TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

April – June 2010

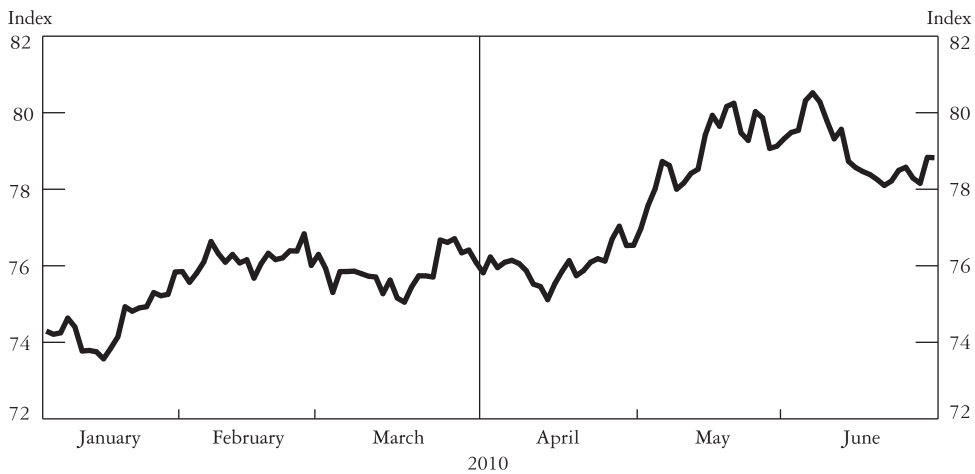
During the second quarter of 2010, the U.S. dollar's trade-weighted exchange value appreciated 3.6 percent, as measured by the Federal Reserve Board's major currencies index. This pattern reflected the dollar's divergent performance against major currencies. In particular, the dollar appreciated 10.4 percent against the euro but depreciated 5.4 percent against the Japanese yen. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

Foreign exchange markets experienced considerable volatility during the quarter, but overall trading conditions were deemed orderly by market participants. The dollar appreciated against most G-10 currencies during the first two months of the quarter, as ongoing concerns about fiscal sustainability and the growth outlook in some euro-area peripheral countries weighed on sentiment toward riskier assets. In early June, however, the dollar began to depreciate against the euro following weaker-than-expected data releases in the United States in conjunction with moderately stronger-than-expected growth indicators in Europe. The stability of the euro may have been aided by a decline in the uncertainty that had accompanied several key risk events in the euro area and by the cumulative effect of a number of policy announcements by European officials.

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 April through June 2010. Gregory Levin was primarily responsible for preparation of the report.

