TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

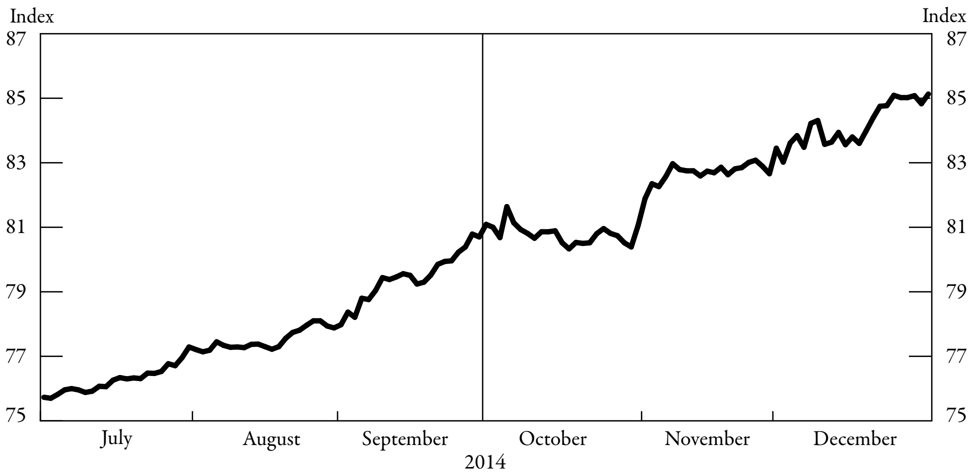
October–December 2014

During the fourth quarter, the U.S. dollar's nominal trade-weighted exchange value appreciated 5 percent, as measured by the Federal Reserve Board's major currencies index. The U.S. dollar continued to appreciate notably against major and emerging market currencies, reflecting market expectations for divergent economic growth prospects and monetary policy outlooks between the United States and other economies. In particular, the dollar appreciated 4.4 percent against the euro and 9.2 percent against the Japanese yen. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

This report, presented by Simon Potter, 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 October through December 2014. Maximilian Dunn was primarily responsible for preparation of the report.

Chart 1

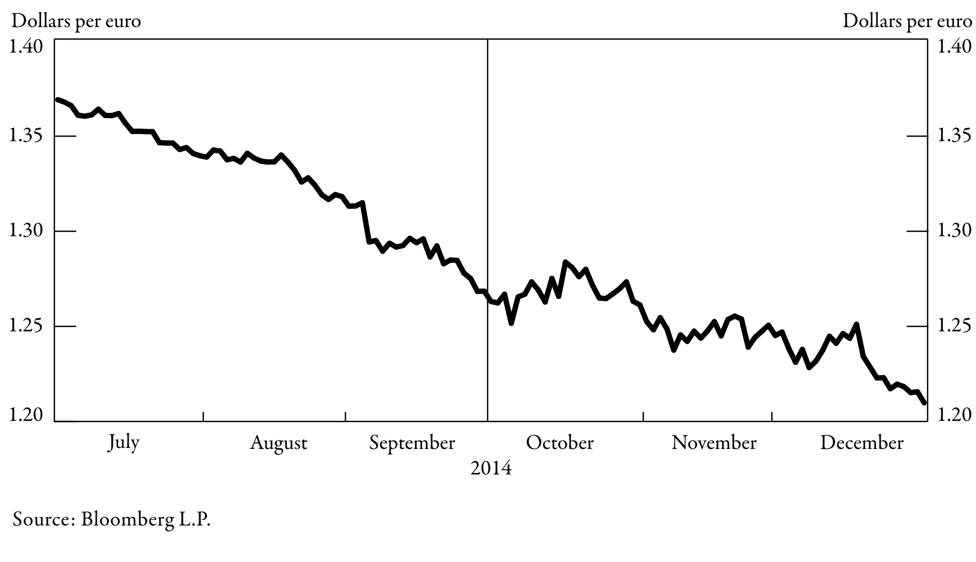
TRADE-WEIGHTED U.S. DOLLAR



Source: Board of Governors of the Federal Reserve System.

