TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

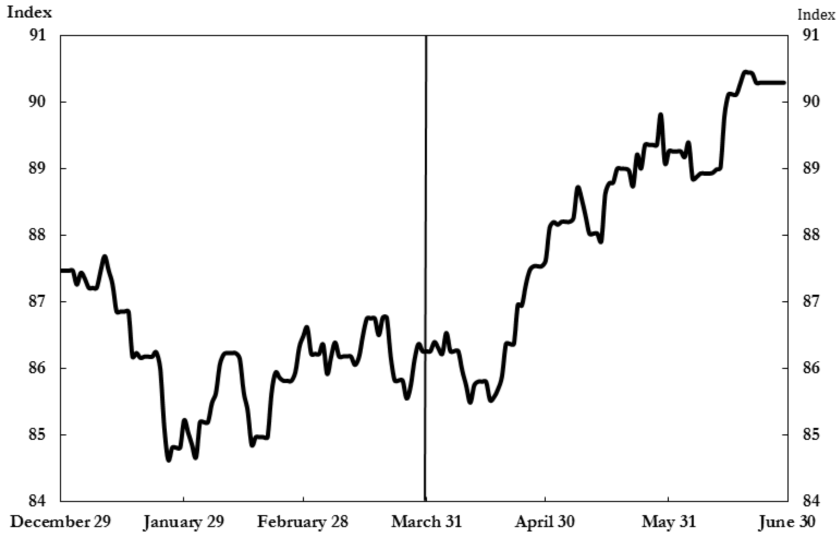
April – June 2018

The U.S. dollar, as measured by the Federal Reserve Board's trade-weighted major currencies index, appreciated 4.2 percent in the second quarter of 2018. The dollar was viewed as being driven by a variety of factors, including wider U.S. interest rate differentials compared to other major economies, decelerating momentum in non-U.S. economic growth, elevated European political risks, and rising financial market volatility across a number of emerging markets. Among major currencies, the dollar appreciated 5.5 percent against the euro, 4.2 percent against the Japanese yen, and 6.1 percent against the British pound. The dollar also appreciated against most emerging market currencies, including 9.5 percent against the Mexican peso and 5.5 percent against the Chinese renminbi. The Federal Reserve and U.S. Treasury did not intervene in 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 April through June 2018. Ingrid Tang was primarily responsible for preparation of the report.

Chart 1

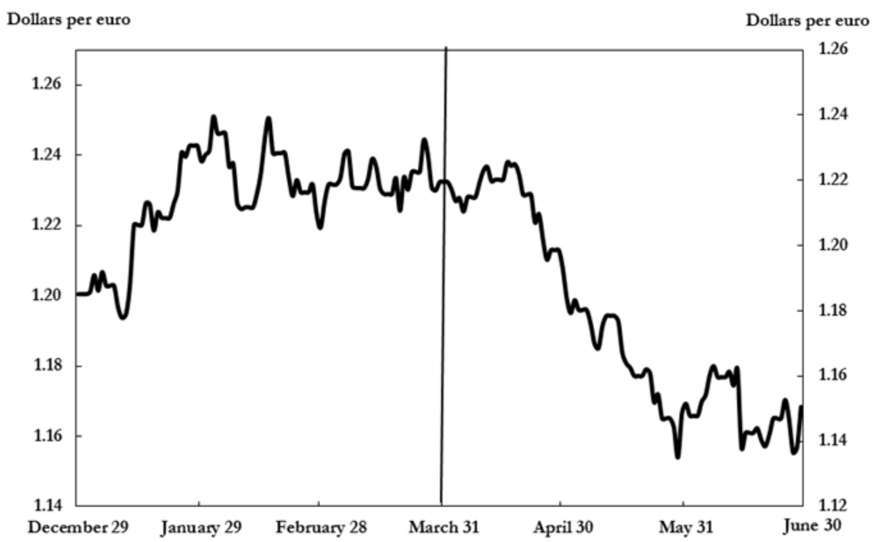
MAJOR CURRENCY TRADE-WEIGHTED U.S. DOLLAR