Chart 1

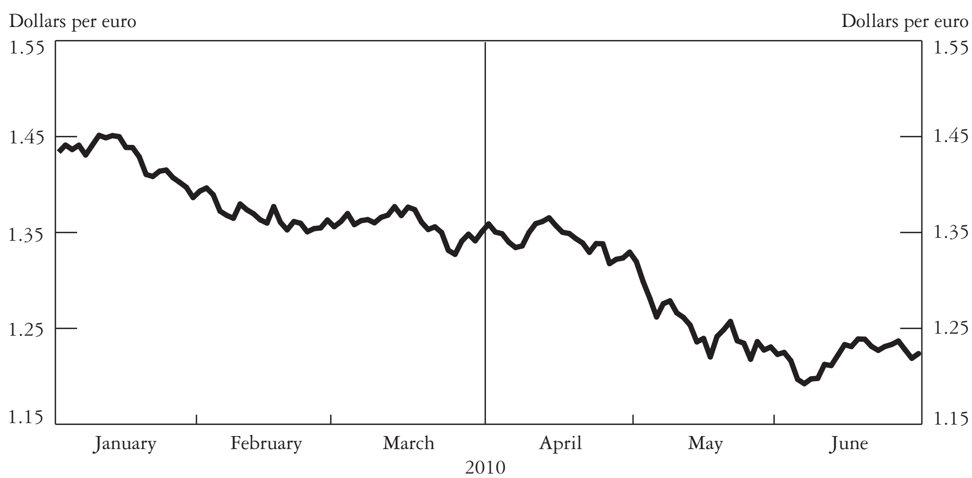
TRADE-WEIGHTED U.S. DOLLAR



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

Chart 2

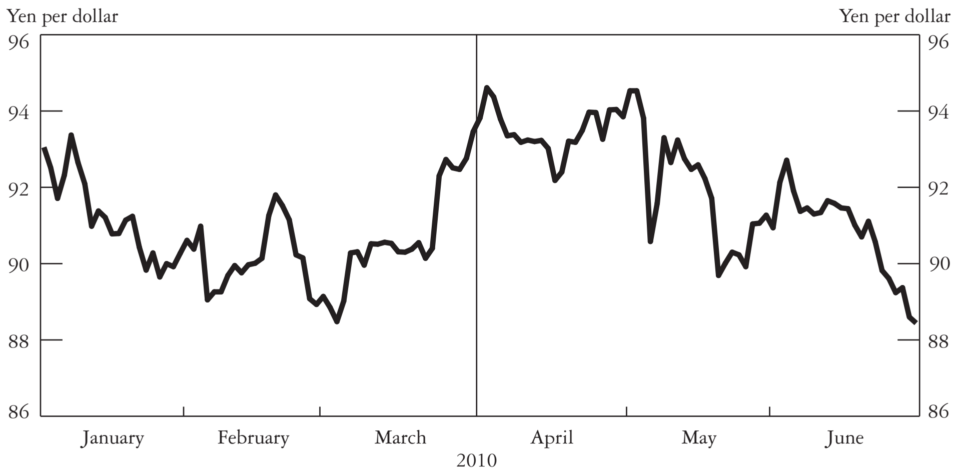
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

U.S. DOLLAR–YEN EXCHANGE RATE



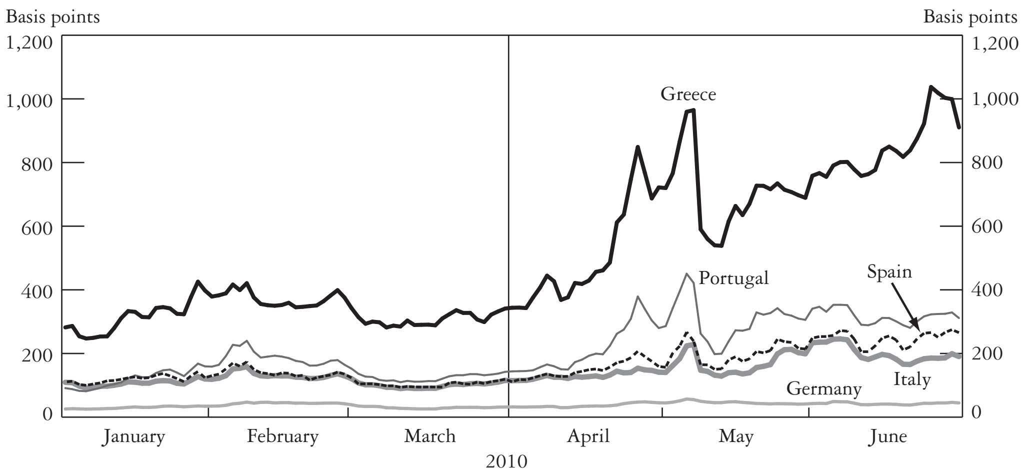
Source: Bloomberg L.P.

Strains in short-term funding markets reemerged in Europe during the quarter, as concerns over fiscal deficits and growth prospects in peripheral European countries remained elevated. In response to these strains, the Federal Reserve reactivated U.S. dollar liquidity swap facilities with the Bank of England (BoE), the European Central Bank (ECB), the Swiss National Bank (SNB), the Bank of Japan (BoJ), and the Bank of Canada (BoC). The reactivation of these liquidity swap lines was designed to improve liquidity conditions in global money markets and to minimize the risk that strains abroad could spread to U.S. markets, by providing foreign central banks with the capacity to deliver U.S. dollar funding to institutions in their jurisdictions.

