TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

January–March 2011

During the first quarter of 2011, the U.S. dollar's trade-weighted exchange value depreciated 3.7 percent, as measured by the Federal Reserve Board's major currencies index. The dollar depreciated 5.5 percent against the euro, but appreciated 2.5 percent against the Japanese yen.

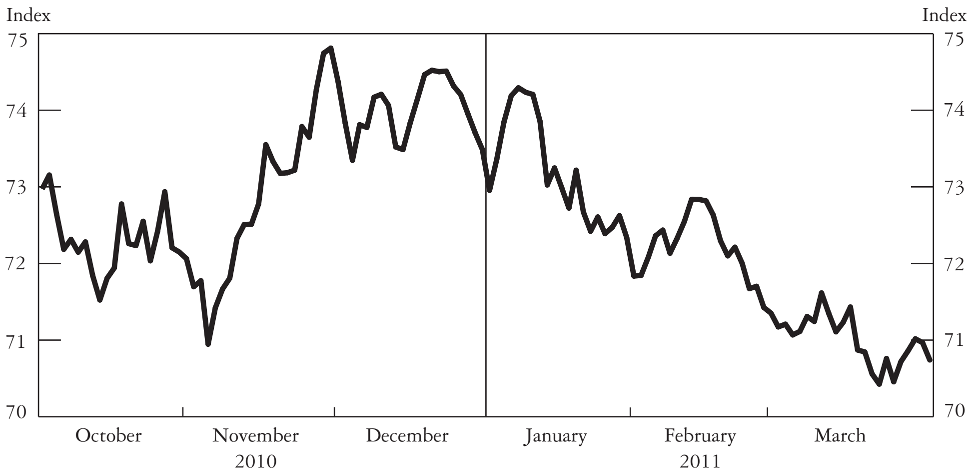
The dollar's depreciation was driven in part by a perceived weakening in the U.S. economic growth outlook relative to those of other countries, as some first-quarter U.S. economic data releases were weaker than expected. In addition, a sharp rise in oil prices during the quarter, stemming from rising instability in the Middle East and North Africa region, weighed on the dollar against some currencies as market participants expressed concern about the impact on U.S. economic growth. The euro appreciated notably against the dollar during the quarter as investors anticipated a faster move toward policy normalization by the European Central Bank (ECB) and reduced their concerns that the sovereign debt problems facing several countries would spread to other euro-area countries following a number of policy actions by European authorities, including expansion of the European Financial Stability Facility.

Following a sharp rise in foreign exchange volatility as a result of the March 11 earthquake in Japan, U.S. monetary authorities participated in a coordinated Group of Seven (G-7) intervention to sell Japanese yen. On March 18, U.S. monetary authorities purchased $1 billion against Japanese yen. The operation, which was divided evenly between the U.S. Treasury Department Exchange Stabilization Fund and the Federal Reserve System Open Market Account, was coordinated with Japanese monetary authorities, as well as with the ECB and the monetary authorities of Canada and the United Kingdom.

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 January through March 2011. Kevin McNeil was primarily responsible for preparation of the report.