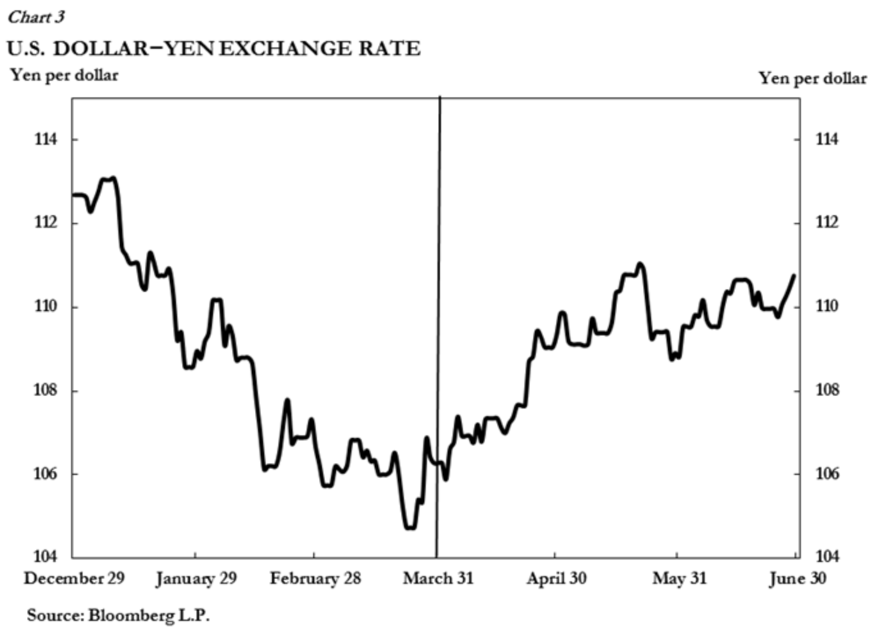
Sources: Board of Governors of the Federal Reserve System; Bloomberg L.P.

Chart 2

EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.



U.S. DOLLAR APPRECIATES BROADLY ON WIDER U.S. INTEREST RATE DIFFERENTIALS AND RELATIVE STRENGTH IN ECONOMIC GROWTH

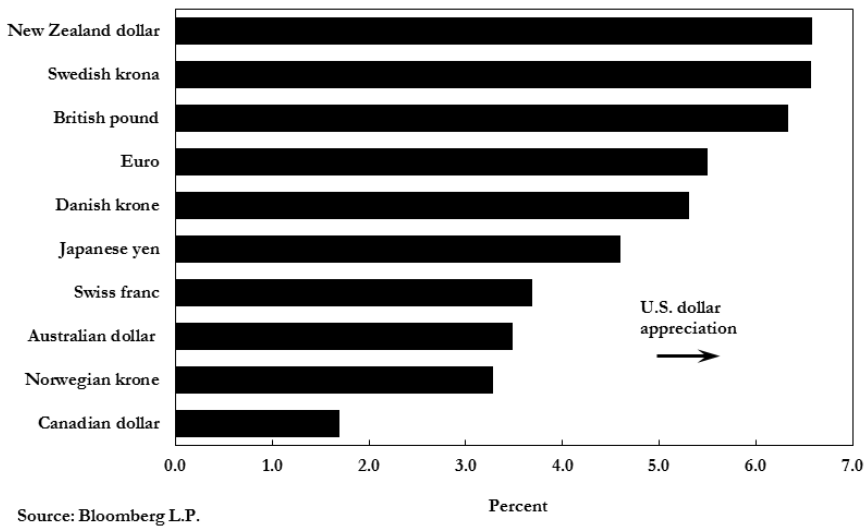
The trade-weighted U.S. dollar appreciated 4.2 percent in the second quarter of 2018, reflecting wider U.S. interest rate differentials compared to other major economies, decelerating momentum in non-U.S. economic growth, elevated European political risks, and rising financial market volatility across a number of emerging markets. The U.S. dollar appreciated against all developed market and emerging market currencies. Broad dollar appreciation began in mid-April on the back of strong domestic economic data. In particular, U.S. retail sales, the ISM non-manufacturing index, and industrial production all printed above consensus and supported expectations for the Federal Open Market Committee (FOMC) to gradually increase its target policy range. The rise in U.S. rates led to wider interest rate differentials against other major economies, supporting dollar appreciation.

