation[e] | Carrying Value, September 30, 2010[a] |
| **U.S. Treasury Exchange Stabilization Fund (ESF)** | | | | | | |
| Euro | 12,859 | 0 | 44 | 0 | 1,372 | 14,275 |
| Japanese yen | 10,909 | 0 | 10 | 0 | 648 | 11,568 |
| Total | 23,768 | 0 | 55 | 0 | 2,020 | 25,843 |

Note: Figures may not sum to totals because of rounding.

[a] Carrying value of the reserve asset position includes interest accrued on foreign currency, which is based on the "day of" accrual method.

[b] Net purchases and sales include foreign currency purchases related to official activity, swap drawings and repayments, and warehousing.

[c] Investment earnings include accrued interest and amortization on outright and swap-related holdings.

[d] Gains and losses on sales are calculated using average cost.

[e] Reserve asset balances are revalued daily at the noon buying rates.

[f] Valuation adjustments on swap-related holdings do not affect profit and loss because the impact is offset by the unwinding of the forward contract at the repayment date.

[g] Figures represent the exchange translation liability on reciprocal currency arrangements.

*Table 2*

## BREAKDOWN OF FOREIGN RESERVE ASSETS HELD

Carrying Value in Millions of U.S. Dollars, as of September 30, 2010

| | U.S. Treasury Exchange Stabilization Fund (ESF)[a] | Federal Reserve System Open Market Account (SOMA)[a] |
|---|---|---|
| **Euro-denominated assets:** | **14,275.5** | **14,298.7** |
| Cash held on deposit at official institutions | 7,116.3 | 7,139.5 |
| Marketable securities held under repurchase agreements[b] | 2,503.2 | 2,503.2 |
| Marketable securities held outright | 4,656.0 | 4,656.0 |
| German government securities | 1,864.1 | 1,864.1 |
| French government securities | 2,791.9 | 2,791.9 |
| **Japanese-yen–denominated assets:** | **11,567.6** | **11,567.6** |
| Cash held on deposit at official institutions | 3,820.1 | 3,820.1 |
| Marketable securities held outright | 7,747.5 | 7,747.5 |
| **Reciprocal currency arrangements:** | | |
| Euro-denominated assets: | | **59.9** |
| Other assets[c] | | 59.9 |
| Japanese-yen–denominated assets: | | **1.1** |
| Other assets[c] | | 1.1 |

Note: Figures may not sum to totals because of rounding.

[a] As of September 30, the euro SOMA and ESF portfolios both had Macaulay durations of 9.4 months; the yen SOMA and ESF portfolios both had Macaulay durations of 11.7 months.

[b] Sovereign debt obligations of Belgium, France, Germany, Italy, the Netherlands, and Spain are currently eligible collateral for reverse repo transactions.

[c] Carrying value of outstanding reciprocal currency swaps with the European Central Bank, the Swiss National Bank, the Bank of Japan, the Bank of Canada, and the Bank of England.

*Table 3*

RECIPROCAL CURRENCY ARRANGEMENTS

Millions of U.S. Dollars

| Institution | Amount of Facility | Outstanding as of September 30, 2010 |
|---|---|---|
| | **Federal Reserve System Open Market Account (SOMA)** | |
| Bank of Canada | 2,000 | 0 |
| Banco de México | 3,000 | 0 |
| European Central Bank[a] | Unlimited | 60 |
| Swiss National Bank[a] | Unlimited | 0 |
| Bank of Japan[a] | Unlimited | 1 |
| Bank of Canada[a] | 30,000 | 0 |
| Bank of England[a] | Unlimited | 0 |
| | Unlimited | 61 |
| | **U.S. Treasury Exchange Stabilization Fund (ESF)** | |
| Banco de México | 3,000 | 0 |
| Total | 3,000 | 0 |

[a] Temporary swap arrangement.