FISCAL AND GLOBAL GROWTH CONCERNS DRIVE CURRENCY PERFORMANCE

Early in the second quarter, favorable global economic data contributed to an appreciation of G-10 currencies against the U.S. dollar, despite sovereign risk concerns about some euro-area countries that had persisted since November. In April and May, the dollar appreciated against most G-10 currencies amid a series of credit rating downgrades of peripheral euro-area countries and large upcoming debt maturities for these countries. These events contributed to a surge in

Chart 4
SOVEREIGN FIVE-YEAR CREDIT DEFAULT SWAP SPREADS



Source: Bloomberg L.P.

government bond yields and raised concerns about the peripheral euro-area countries' broader fiscal and growth outlooks. The cost of protecting against sovereign debt default in many of these countries, as measured by credit default swap spreads, also rose sharply.

The euro and other G-10 currencies continued to depreciate against the U.S. dollar throughout much of the quarter despite a number of policy announcements by European officials, including pledges of direct fiscal support and increased bank liquidity and fiscal austerity measures. On May 2, the European Commission and the International Monetary Fund (IMF) agreed to provide Greece with a three-year €110 billion ($145 billion) aid package that is expected to help cover the country's financing needs for the next two years. The ECB then announced on May 3 that it was suspending the minimum rating threshold for the collateral eligibility requirements for marketable debt instruments issued or guaranteed by the Greek government. On May 9, European finance ministers announced the establishment of a European Stabilization Mechanism that includes €440 billion from the European Financial Stability Facility (EFSF), €60 billion from an existing balance-of-payments facility, and unspecified financial support from the IMF. On May 10, the ECB announced it would conduct interventions in the public and private debt securities markets in the euro area (through its Securities Markets Program), a move it suggested was aimed at ensuring depth and liquidity in dysfunctional markets. The ECB also announced that it would hold an additional six-month long-term refinancing operation (LTRO) in mid-May and two three-month LTROs in May and June to support banking sector financing activities. Finally, in response to the emerging strains in U.S. dollar funding markets in Europe, the Federal Reserve announced the reestablishment of temporary U.S. dollar liquidity swap facilities with the BoE, ECB, SNB, BoJ, and BoC.[1]

The announcement of these joint measures initially contributed to a sharp decline in peripheral European bond yields as well as improvements in offshore dollar funding markets and access to dollar liquidity. At the same time, cash and forward spreads between the U.S. dollar Libor (London interbank offered rate) and overnight index swaps (OIS) stabilized by the end of the quarter.

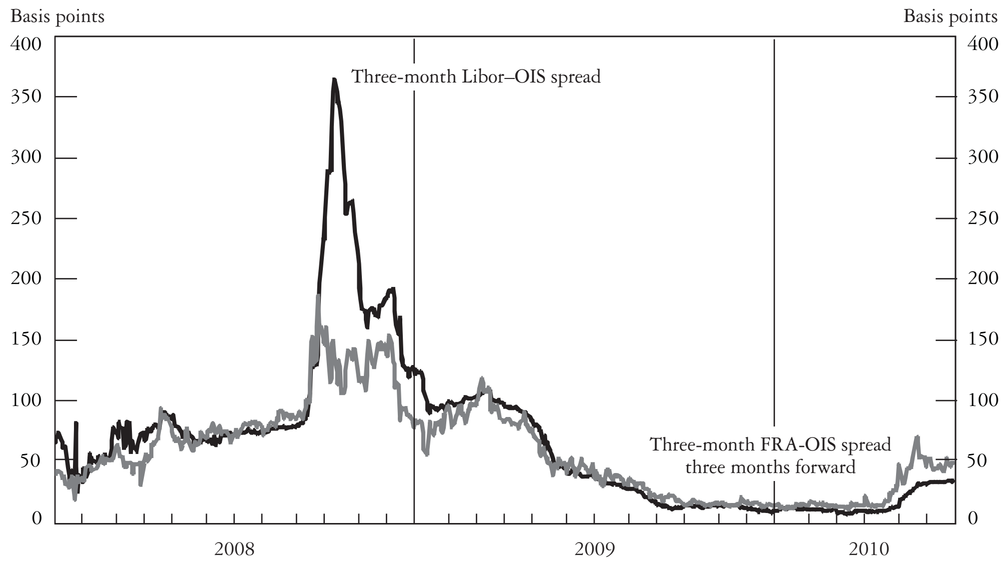
In May, concerns about the situation in Europe persisted, as investors grew increasingly worried about global growth prospects. Global investors reportedly deleveraged out of assets that are highly correlated with global growth and trade. Cyclically sensitive currencies depreciated against the U.S. dollar in May, including the New Zealand and Australian dollars, which depreciated 6.4 and 8.5 percent, respectively. Increases in risk premia weighed on equity indexes and led to increases in implied-measures of volatility. For example, the S&P 500 index, FTSE, and Nikkei declined between 6 and 12 percent in May, while thirty-day implied volatility on S&P 500 options, as measured by the VIX index, increased 10 percentage points to around 32 percent. In contrast to those cyclically sensitive currencies, the Japanese yen appreciated 2.8 percent against the dollar in May, as Japanese investors also deleveraged and reduced holdings of foreign assets.