The recent dollar appreciation partially reversed the depreciation seen in early 2018 when investors were more buoyant about the global growth outlook. Data from the Chicago Mercantile Exchange show that noncommercial investors' dollar positioning was short on net prior to the broad U.S. dollar appreciation.

With respect to international factors, signs of potentially slower euro area growth relative to the United States, in addition to political risks related to the formation of the Italian government, further contributed to U.S. dollar strength. Compared to the past couple of quarters when stronger global growth led to capital allocations abroad, softening global economic data in recent months led to more accommodative communications from developed central banks, including the European Central Bank (ECB), the Bank of England (BoE), the Bank of Canada (BoC), and the Swedish Riksbank. The U.S. dollar appreciated between 2 and 6 percent against the associated foreign currencies. Furthermore, the combination of widening U.S. rate differentials, weakening global growth, and concerns about trade protectionism also led to broad emerging markets currency weakness against the U.S. dollar.

Chart 4

U.S. DOLLAR PERFORMANCE AGAINST G-10 CURRENCIES DURING THE SECOND QUARTER



Source: Bloomberg L.P.

EURO DEPRECIATES AMID EUROZONE GROWTH SLOWDOWN, ECB COMMUNICATIONS, AND PERCEIVED RISE IN POLITICAL RISK

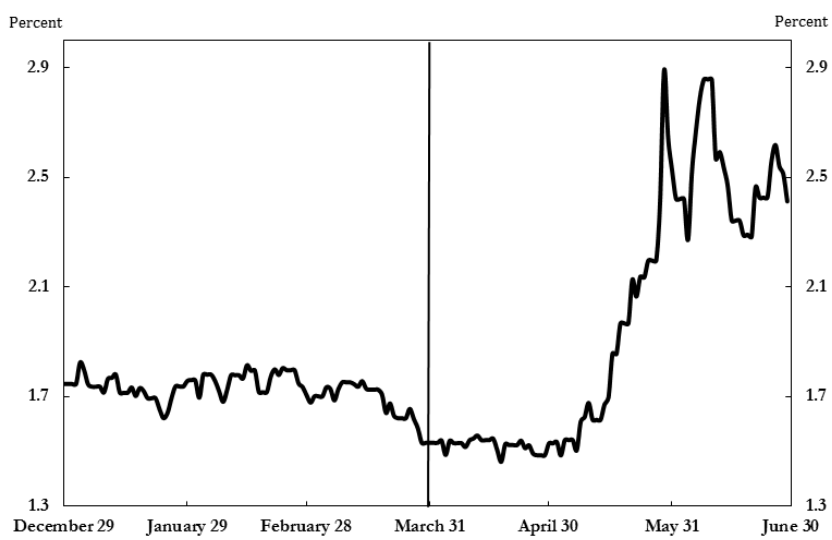
The U.S. dollar appreciated 5.5 percent against the euro in the second quarter amid slowing euro area economic activity, more accommodative communication from the ECB, and a perceived rise in euro area political risk.

In contrast to much of last year, euro area economic data in the second quarter, such as retail sales, factory orders, and industrial production, were generally below market expectations. Weaker economic data also led to a modest shift in communications from the ECB, which market participants interpreted as being more accommodative. For example, the ECB's April meeting minutes highlighted risks to the growth outlook and characterized the moderation in economic activity as reflecting a pull-back from the higher-than-expected growth seen in late 2017. The ECB also cited risks related to global factors, including the threat of increased trade protectionism. The ECB's General Council subsequently pledged at its June meeting that it would not hike rates at least through the summer of 2019, which market participants interpreted as more accommodative than expected.