Chart 2

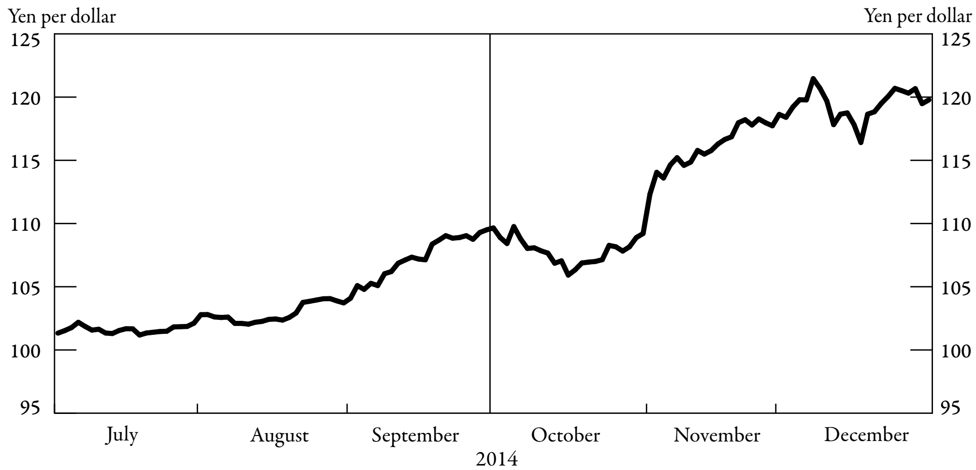
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

U.S. DOLLAR CONTINUES TO APPRECIATE AMID DIVERGENT GROWTH AND MONETARY POLICY EXPECTATIONS

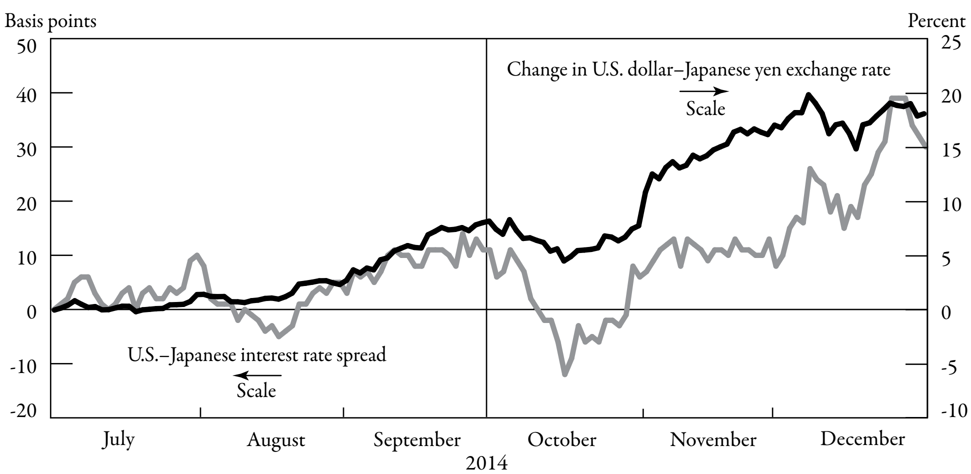
During the fourth quarter, the trade-weighted U.S. dollar appreciated 5 percent on improving U.S. economic data relative to many developed and emerging market economies and divergence in monetary policy expectations. Above-consensus U.S. economic activity indicators, such as employment data, third-quarter GDP, Institute for Supply Management manufacturing PMI, and retail sales data, supported market expectations for the normalization of U.S. monetary policy in 2015. The appreciation of the U.S. dollar against other major and emerging market currencies was reinforced both by this stronger-than-expected realized economic data as well as by Federal Open Market Committee (FOMC) communications that were reportedly viewed as supporting market expectations for U.S. policy normalization. For example, market participants interpreted the October FOMC meeting statement as underscoring improvements in the labor market, while the December FOMC meeting statement was viewed as consistent with market expectations for a gradual rise in the target federal funds range beginning in the middle of 2015.