Euro-area financial institutions that were perceived to have substantial exposure to peripheral European sovereign debt experienced significant funding pressures during the quarter. Obtaining funding in the wholesale markets in tenors beyond one-week had become increasingly difficult due to rising counterparty credit risks. For example, cash spreads between the U.S. dollar Libor and OIS at the three-month tenor increased from around 11 to 32 basis points in May, reaching levels not seen since July 2009. Forward measures of dollar funding rates also increased notably during the period, as evidenced by the widening spread between three-month forward rate agreements and the three-month OIS rate three months forward, rising from an average of around 14 basis points early in April to peak at nearly 70 basis points at the end of May. However, spread levels remained well below those observed in fall 2008. Also a result of bank funding strains, the implied dollar funding rate observed in foreign exchange swaps on major currencies rose more than the U.S. dollar Libor.

[1] The Federal Reserve officially announced the reestablishment of its temporary U.S. dollar liquidity swap facilities with the BoE, ECB, SNB, and BoC on May 9 and with the BoJ on May 10.

Chart 5

SPOT VERSUS FORWARD SPREAD INDICATORS OF U.S. DOLLAR FUNDING RATES



Source: Bloomberg L.P.

DOLLAR DEPRECIATES LATE IN QUARTER ON REASSESSMENT OF RELATIVE GROWTH OUTLOOK

Market concerns about the relative strength of the U.S. growth outlook led to the dollar's moderate depreciation against major currencies beginning in early June. A series of weaker-than-expected data releases from the United States began to raise concerns about the sustainability of the U.S. recovery. In June, the ten-year U.S. Treasury yield declined 35 basis points to below 3.0 percent for the first time since April 2009, while the two-year U.S. Treasury yield declined 17 basis points, falling to a record-low yield of 59 basis points on June 29. Declines in U.S. Treasury yields reduced spreads between equivalent-maturity German and Japanese sovereign debt yields to their lowest levels for 2010. This adjustment in relative interest rate differentials was consistent with the dollar's moderate depreciation against the euro and yen toward the end of the quarter. On the margin, the emergence of some details related to the European Union's EFSF and other policy measures contributed to a reduction in some tail risks associated with the euro.

An improved growth outlook outside of the United States led some central banks to begin tightening monetary policy during the quarter, contributing to a strengthening of their currencies against the dollar. Notably, in early June the BoC raised its overnight target policy rate 25 basis points to 0.5 percent, and the Reserve Bank of New Zealand raised its official cash rate 25 basis points to 2.75 percent. Although the SNB did not raise its policy rate in June, the Swiss franc appreciated 7.2 percent against the dollar over the month, as the SNB noted in its June policy statement that deflationary risks had "largely disappeared." Moreover, the SNB raised its 2010 economic growth forecast to 2.0 percent in June, revised upward from 1.5 percent in March, as well as removed language from its previous statement that suggested it would "act decisively to prevent any excessive appreciation of the Swiss franc against the euro."

The British pound appreciated 2.8 percent against the dollar in June, as political risks associated with Britain's June general election abated. Earlier in the quarter, market participants had expressed concerns about the ability of the newly formed coalition government to enact fiscal reforms. However, market participants were encouraged by the coalition government's passing in late June of a new budget, which was seen as a viable approach to deficit reduction.