Political uncertainty in the euro area, primarily in Italy regarding the country's future position on the euro, was also widely cited as weighing on the euro. Italian sovereign bond yields experienced heightened volatility during the second quarter, and ten-year Italian sovereign bond yields ended the quarter 90 basis points higher. Market participants further highlighted the unwinding of long euro positions by many investors as potentially exacerbating euro depreciation.

Chart 5

ITALIAN TEN-YEAR GOVERNMENT BOND INDEX



Source: Bloomberg L.P.

JAPANESE YEN DEPRECIATES AS INTERNATIONAL CONCERNS EASE

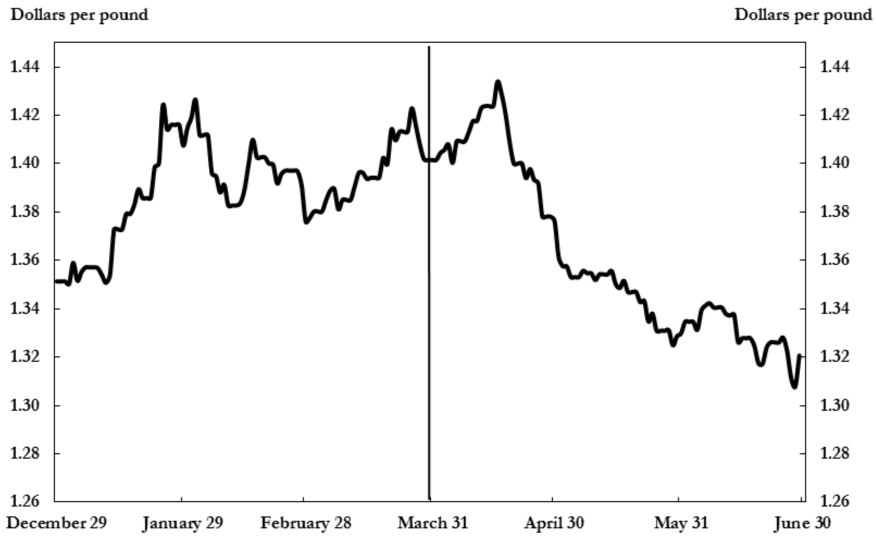
The U.S. dollar appreciated 4.2 percent against the Japanese yen in the second quarter. Japanese yen depreciation during the quarter was most pronounced in late April and early May, and was primarily ascribed to external factors such as broad dollar strength and a perceived abatement of global trade-related risks. The Japanese yen, which tends to appreciate during a market-negative environment, exhibited some volatility in late May and mid-June upon the re-emergence of perceived global trade tensions and concerns over the political outlook in Europe. However, the dollar–yen exchange rate traded in a relatively narrow range from the beginning of May onward.

BRITISH POUND DEPRECIATES ON WEAK DATA, BOE COMMUNICATIONS, AND POLITICAL DEVELOPMENTS

Among other major currencies, the British pound ended the quarter 5.8 percent weaker against the dollar. The British pound's depreciation began in mid-April on comments from BoE Governor Carney that highlighted mixed data and raised uncertainty over the timing of the next rate hike. Several weeks later, weaker-than-expected first-quarter GDP further weighed on the pound against the dollar. At its May meeting, the Monetary Policy Committee (MPC) left the Bank Rate unchanged, as expected, though the Committee's overall message was viewed as slightly more accommodative than expected given the downward revision to inflation forecasts, and language in the minutes suggested that the costs of waiting for additional information were likely to be modest. The June MPC meeting, however, shifted back toward a less accommodative tone, with the Committee citing the first-quarter slowdown as temporary and noting that ongoing policy tightening would be appropriate. Nevertheless, the pound continued to weaken through the end of the quarter owing to ongoing domestic political risks and a slowdown in negotiations between the United Kingdom and the European Union regarding U.K. withdrawal from the European Union.