Chart 1

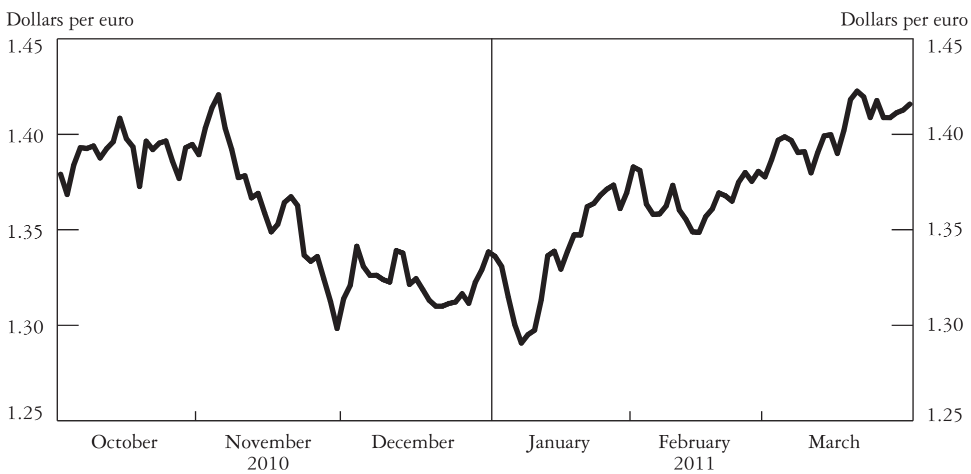
TRADE-WEIGHTED U.S. DOLLAR



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

Chart 2

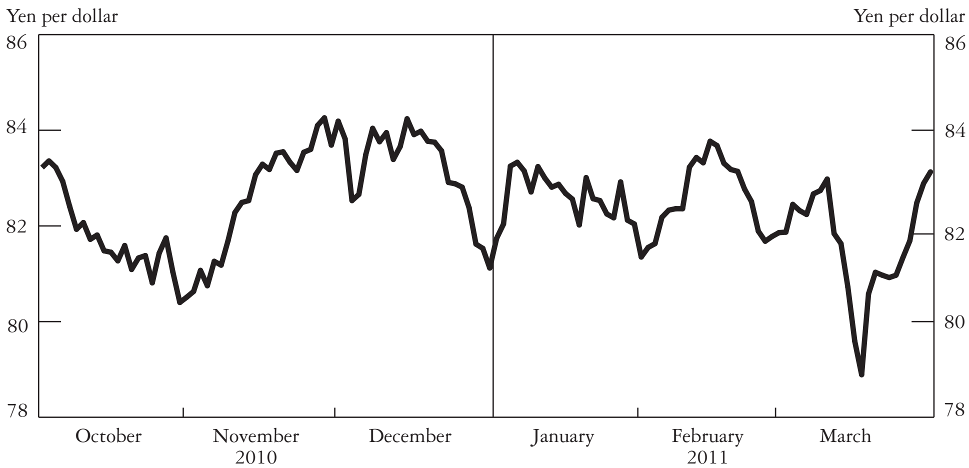
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

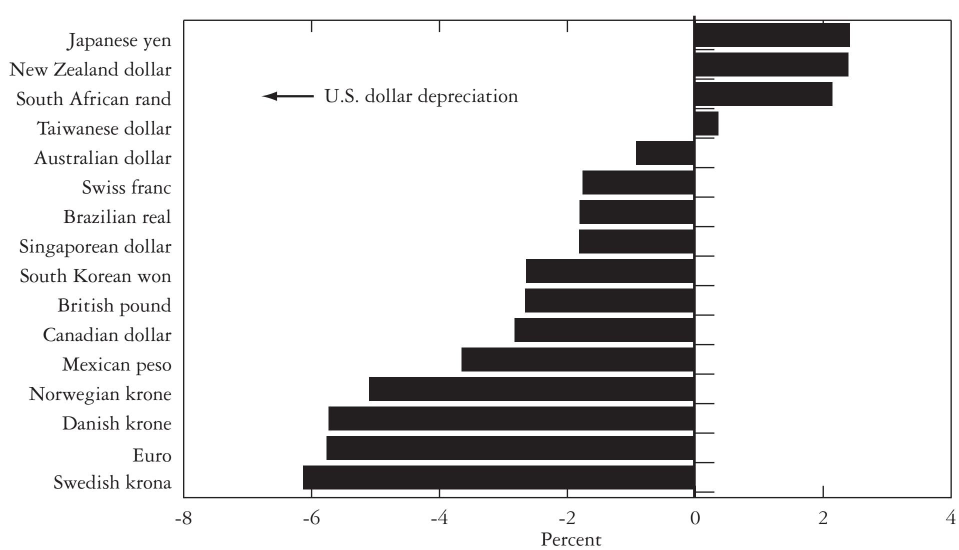
U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

Chart 4

U.S. DOLLAR AGAINST SELECTED CURRENCIES DURING FIRST QUARTER



Source: Bloomberg L.P.

