TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

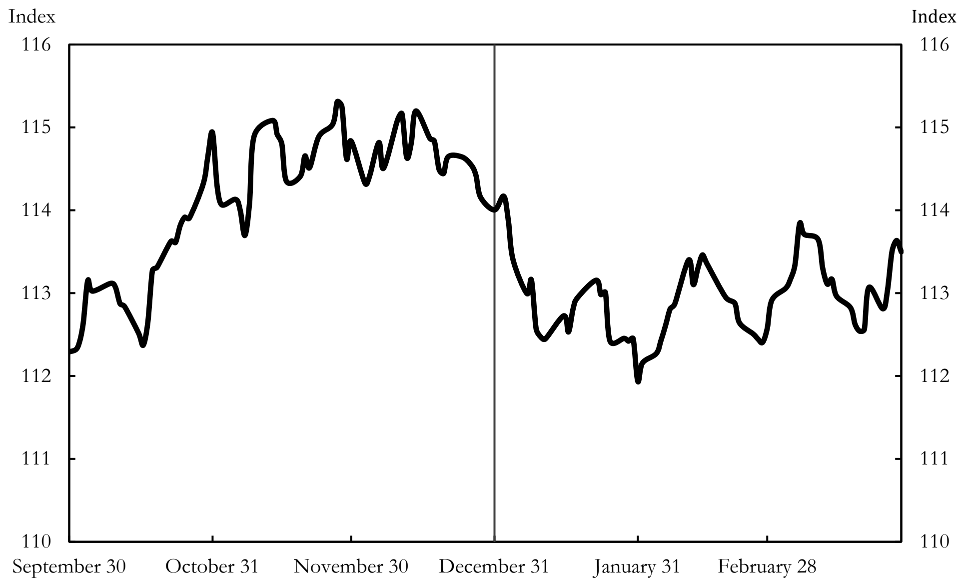
January – March 2019

During the first quarter of 2019, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, was range-bound amid multiple cross-currents. On net, the dollar depreciated 0.4 percent with relatively modest moves against most major and emerging market currencies. The main factor cited as weighing on the dollar over the quarter was a decline in market expectations for the Federal Reserve path of policy, though this was largely offset by the relative outperformance of the U.S. economy vis-à-vis most other jurisdictions and a perceived shift toward a more accommodative policy stance by central banks in other advanced economies. On a bilateral basis, the U.S. dollar depreciated 2.2 percent against the British pound, 2.1 percent against the Canadian dollar, and 2.4 percent against the Chinese renminbi. By contrast, the dollar appreciated 2.2 percent against the euro and 1.1 percent against the Japanese yen. 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 January through March 2019. Pedro Quintanilla-Dieck was primarily responsible for preparation of the report.