Chart 6

BRITISH POUND–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

EMERGING MARKET CURRENCIES DEPRECIATE AMID HIGHER U.S. RATE DIFFERENTIALS, BROAD DOLLAR STRENGTH, AND IDIOSYNCRATIC DEVELOPMENTS

The U.S. dollar broadly appreciated against emerging market currencies in the second quarter, with the JP Morgan Emerging Markets Currency Index declining 9.0 percent, the largest quarterly decline since the third quarter of 2011.[1] Wider U.S. interest rate differentials, broad U.S. dollar strength, driven in part by signs of softening growth momentum outside of the United States, and perceived shifts in U.S. trade policies were all viewed by market participants as putting pressure on emerging market currencies. Against this backdrop, option-implied volatility of emerging-market currencies also increased notably over the quarter, somewhat reducing the attractiveness of emerging market carry-trade activity.

The increase in U.S. rate differentials and broad dollar strength also brought renewed focus on currencies from economies with large current account deficits, including the Argentine peso, which depreciated 30 percent against the dollar, and the Turkish lira and South African rand, which each

[1] The JP Morgan Emerging Markets Currency Index's weighting consists of ten currencies. The Turkish lira, Russian ruble, Hungarian forint, and South African rand each have a weighting of 8.33335 percent in the index, whereas the Brazilian real, Mexican peso, Chilean peso, Chinese renminbi, Indian rupee, and Singapore dollar each have a weighting of 11.1111 percent.

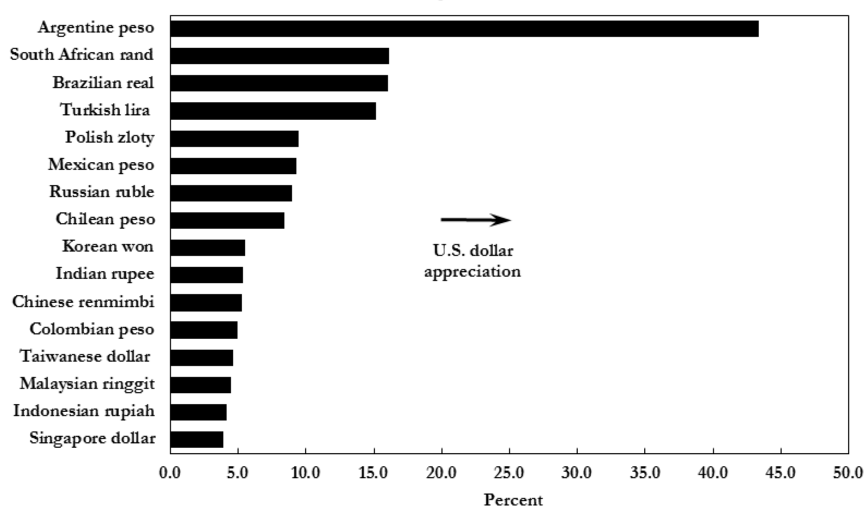
depreciated more than 13 percent against the dollar. In response to the Argentine peso's depreciation, government officials announced a series of measures, including a sharp increase to the key interest rate, foreign-exchange intervention, changes in the primary fiscal target, and the approval of a $50 billion stand-by arrangement with the International Monetary Fund. Similarly, the Central Bank of Turkey increased interest rates and simplified its monetary policy framework to help stem capital outflows and combat rising inflationary pressures. The Brazilian Central Bank increased its auctions of nondeliverable forwards that settle in local currency amid a 15 percent depreciation of the Brazilian real against the dollar. Depreciation in the Brazilian real had been driven in part by weaker-than-expected economic data and heightened political risk.