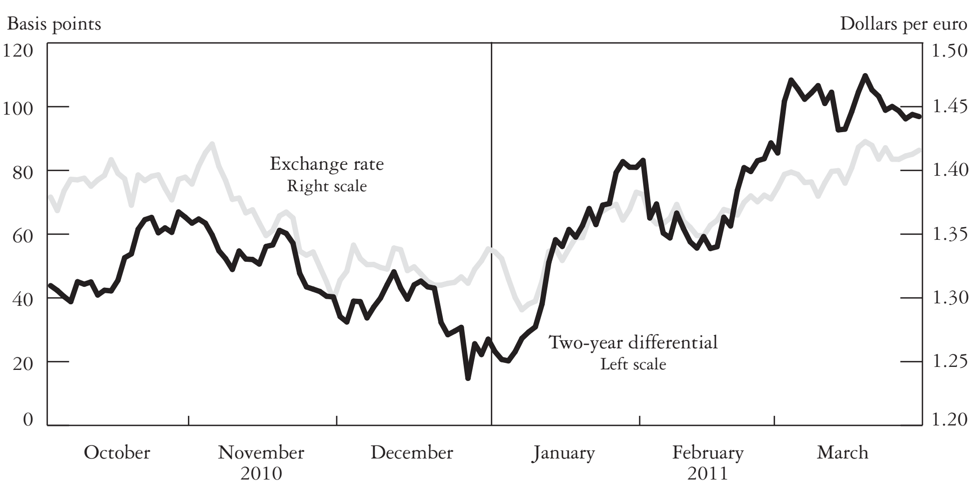
DOLLAR DEPRECIATES AS NEAR-TERM U.S. ECONOMIC OUTLOOK MODERATES

The U.S. dollar depreciated broadly during the first quarter, owing to a number of factors. Further signs that employment and inflation remained subdued led investors to anticipate continued accommodative policy in the United States. In addition, U.S. economic growth concerns increased due to a series of weaker-than-expected first-quarter economic data releases that followed weaker-than-expected fourth-quarter economic growth data. Given these economic conditions, market participants continued to expect that the Federal Reserve would complete its $600 billion program of longer term asset purchases and would not tighten monetary policy for an extended period.

This U.S. policy outlook stood in contrast to market participants' expectations for European Central Bank policy. Analysts increasingly came to the view that the ECB would shift its monetary policy stance toward normalization, beginning with a policy rate increase early in the second quarter. This view was supported by commentary from ECB officials as well as by rising euro-area inflation and stronger-than-expected economic data from Germany, leading to a widening interest rate differential between the two-year notes of the respective countries. Additionally, many central banks in emerging economies, including China, Korea, Brazil, Russia, Vietnam, Thailand, and Malaysia, raised policy rates during the quarter. The anticipated divergence in the direction of monetary policy adjustment in the euro area, as well as in emerging economies, was an important driver of broad dollar weakness during the quarter.

Chart 5

EURO–U.S. DOLLAR EXCHANGE RATE AND TWO-YEAR INTEREST RATE DIFFERENTIAL



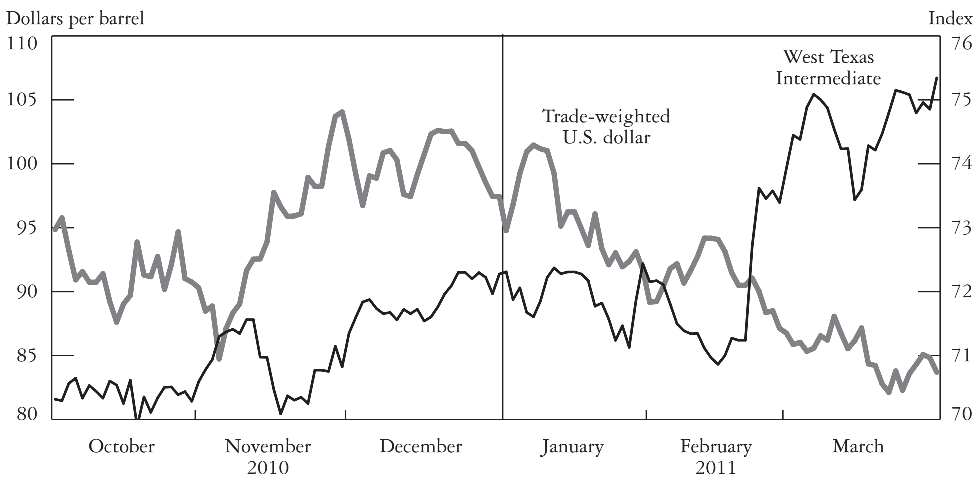
Source: Bloomberg L.P.