Chart 1

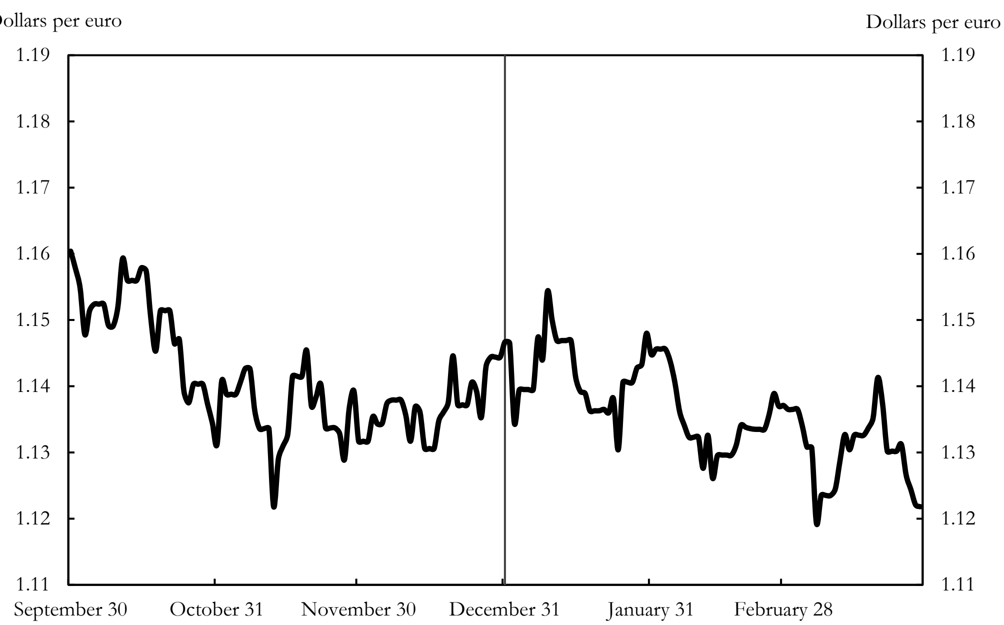
BROAD TRADE-WEIGHTED U.S. DOLLAR



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

Chart 2

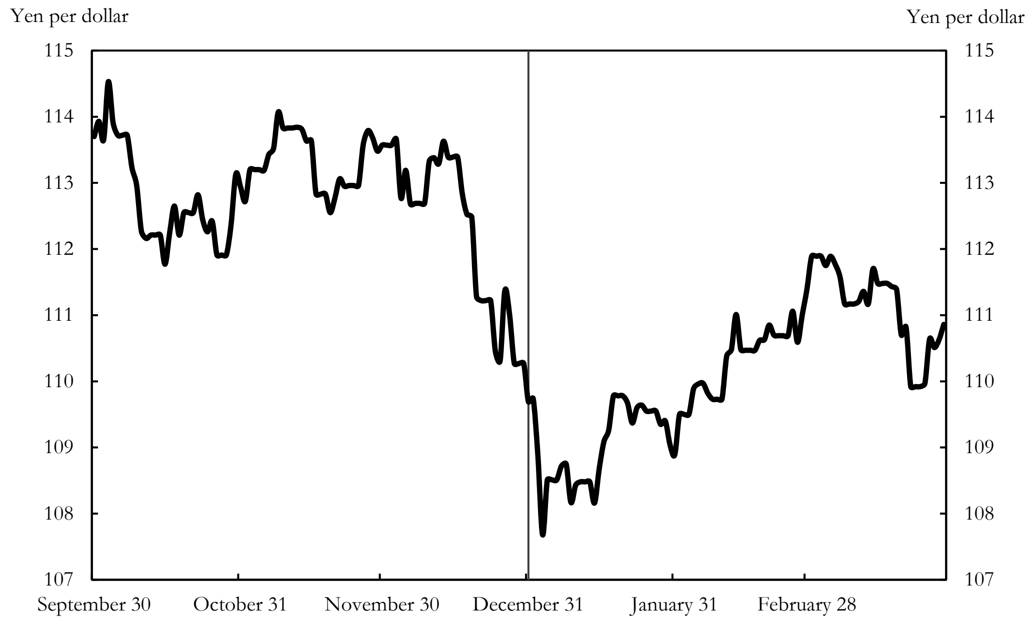
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