Data on international capital flows in the United States, the euro area, and Japan were also consistent with the trend of dollar strength against the yen and euro. Notably, the Treasury International Capital (TIC) Monthly Reports on Cross-Border Financial Flows for October and November showed increases to both net foreign purchases of U.S. long-term securities and foreign holdings of dollar-denominated short-term U.S. securities. During this time, U.S. residents were net sellers of foreign securities.

Positioning data were also consistent with the dollar's appreciation. The U.S. Commodity Futures Trading Commission's (CFTC) net noncommercial long dollar position rose to a record high during the quarter. While the most sizable long dollar positions were against the euro and yen, the data also showed that investors extended or established new net long dollar positions against many of the remaining currencies tracked by the CFTC. Market participants suggested that the shift in positioning may also reflect a rotation by investors away from using the U.S. dollar as a funding currency for carry trades or a general reduction in carry trade activity in response to recent increases in realized and implied currency volatility. The effect of this potential shift in carry trade dynamics would, all else being equal, support a general strengthening of the U.S. dollar.

Chart 4

CUMULATIVE CHANGE IN TWO-YEAR U.S.–JAPANESE INTEREST RATE SPREAD AND U.S. DOLLAR APPRECIATION



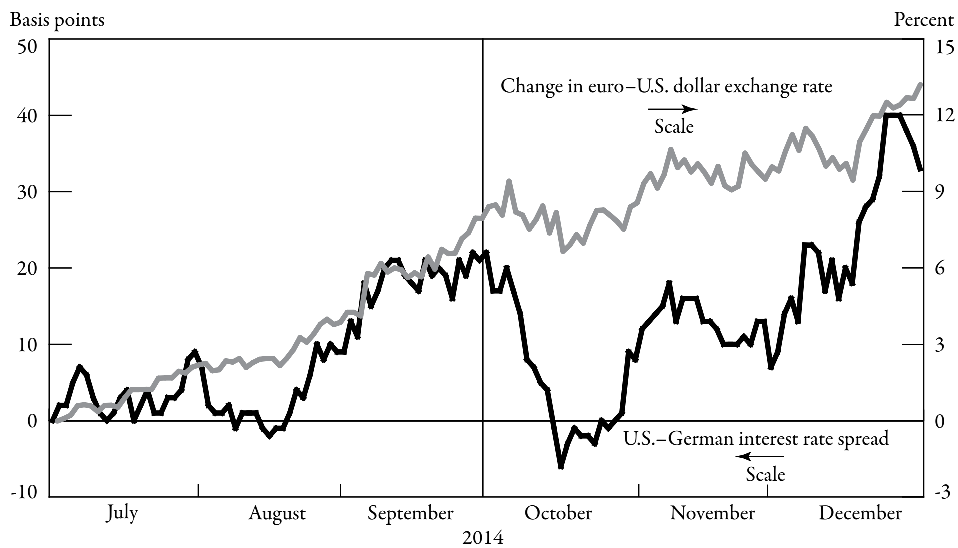
Source: Bloomberg L.P.

Several notable events in Japan during the fourth quarter contributed to the Japanese yen's 8.4 percent depreciation against the U.S. dollar, including the Bank of Japan's (BoJ) unexpected expansion in late October of its Quantitative and Qualitative Monetary Easing program, the downward revision to its fiscal-year 2014 economic outlook, and lower-than-expected third-quarter GDP. Market participants suggested that Prime Minister Shinzō Abe's decision to dissolve the Lower House and the delay of the second phase of the value-added tax (VAT) hike also likely contributed to further depreciation of the yen.

The yen's depreciation during the quarter was consistent with a 20-basis-point widening of the yield spread between the two-year U.S. Treasury note and Japanese government bonds. Investment flows further supported weakness in the yen during the quarter, as reflected in Japanese Ministry of Finance data that showed Japanese investors had increased their exposure to foreign markets.