Political unrest in the Middle East and North Africa and the subsequent sharp rise in oil prices also weighed on the U.S. dollar during the quarter. Market participants worried about the spread of instability throughout the region and the potential for significant oil supply disruptions. In late January, political turmoil in Egypt raised concerns that shipments through the Suez Canal and the Suez-Mediterranean pipeline could be impacted. Beginning in mid-February, escalating political tension in other Middle East and North African countries—particularly in Libya, an Organization of the Petroleum Exporting Countries (OPEC) member—supported further increases in oil prices. The loss of more than 1 million barrels per day from Libyan export production, the equivalent of roughly one-third of OPEC's effective spare capacity, contributed to the 27 percent increase of the front-month West Texas Intermediate crude oil futures contract price from $84.32 per barrel in mid-February to $106.72 per barrel at the end of the quarter, its highest level since September 2008.

Market participants noted several possible channels through which higher oil prices weighed on the dollar. The impact of higher oil prices on final demand caused many analysts to mark down their near-term U.S. economic outlook. Moreover, higher oil prices increase the current account surpluses of oil-producing countries, many of which reportedly rebalance their reserve portfolios by selling dollars in order to maintain established currency allocations.

Chart 6

TRADE-WEIGHTED U.S. DOLLAR AND FRONT-MONTH WEST TEXAS INTERMEDIATE CRUDE OIL FUTURES CONTRACT PRICE



Source: Bloomberg L.P.

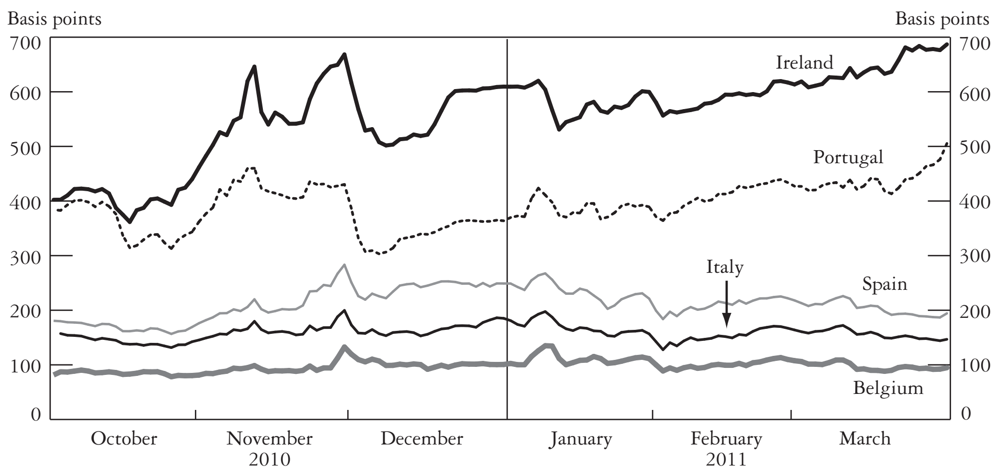
POLICY RESPONSES IN EURO-AREA FISCAL CRISIS HELP EASE BROADER CONTAGION CONCERNS

The euro's appreciation against the dollar in the first quarter to its strongest level in more than a year was partially attributed to policy responses by European authorities that helped ease perceptions of sovereign risk in the euro area. Moreover, investors appeared to have differentiated the risk among euro-area countries, as increasing pressures on the sovereign debt of Ireland, Greece, and Portugal did not appear to be affecting the debt of Spain and Italy. One reason was that European officials reached an agreement to increase the effective lendable capacity of the European Financial Stability Facility to its originally intended €440 billion. Other factors that appeared to support sentiment toward the euro were Spain's progress with its fiscal adjustment; the results of the Irish stress test, which were viewed as credible by the market; and Ireland's bank recapitalization plan, which did not require debt restructuring by senior bondholders.

Despite the improvement in broader euro-area sentiment during the quarter, concerns remained about particular countries in the euro-area periphery, as evidenced by the continued widening in debt spreads in Greece and Portugal. Analysts noted that Greece and Portugal faced difficulties meeting their fiscal targets, sentiment increased that Portugal would seek external support from the European Union and International Monetary Fund, and rating agencies continued to downgrade these countries' banks and sovereign credit ratings. During the quarter, Portugal's ten-year sovereign spread to its German equivalent widened to a record 505 basis points. In contrast, spreads in Spain, Italy, and Belgium narrowed to levels below the peaks reached in the fourth quarter of 2010.