CHINESE AUTHORITIES ENHANCE EXCHANGE RATE FLEXIBILITY

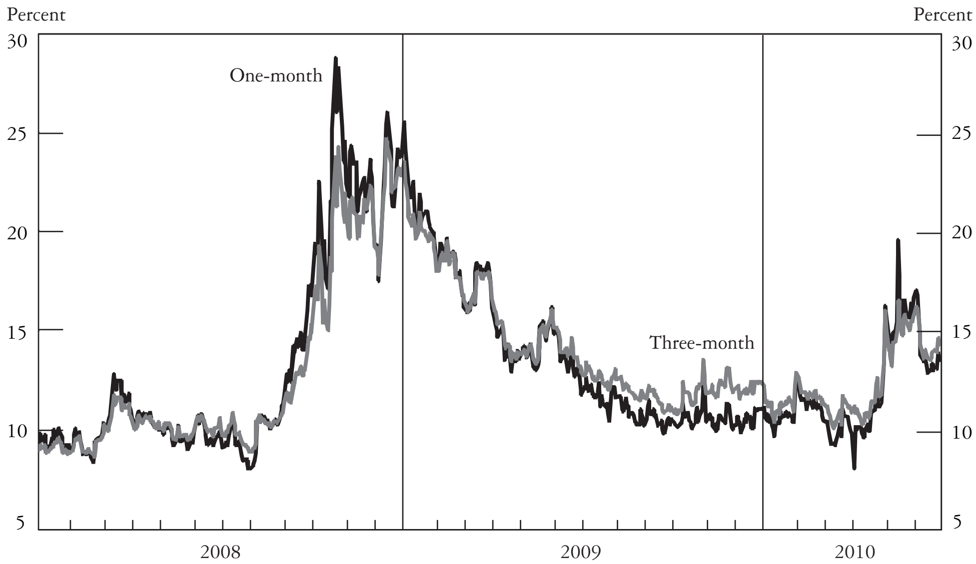
The People's Bank of China (PBoC) released a statement in mid-June suggesting it would enhance the flexibility of the Chinese yuan. The PBoC allowed the currency to appreciate 0.7 percent against the U.S. dollar through the end of the month. Prior to this announcement, the PBoC had held the yuan steady against the dollar since July 2008. The statement noted a gradual recovery in global and domestic growth as being supportive of the move, adding that increased currency flexibility would contribute to a rebalancing of the Chinese economy toward more sustainable growth. Market participants debated the longer term implications of the move, in particular the extent to which the reforms might imply increased exchange rate flexibility against the currencies of China's major trading partners. Market-implied expectations for yuan appreciation, as evidenced by twelve-month non-deliverable forward contracts, declined from 2.3 percent immediately after the announcement to 1.8 percent by the end of the quarter.

OPTION-IMPLIED VOLATILITY RISES IN SECOND QUARTER, WHILE TRADING CONDITIONS REMAIN ORDERLY

Heightened volatility during the quarter placed renewed focus on trading conditions in foreign exchange markets. Option-implied volatility in the euro–U.S. dollar and U.S. dollar–yen exchange rates increased notably in May, but declined as near-term risks in the euro area appeared to dissipate later in the quarter. One- and three-month implied volatility in the euro–dollar pair increased from an average of roughly 11 percent in the first quarter to peak at more than

Chart 6

ONE-MONTH AND THREE-MONTH EURO–U.S. DOLLAR IMPLIED VOLATILITY



Source: Bloomberg L.P.

15 percent in late May. Trading volumes were generally characterized as above average, but they also subsided toward the end of the quarter. Bid-ask spreads on observable electronic trading platforms widened modestly in May, although they were generally within recent averages for the year and were noticeably narrower than levels reached in the fourth quarter of 2008 and the first quarter of 2009.

TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE HOLDINGS

The U.S. monetary authorities did not undertake any intervention operations during the quarter. As of June 30, 2010, the value of the foreign-currency-denominated assets in the U.S. Treasury's Exchange Stabilization Fund totaled $23.8 billion, comprised of euro and yen holdings. The foreign-currency-denominated assets of the Federal Reserve System Open Market Account holdings totaled $25.0 billion, comprised of $23.8 billion of foreign exchange reserve portfolio investments and $1.2 billion carrying value of outstanding swaps with authorized foreign central banks.