Chart 5

CUMULATIVE CHANGE IN TWO-YEAR U.S.–GERMAN INTEREST RATE SPREAD AND U.S. DOLLAR APPRECIATION



Source: Bloomberg L.P.

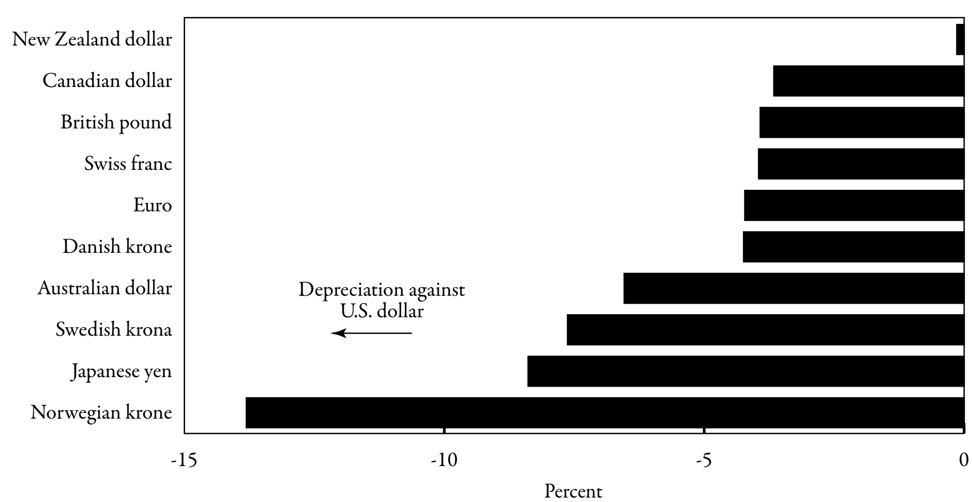
The euro–U.S. dollar exchange rate declined 4.2 percent over the quarter as weaker economic growth data and lower realized and expected inflation raised market expectations that the European Central Bank (ECB) would implement a sovereign debt purchase program in the first quarter of 2015. Market participants highlighted continued declines in the five-year/five-year-forward euro-area inflation swap rate, a metric previously referenced by ECB President Mario Draghi, as reinforcing these market expectations of additional policy accommodation. An 11-basis-point widening in the yield spread between the two-year U.S. Treasury note and the German bund further supported the appreciation of the U.S. dollar against the euro.

Expectations for additional monetary policy accommodation by the ECB and capital flows stemming from increased volatility in Russia led to further depreciation of the euro–Swiss franc currency pair toward the Swiss National Bank's (SNB) 1.20 exchange rate floor. In response, the SNB intervened in the foreign exchange market and, on December 18, introduced at an unscheduled policy meeting a negative deposit rate. On January 15, the SNB abandoned the 1.20 floor.

The British pound depreciated 3.9 percent against the U.S. dollar, with much of the move occurring after the Bank of England's (BoE) downward revision to its outlooks for both U.K. growth and inflation in November. These downward revisions pushed back the market-implied timing for the first rate hike from the first quarter of 2015 to the fourth quarter of 2015. As such, the yield spread between the two-year U.S. Treasury note and the U.K. gilt widened by 48 basis points and became positive for the first time since the summer of 2013.