Chart 7

SELECTED EURO-AREA TEN-YEAR SOVEREIGN SPREADS TO GERMAN EQUIVALENT

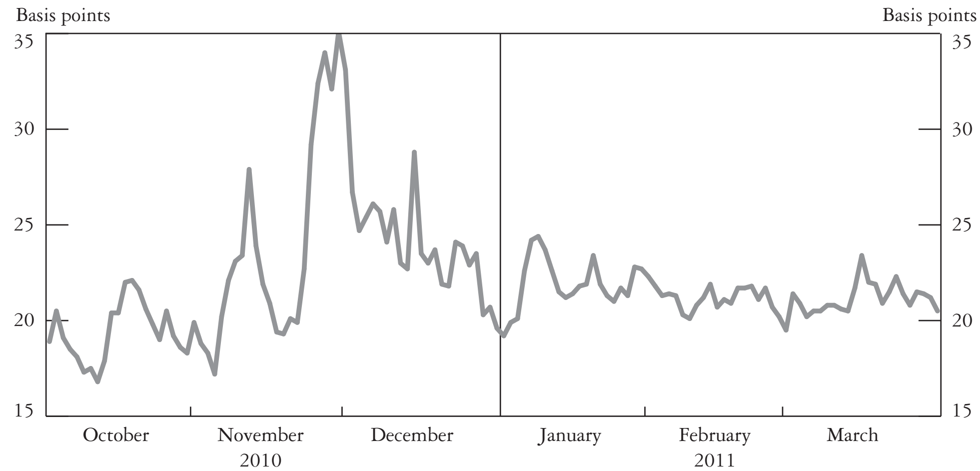


Source: Bloomberg L.P.

Reflecting the improved sentiment for most of the euro area, offshore dollar funding conditions continued to stabilize. Market participants attributed this stabilization to easing concerns over the risk of contagion from Ireland, Greece, and Portugal. Metrics of systemic concerns in offshore dollar funding markets such as the spread between the U.S. dollar three-month forward rate agreement and the three-month overnight indexed swap rate three months forward declined over the quarter, as did the three-month dollar funding rates implied from swapping euros for dollars in the foreign exchange swap market.

Chart 8

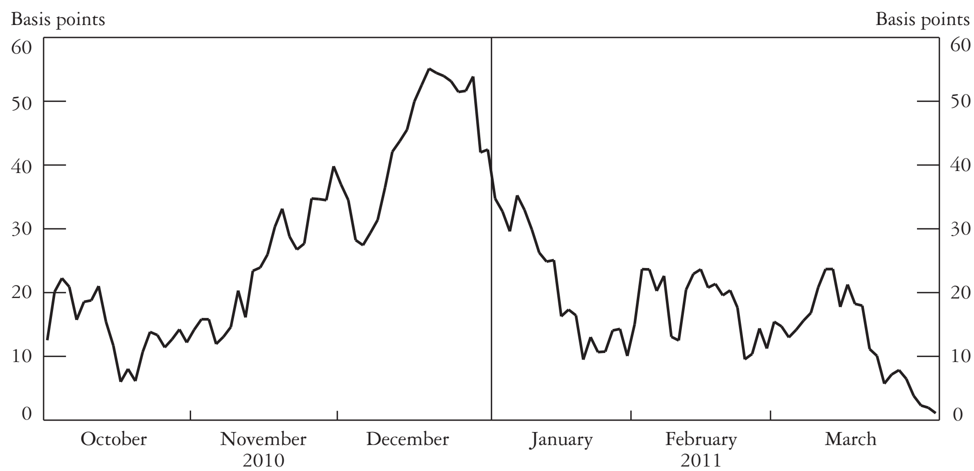
SPREAD BETWEEN THE U.S. DOLLAR THREE-MONTH FORWARD RATE AGREEMENT AND THE THREE-MONTH OVERNIGHT INDEXED SWAP THREE MONTHS FORWARD



Source: Bloomberg L.P.

Chart 9

EURO–U.S. DOLLAR FOREIGN EXCHANGE SWAP IMPLIED BASIS SPREAD



Source: Bloomberg L.P.

JAPANESE FINANCIAL ASSETS EXPERIENCE SIGNIFICANT VOLATILITY IN AFTERMATH OF TOHOKU EARTHQUAKE

On March 11, a 9.0-magnitude earthquake struck off the coast of Tohoku, Japan, triggering tsunami waves that resulted in devastating loss of life and severe damage to the country's infrastructure. These developments created extensive disruptions to the country's economy, including severe damage to several of Japan's nuclear reactors. In the days immediately following, Japanese financial assets experienced significant volatility, as measured by the difference between a number of Japanese financial asset values at the close of trading before the earthquake and their respective intraday lows or highs in the following days. For instance, the Nikkei 225 Equity Index decreased as much as 21.1 percent, the Japanese five-year sovereign credit default swap spread widened 46 basis points, and the benchmark ten-year Japanese government note yield declined 16.5 basis points.