Within the Federal Reserve Board's broad trade-weighted dollar index, the Chinese renminbi and the Mexican peso exhibited the greatest underperformance during the quarter. The Chinese renminbi depreciated 5.2 percent against the dollar, reflecting increased concerns related to trade negotiations and tariff implementation between the United States and China and further incremental People's Bank of China easing measures amid softer Chinese economic data. Elsewhere in emerging markets in Asia, the Korean won and the Taiwanese dollar depreciated 4.6 percent and 4.5 percent, respectively, partially because of their sensitivity to supply and manufacturing chains within China.

The Mexican peso depreciated nearly 9 percent against the dollar, reflecting ongoing uncertainty over North American Free Trade Agreement negotiations and heightened domestic political risk ahead of presidential elections in July.

Chart 7

U.S. DOLLAR PERFORMANCE AGAINST EMERGING MARKET CURRENCIES DURING THE SECOND QUARTER



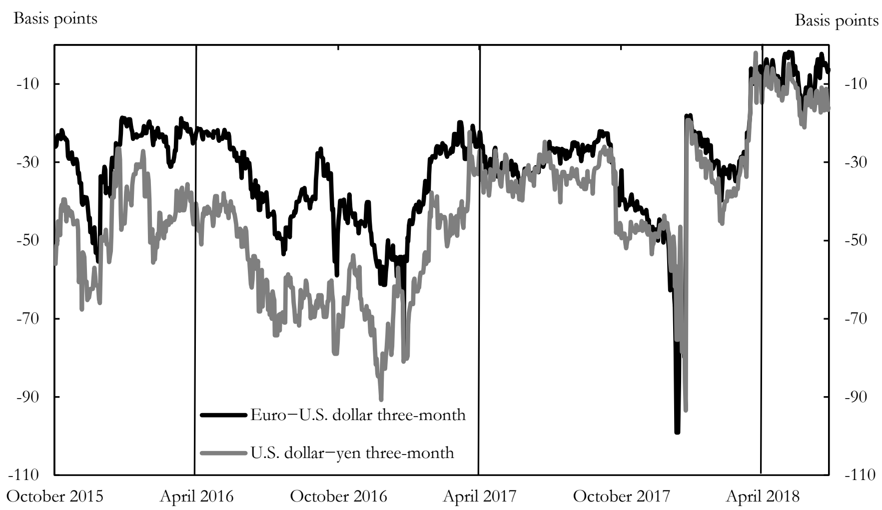
Source: Bloomberg L.P.

FOREIGN EXCHANGE SWAP BASIS SPREADS NARROW AMID REPORTED REDUCTION IN FOREIGN EXCHANGE HEDGING DEMAND

During the second quarter, the three-month foreign exchange swap basis spreads of key U.S. dollar currency pairs remained relatively stable.[2] Demand for U.S. dollar assets by some foreign investors reportedly declined slightly, reflecting a continued flattening of the U.S. Treasury yield curve, which increases the cost of hedging and reduces overall returns. Market participants reported that foreign exchange swap markets were orderly at quarter end, aided by a combination of reduced demand for dollar funding and continued perceived improvement in U.S. dollar liquidity management by banks.

Chart 8

FOREIGN EXCHANGE SWAP-IMPLIED BASIS SPREADS



Source: Bloomberg L.P.

[2] The foreign exchange swap basis represents the premium to borrow dollars in the foreign exchange swap market relative to the London Interbank Offered Rate.

TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE HOLDINGS

The Federal Reserve and U.S. Treasury did not undertake any intervention operations during the quarter. As of June 30, the value of the U.S. Treasury's Exchange Stabilization Fund (ESF) foreign-currency-denominated assets totaled $21.1 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account (SOMA) holdings of foreign-currency-denominated assets totaled $21.2 billion, comprised of euro and yen holdings.

Foreign Exchange Reserve Holdings

The Federal Reserve and U.S. Treasury invest their foreign currency reserves, which are held in the SOMA and the ESF, in a variety of instruments that yield market rates of return in their respective currencies and have a high degree of liquidity and credit quality. The Authorization for Foreign Currency Operations defines the permitted investments for the SOMA foreign currency portfolio.