Chart 6

U.S. DOLLAR PERFORMANCE AGAINST DEVELOPED MARKET CURRENCIES DURING FOURTH QUARTER



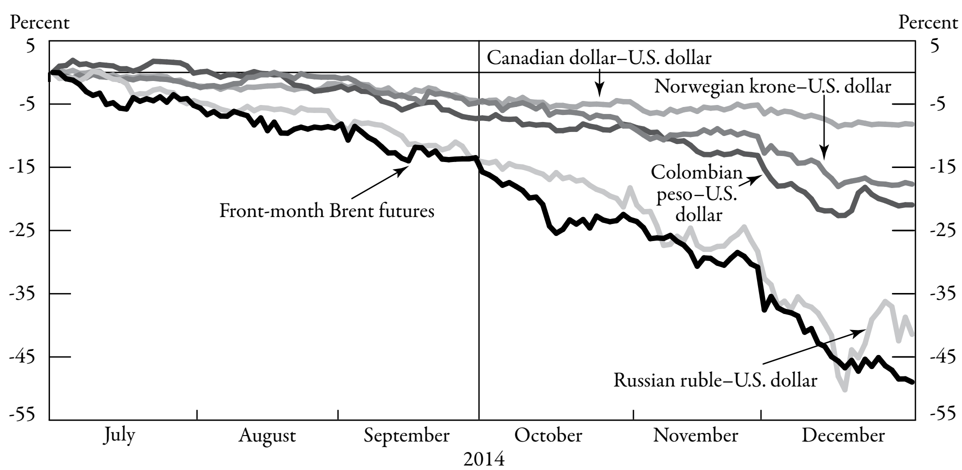
Source: Bloomberg L.P.

SHARP DECLINES IN COMMODITY PRICES CONTRIBUTE TO DOLLAR APPRECIATION AGAINST CURRENCIES OF OIL EXPORTERS

The currencies of oil-exporting countries depreciated against the U.S. dollar as front-month crude oil futures declined approximately 40 percent during the quarter. Analysts attributed the large declines in both Brent and West Texas Intermediate crude oil futures to greater-than-expected supply and, to a lesser extent, lower demand, particularly from the euro area and Japan. Specifically, the Canadian dollar, Mexican peso, Norwegian krone, and Colombian peso depreciated between 4 and 15 percent against the U.S. dollar as oil prices fell. Most notably, the Russian ruble depreciated 31.8 percent against the U.S. dollar as declines in oil prices added to existing economic headwinds and concerns over capital outflows arising from geopolitical tensions and sanctions that were present for much of the year.

Chart 7

CRUDE OIL PRICES AND CURRENCIES OF NET OIL EXPORTERS

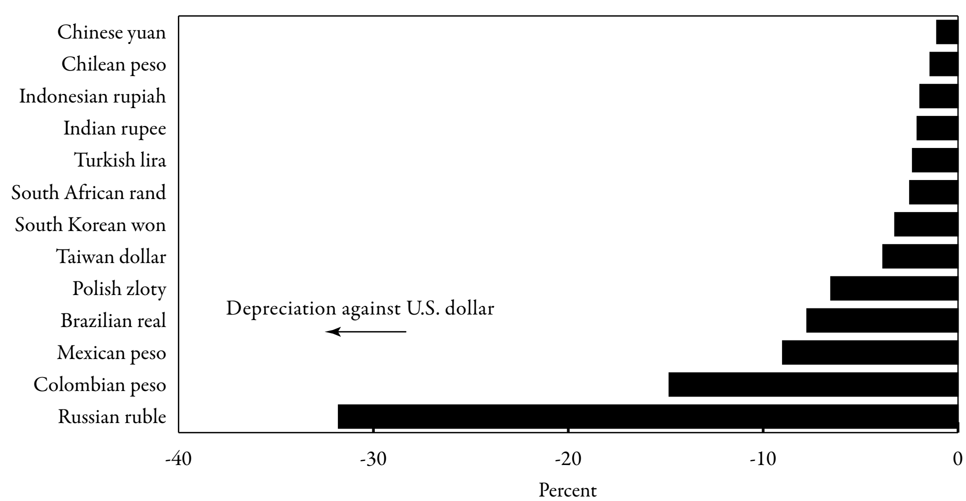


Source: Bloomberg L.P.

Other emerging market currencies also depreciated against the U.S. dollar, although by less than those of oil-exporting countries. Shifts in sentiment toward emerging markets as the situation in Russia deteriorated, and continued focus on prospects of policy normalization by the FOMC, weighed on emerging market currencies. Idiosyncratic factors, however, also differentiated the performance of some currencies. For example, in Brazil, a tepid 2015 growth outlook, worsening terms of trade, and a focus on the fiscal outlook contributed to the Brazilian real's 7.8 percent depreciation against the U.S. dollar. In contrast, the Indian rupee outperformed other emerging market currencies, depreciating 2.1 percent against the U.S. dollar, as a steady improvement in India's current account deficit, a stable inflation outlook, fiscal consolidation, and declining commodity prices supported the country's growth outlook.