Table 1

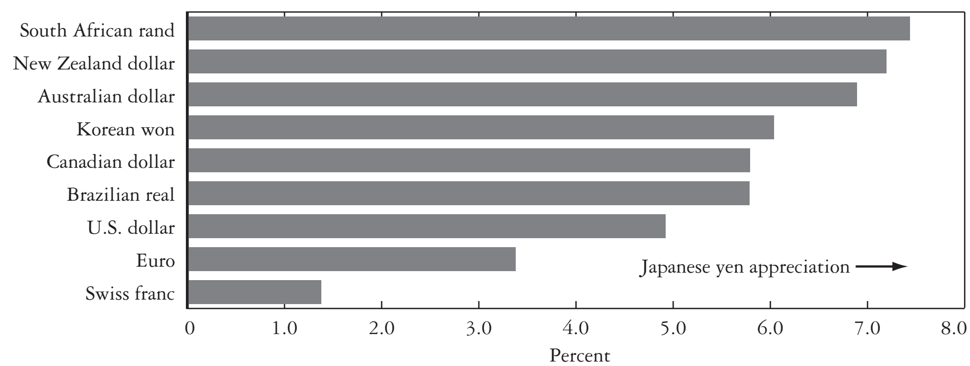
JAPANESE FINANCIAL ASSET PERFORMANCE, POST-EARTHQUAKE

Financial Indicator	March 10 Close	Post-Earthquake Maximum or Minimum Intraday Level	Percentage Change
Nikkei (index value, yen)	10,434	8,228	-21.1
Credit default swap (basis points)	78.4	124.6	46.2
Two-year Japanese government bond yield (basis points)	23.2	16.5	-6.7
Ten-year Japanese government bond yield (basis points)	131.0	115.5	-15.5
U.S. dollar–Japanese yen exchange rate (yen per dollar)	83.0	76.3	-8.1
VXJ Volatility Index based on Nikkei 225 Equity Index options (percentage points)	21.7	70.1	48.4
U.S. dollar–Japanese yen one-month implied volatility (percentage points)	8.5	20.1	11.6
U.S. dollar–Japanese yen one-year implied volatility (percentage points)	12.2	16.4	4.2

The Japanese yen also appreciated markedly following the earthquake, including reaching a record high against the dollar on the evening of March 16 (EDT). The strength of the yen was attributed to investor expectations for capital repatriation by Japanese corporates, as occurred during the Kobe earthquake. In addition, retail investors who held positions in foreign currencies faced margin calls as the yen appreciated, forcing them to close positions by abruptly purchasing yen, thereby exacerbating yen strength. Indeed, in the five trading days following the earthquake, the yen appreciated between 1 percent and 8 percent against G-10 currencies (as measured at the close of trading in New York). On an intraday basis, the yen appreciated 8 percent against the U.S. dollar and 5 percent against the euro. Volatility also rose sharply, with one-month at-the-money option-implied volatility on the dollar–yen currency pair increasing from approximately 9 percent to 20 percent on an intraday basis, leading to an inversion of the volatility curve.