The Open Market Trading Desk of the Federal Reserve Bank of New York (the Desk) utilizes an investment framework for the management of the foreign currency assets. The framework involves a routine affirmation of objectives and constraints from policymakers. The Desk then utilizes an investment approach designed to meet those objectives to maximize return subject to maintaining sufficient liquidity and a high degree of safety.

In terms of the composition of foreign currency reserves, a significant portion of the Federal Reserve and U.S. Treasury's foreign exchange reserves remained invested on an outright basis in German, French, Dutch, and Japanese government securities. Foreign currency reserves may also be invested at the Bank for International Settlements and in instruments at other official institutions, such as the Deutsche Bundesbank, the Banque de France, and the Bank of Japan. To the greatest extent practicable, the investments are split evenly between the SOMA and the ESF.

As of June 30, the euro reserves held by both the SOMA and the ESF totaled $25.4 billion, a decrease from $26.8 billion, owing to foreign exchange translation effects as the dollar appreciated against the euro. Cash held in euro-denominated deposits at official institutions increased to $13.8 billion from $12.9 billion, while direct holdings of euro-denominated government securities decreased to $11.6 billion from $14.0 billion. The amount of yen-denominated deposits and government securities held by the SOMA and the ESF fell to $16.9 billion from $17.6 billion at quarter-end, which was mostly attributable to the depreciation of the yen against the dollar.

Consistent with the current Authorization for Foreign Currency Operations, the Desk conducts small-value exercises for the foreign currency reserves as a matter of prudent advance planning. No inference about policy should be drawn from these exercises. In the second quarter, the Desk conducted a small-value sale of a euro-denominated government security.

Liquidity Swap Arrangements with Foreign Central Banks

As of June 30, the ECB had $1.09 billion of swaps outstanding and the Bank of Japan had $1.0 million of swaps outstanding. The BoC, the BoE, and the Swiss National Bank did not have any dollar swaps outstanding at the end of the quarter.

Table 1

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

Millions of U.S. Dollars

	Carrying Value, March 31, 2018[a]	Changes in Balances by Source: 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, 2018[a]
Federal Reserve System Open Market Account (SOMA)						
Euro	13,423	0	(8)	0	(700)	12,715
Japanese yen	8,800	0	0	0	(358)	8,442
Total	22,223	0	(8)	0	(1,059)	21,157

	Carrying Value, March 31, 2018[a]	Changes in Balances by Source: 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, 2018[a]
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	13,402	0	(8)	0	(699)	12,695
Japanese yen	8,800	0	0	0	(358)	8,442
Total	22,202	0	(8)	0	(1,058)	21,137

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, as well as 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 June 30, 2018

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets	**12,694.9**	**12,714.6**
Cash held on deposit at official institutions	6,871.8	6,891.5
Marketable securities held under repurchase agreements[b]	0.0	0.0
Marketable securities held outright	5,823.1	5,823.1
German government securities	1,559.2	1,559.2
French government securities	2,674.9	2,674.9
Dutch government securities	1,589.0	1,589.0
Japanese yen-denominated assets	**8,442.0**	**8,442.0**
Cash held on deposit at official institutions	7,059.3	7,059.3
Marketable securities held outright	1,382.7	1,382.7
Reciprocal currency arrangements		
European Central Bank[c]		1,090
Bank of Japan[c]		1
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 June 30, the SOMA and the ESF euro portfolios had Macaulay durations of 21.82 and 21.85 months, respectively; both the SOMA and ESF yen portfolios had Macaulay durations of 3.35 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 June 30, 2018
	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	1,090
Swiss National Bank	No preset limit	0
Bank of Japan	No preset limit	1
Bank of Canada	No preset limit	0
Bank of England	No preset limit	0
	No preset limit	1,091
Standing foreign currency liquidity swap arrangements		
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