Chart 8

U.S. DOLLAR PERFORMANCE AGAINST EMERGING MARKET CURRENCIES DURING FOURTH QUARTER



Source: Bloomberg L.P.

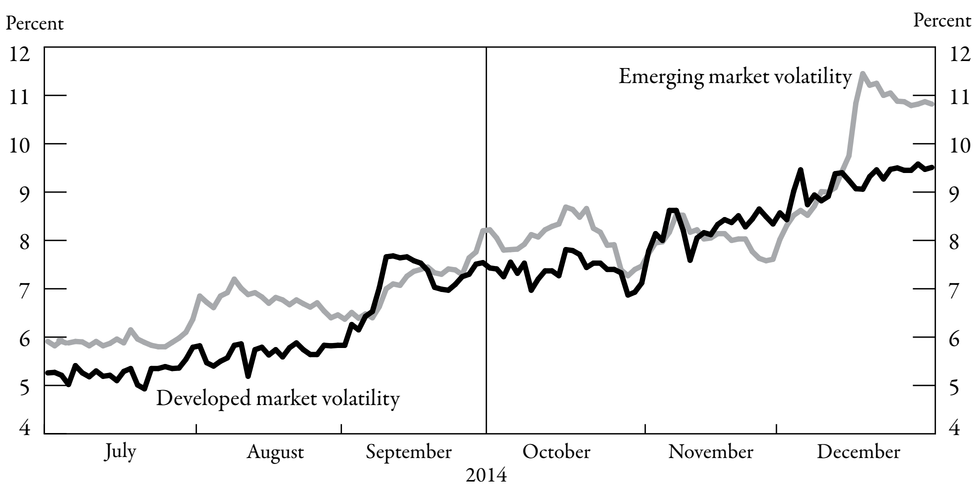
Separately, the Chinese renminbi depreciated 1.1 percent against the U.S. dollar, and the central parity rate set by the People's Bank of China (PBoC) appreciated 0.5 percent. The renminbi's depreciation occurred amid weaker-than-expected economic activity data and a shift to broader-based monetary easing measures by the PBoC.

FOREIGN EXCHANGE VOLATILITY CONTINUES TO INCREASE MODESTLY

During the period, both option-implied and realized currency volatility continued to increase from their respective multiyear lows in the middle of 2014. The theme of divergent growth and monetary policy outlooks was a primary driver of the sustained increase in implied currency volatility over the past two quarters. For example, implied volatility for the U.S. dollar–Japanese yen currency pair increased notably following the BoJ's surprise decision to expand the pace of policy accommodation. Some of the recent moves in volatility can also be explained by the sizable depreciation of commodity-linked currencies. Implied volatility for the U.S. dollar–Russian ruble and U.S. dollar–Norwegian krone currency pairs increased notably over the course of the quarter, with particularly outsized increases in Russian ruble volatility stemming from concerns over financial stability and growth risks.

Chart 9

IMPLIED DEVELOPED AND EMERGING MARKET CURRENCY VOLATILITY



Source: Deutsche Bank; JPMorgan Chase.

TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE HOLDINGS

The U.S. monetary authorities did not undertake any intervention operations during the quarter. As of December 31, the value of the U.S. Treasury's Exchange Stabilization Fund foreign-currency-denominated assets totaled $20.96 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account holdings of foreign-currency-denominated assets totaled $20.98 billion, also comprised of euro and yen holdings.