Chart 10

JAPANESE YEN AGAINST SELECTED CURRENCIES,
MARCH 10-17, 2011

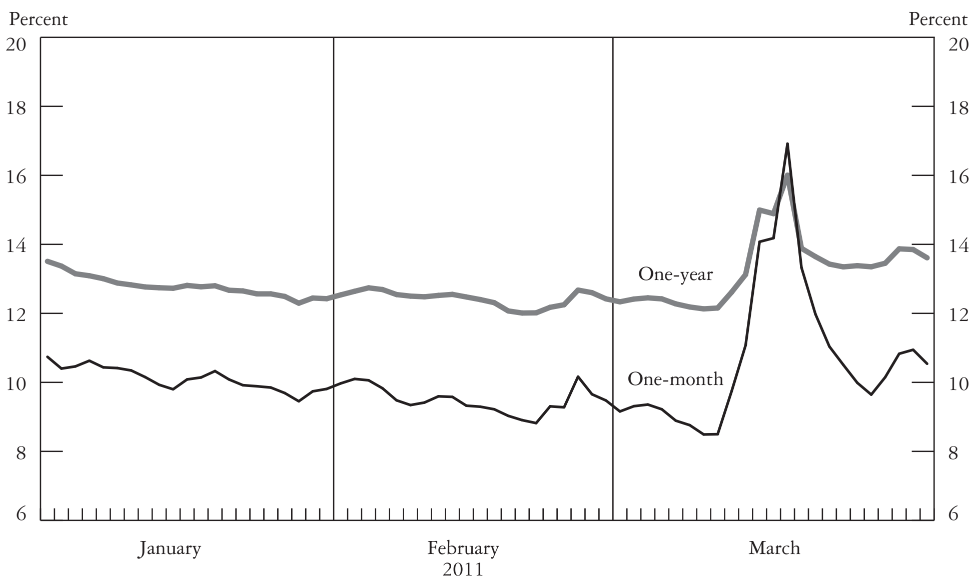


Source: Bloomberg L.P.

Note: Percent changes were computed using currency values at the close of trading in New York, 4:00 p.m.

Chart 11

ONE-MONTH AND ONE-YEAR U.S. DOLLAR–YEN AT-THE-MONEY OPTION-IMPLIED VOLATILITY



Source: Bloomberg L.P.

U.S. MONETARY AUTHORITIES PARTICIPATE IN COORDINATED INTERVENTION TO SELL YEN IN THE MARKET

Yen appreciation culminated in a sharp move higher against the dollar in illiquid trading after the close of trading in New York on March 16. On the evening of March 17, the G-7 Finance Ministers issued the following statement in response to the extreme volatility in the yen market, indicating that there would be a coordinated intervention in foreign exchange markets:

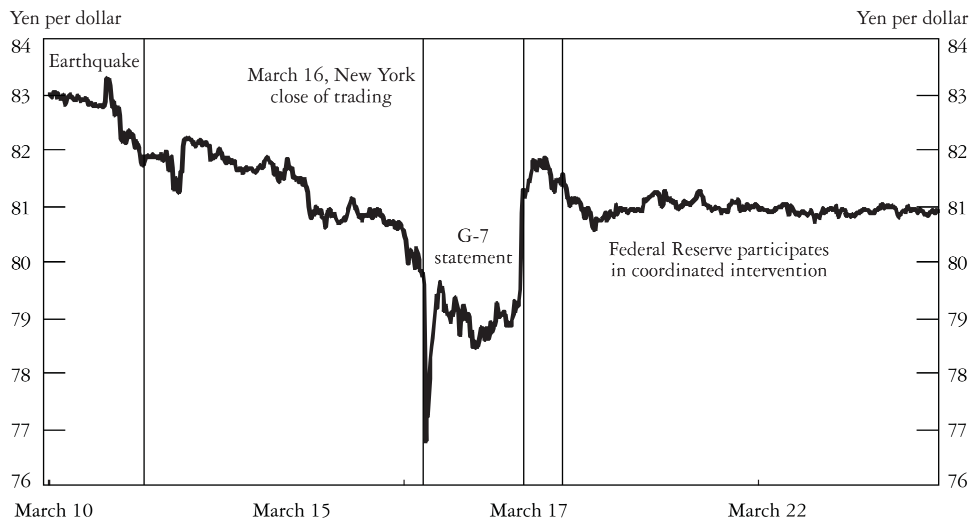
> "In response to recent movements in the exchange rate of the yen associated with the tragic events in Japan, and at the request of the Japanese authorities, the authorities of the United States, the United Kingdom, Canada, and the European Central Bank will join with Japan, on March 18, 2011, in concerted intervention in exchange markets. As we have long stated, excess volatility and disorderly movements in exchange rates have adverse implications for economic and financial stability. We will monitor exchange markets closely and will cooperate as appropriate."

At the direction of the Federal Open Market Committee's (FOMC) Foreign Currency Subcommittee, the Desk at the Federal Reserve Bank of New York intervened in the currency markets by purchasing $500 million against the sale of Japanese yen from the System Open Market Account portfolio. In addition, acting as agent for the U.S. Treasury, the Desk purchased $500 million against the sale of Japanese yen from the Exchange Stabilization Fund. The intervention was consistent with the G-7 statement and was performed in concert with the Bank of Japan (BoJ), the Bank of England (BoE), the Bank of Canada (BoC), and the ECB. Yen selling interventions were conducted by each central bank at the start of its respective trading day, beginning with the BoJ.