Temporary Reciprocal Currency Arrangements (Dollar Liquidity Swap Lines)

From 2007 through 2009, the Federal Open Market Committee authorized temporary reciprocal currency arrangements with fourteen foreign central banks to facilitate the functioning of financial markets. Through the reciprocal currency swaps, the Federal Reserve provided dollars to the foreign central banks, rather than directly to the institutions obtaining funding through these operations. Each foreign central bank determined the terms on which it would lend dollars onward to institutions in its jurisdiction, including how it would allocate dollar funds to institutions, which institutions were eligible to borrow, and what types of collateral they could borrow against. Because the Federal Reserve's contractual relationship was with the foreign central bank exclusively and not with the institutions obtaining dollar funding, the Federal Reserve did not assume the credit risk associated with lending to financial institutions based in these foreign jurisdictions.[2]

In early May, the Federal Reserve reestablished temporary U.S. dollar liquidity swap facilities with five foreign central banks in response to the reemergence of strains in the offshore U.S. dollar short-term funding markets. Temporary swap arrangements have been reestablished with the BoE, ECB, SNB, BoJ, and BoC. As of June 30, the ECB had $1.0 billion outstanding, the BoJ had $0.2 billion outstanding, and the BoE, SNB, and BoC had not utilized their swap lines.

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 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 June 30, direct holdings of foreign government securities totaled $23 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 $4.5 billion at the end of the quarter and were also split evenly between the two authorities.

[2] The initial swap lines expired on February 1, 2010, and the last outstanding draw under these arrangements matured on February 12, 2010.

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, March 31, 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, June 30, 2010[a]
Federal Reserve System						
Open Market Account (SOMA)						
Euro	14,129	0	42	0	(1,291)[f]	12,880
Japanese yen	10,325	0	11	0	573[f]	10,909
Total	24,454	0	53	0	(718)	23,789

	Carrying Value, March 31, 2010[a]	Change in Swaps Outstanding	Change in Accrued Interest Receivable	Change in Exchange Translation Liability on Foreign Exchange Swaps	Carrying Value, June 30, 2010[a]
Reciprocal currency arrangements					
Euro	0	1,032	1	(8)[f,g]	1,026
Swiss franc	0	0	0	0[f,g]	0
Japanese yen	0	213	0	10[f,g]	223
British pound	0	0	0	0[f,g]	0
Total	—	1,245	2	2	1,249

		Change in Balances by Source				
	Carrying Value, March 31, 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, June 30, 2010[a]
U.S. Treasury Exchange						
Stabilization Fund (ESF)						
Euro	14,106	0	42	0	(1,289)	12,859
Japanese yen	10,325	0	11	0	573	10,909
Total	24,431	0	53	0	(716)	23,768

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 June 30, 2010

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets:	12,859.0	12,879.9
Cash held on deposit at official institutions	6,401.0	6,422.0
Marketable securities held under repurchase agreements[b]	2,266.2	2,266.2
Marketable securities held outright	4,191.7	4,191.7
German government securities	1,814.6	1,814.6
French government securities	2,377.2	2,377.2
Japanese-yen–denominated assets:	10,909.2	10,909.1
Cash held on deposit at official institutions	3,605.3	3,605.3
Marketable securities held outright	7,303.9	7,303.9
Reciprocal currency arrangements:		
Euro-denominated assets:		1,025.7
Other assets[c]		1,025.7
Japanese-yen–denominated assets:		223.1
Other assets[c]		223.1

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

[a] As of June 30, the euro SOMA and ESF portfolios had Macaulay durations of 9.1 and 9.0 months, respectively; the yen SOMA and ESF portfolios both had Macaulay durations of 10.7 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 June 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	1,032
Swiss National Bank[a]	Unlimited	0
Bank of Japan[a]	Unlimited	213
Bank of Canada[a]	30,000	0
Bank of England[a]	Unlimited	0
	Unlimited	1,245
	U.S. Treasury Exchange Stabilization Fund (ESF)	
Banco de México	3,000	0
Total	3,000	0

[a] Temporary swap arrangement.