Liquidity Swap Arrangements with Foreign Central Banks

As of December 31, the BoJ had $1.528 billion of outstanding swaps, all in a ten-day transaction over the year-end. The Bank of Canada, BoE, ECB, and SNB did not have any outstanding swaps at the end of the quarter. On October 21, the Federal Reserve Bank of New York performed the first non-U.S. dollar liquidity swap small value exercise, in which the Federal Reserve drew euros from the euro liquidity swap line with the ECB. In addition, on December 4, the Federal Reserve Bank of New York performed a small-value U.S. dollar liquidity swap exercise with some foreign central banks with a liquidity swap arrangement. The purpose of these small-value operations was to test the operational readiness of the swap arrangements.

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 typically invested on an outright basis in German, French, and Japanese government securities. A smaller portion of the reserves is typically invested in euro-denominated repurchase agreements, under which the U.S. monetary authorities may 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 December 31, cash held in euro-denominated deposits at official institutions totaled $13.85 billion, a decrease from $16.52 billion, while direct holdings of euro-denominated government securities totaled $12.4 billion, an increase from $8.6 billion. Foreign government securities held under repurchase agreements remained at $0 billion. The portfolio continues to reflect extremely low or negative rates across money market instruments in the euro area. The amount of yen-denominated deposits and government securities has remained fairly steady over recent quarters.

Table 1

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

Millions of U.S. Dollars

		Changes in Balances by Source				
	Carrying Value, September 30, 2014[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, December 31, 2014[a]
Federal Reserve System Open Market Account (SOMA)						
Euro	13,758	0	14	0	(574)	13,197
Japanese yen	8,506	0	2	0	(723)	7,785
Total	22,264	0	16	0	(1,298)	20,982

		Changes in Balances by Source				
	Carrying Value, September 30, 2014[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, December 31, 2014[a]
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	13,736	0	14	0	(574)	13,176
Japanese yen	8,506	0	2	0	(723)	7,785
Total	22,242	0	16	0	(1,297)	20,961

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, repayments, and warehousing.

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

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

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

Table 2

BREAKDOWN OF FOREIGN RESERVE ASSETS HELD

Carrying Value in Millions of U.S. Dollars, as of December 31, 2014

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets	**13,176.4**	**13,197.2**
Cash held on deposit at official institutions	6,915.9	6,936.7
Marketable securities held under repurchase agreements[b]	0.0	0.0
Marketable securities held outright	6,260.5	6,260.5
German government securities	2,529.2	2,529.2
French government securities	3,731.3	3,731.3
Japanese-yen–denominated assets	**7,785.0**	**7,784.9**
Cash held on deposit at official institutions	2,575.7	2,575.7
Marketable securities held outright	5,209.2	5,209.2
Reciprocal currency arrangements		
European Central Bank[c]		0
Bank of Japan[c]		1,528
Swiss National Bank[c]		0
Bank of Canada[c]		0
Bank of England[c]		0
Banco de México[c]		0

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

[a] As of December 31, the euro SOMA and ESF portfolios both had Macaulay durations of 12.6 months; the yen SOMA and ESF portfolios both had Macaulay durations of 11.8 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, the Bank of England, and Banco de México.

Table 3

RECIPROCAL CURRENCY ARRANGEMENTS

Millions of U.S. Dollars

Institution	Amount of Facility	Outstanding as of December 31, 2014
	Federal Reserve System Open Market Account (SOMA)	
Reciprocal Currency Arrangement		
Bank of Canada	2,000	0
Banco de México	3,000	0
Standing Dollar Liquidity Swap Arrangement		
European Central Bank	No preset limit	0
Swiss National Bank	No preset limit	0
Bank of Japan	No preset limit	1,528
Bank of Canada	No preset limit	0
Bank of England	No preset limit	0
	No preset limit	1,528
Standing Foreign Currency Liquidity Swap Arrangement		
European Central Bank	No preset limit	0
Swiss National Bank	No preset limit	0
Bank of Japan	No preset limit	0
Bank of Canada	No preset limit	0
Bank of England	No preset limit	0
	No preset limit	0
	U.S. Treasury Exchange Stabilization Fund (ESF)	
Banco de México	3,000	0
	3,000	0