Much of the yen's depreciation associated with the intervention took place in the period immediately following the release of the G-7 statement, coinciding with the BoJ intervention. Indeed, the yen immediately depreciated from ¥79.20 per dollar to about ¥81.50 per dollar and depreciated further to ¥82.00 per dollar in subsequent hours. The U.S. dollar–Japanese yen exchange rate closed the quarter at ¥83.13 per dollar.

Chart 12

U.S. DOLLAR–YEN EXCHANGE RATE AT TWENTY-MINUTE INTERVALS, MARCH 10-24, 2011



Source: Bloomberg L.P.

TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE RESERVES

As of March 31, 2011, the value of the U.S. Treasury's Exchange Stabilization Fund foreign-currency-denominated assets totaled $26.19 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account holdings of foreign-currency-denominated assets totaled $26.21 billion.

Temporary Reciprocal Currency Arrangements (Dollar Liquidity Swap Lines)

As of March 31, the BoC, BoE, ECB, BoJ, and the Swiss National Bank (SNB) were not utilizing their respective dollar liquidity swap lines. The swap lines with these central banks were reintroduced in May 2010 in response to the reemergence of strains in offshore U.S. dollar short-term funding markets. The BoE, ECB, BoJ, and SNB have unlimited swap line amounts, while the BoC has a $30 billion swap line. In December 2010, the FOMC authorized an extension through August 1, 2011, of its temporary U.S. dollar liquidity swap facilities from the previous expiration date of January 31, 2011.

Foreign Exchange Reserve Holdings

The U.S. monetary authorities invest their foreign currency reserves 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, 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 March 31, direct holdings of foreign government securities totaled $25.4 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 $5.3 billion at the end of the quarter and were also split evenly between the two authorities.

Table 2

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, December 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, March 31, 2011[a]
Federal Reserve System Open Market Account (SOMA)						
Euro	14,127	0	49	0	835[f]	15,012
Japanese yen	11,922	(500)	9	0	(231)[f]	11,200
Total	26,049	(500)	58	0	605	26,211

		Change in Balances by Source				
	Carrying Value, December 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, March 31, 2011[a]
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	14,104	0	49	0	834	14,987
Japanese yen	11,922	(500)	9	0	(231)	11,200
Total	26,026	(500)	58	0	603	26,187

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.

Table 3

BREAKDOWN OF FOREIGN RESERVE ASSETS HELD

Carrying Value in Millions of U.S. Dollars, as of March 31, 2011

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets:	**14,987.3**	**15,011.6**
Cash held on deposit at official institutions	7,464.0	7,488.3
Marketable securities held under repurchase agreements[b]	2,635.6	2,635.6
Marketable securities held outright	4,887.7	4,887.7
German government securities	2,011.4	2,011.4
French government securities	2,876.4	2,876.4
Japanese-yen–denominated assets:	**11,199.8**	**11,199.8**
Cash held on deposit at official institutions	3,364.7	3,364.7
Marketable securities held outright	7,835.1	7,835.1
Reciprocal currency arrangements:		
Euro-denominated assets:		**0.0**
Other assets[c]		0.0
Japanese-yen–denominated assets:		**0.0**
Other assets[c]		0.0
Swiss-franc–denominated assets:		**0.0**
Other assets[c]		0.0
Canadian-dollar–denominated assets:		**0.0**
Other assets[c]		0.0
British-pound–denominated assets:		**0.0**
Other assets[c]		0.0

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

[a] As of March 31, the euro SOMA and ESF portfolios had Macaulay durations of 9.6 months and 9.5 months, respectively; the yen SOMA and ESF portfolios both had Macaulay durations of 11.6 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 4

RECIPROCAL CURRENCY ARRANGEMENTS

Millions of U.S. Dollars

Institution	Amount of Facility	Outstanding as of March 31, 2011
	Federal Reserve System Open Market Account (SOMA)	
Bank of Canada	2,000	0
Banco de México	3,000	0
European Central Bank[a]	Unlimited	0
Swiss National Bank[a]	Unlimited	0
Bank of Japan[a]	Unlimited	0
Bank of Canada[a]	30,000	0
Bank of England[a]	Unlimited	0
	Unlimited	0
	U.S. Treasury Exchange Stabilization Fund (ESF)	
Banco de México	3,000	0
Total	3,000	0

[a] Temporary swap arrangement.