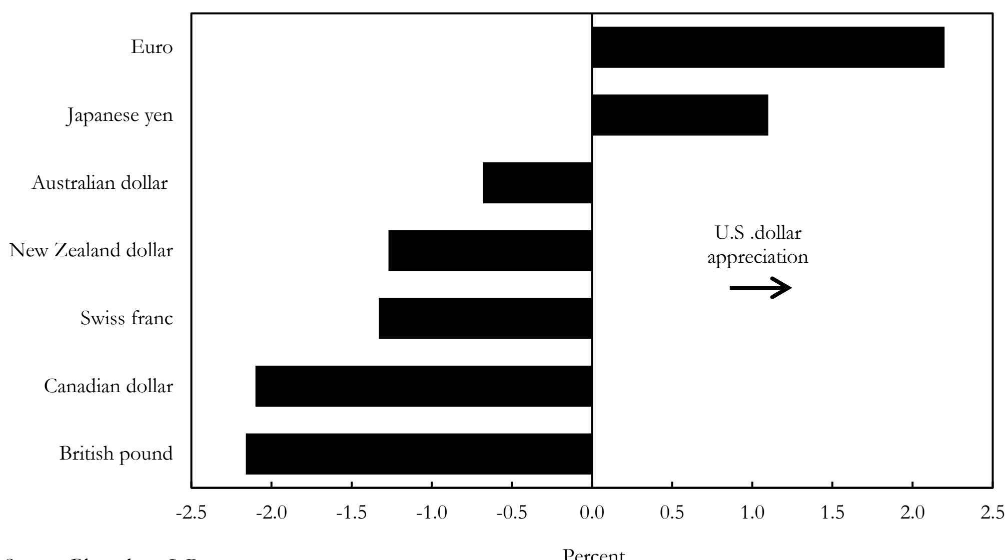
U.S. DOLLAR–JAPANESE YEN EXCHANGE RATE



Source: Bloomberg L.P.

Chart 4

U.S. DOLLAR PERFORMANCE AGAINST DEVELOPED MARKET CURRENCIES DURING THE FIRST QUARTER



Source: Bloomberg L.P.

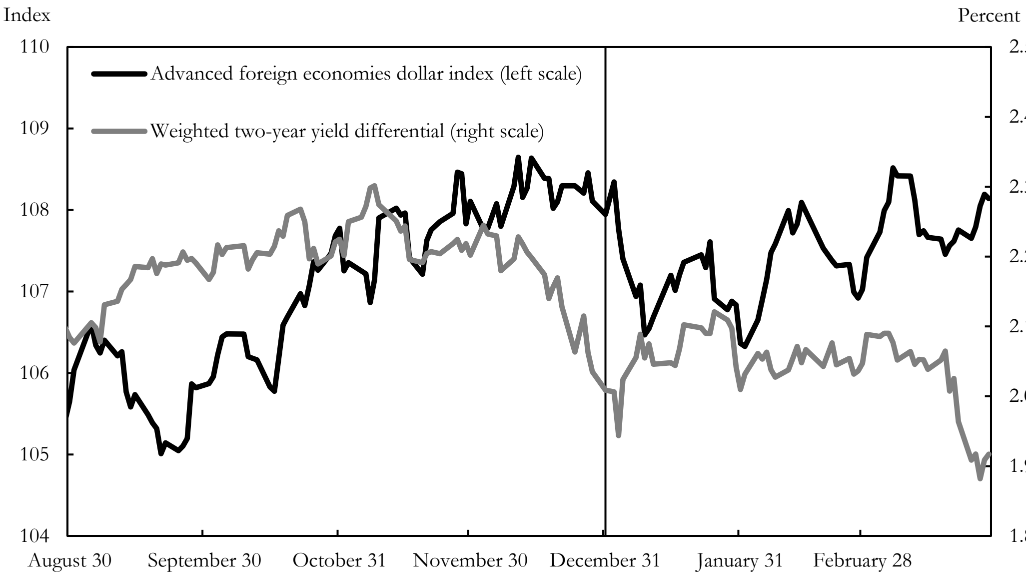
U.S. DOLLAR RANGE-BOUND AMID MULTIPLE CROSS-CURRENTS

During the first quarter of 2019, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, was range-bound amid multiple cross-currents.[1] On net, the U.S. dollar depreciated 0.4 percent during the first quarter, with relatively modest moves against most major currencies. One key factor cited as contributing to depreciation pressure on the dollar was the continued market repricing of the Federal Reserve's future policy rate to reflect a lower expected path during 2019 and 2020. During the quarter, the path declined amid mixed U.S. and global economic data as well as Federal Reserve communication emphasizing patience and data-dependence with regard to further changes in the policy rate. With respect to the domestic economy, U.S. economic data during the quarter were broadly viewed as consistent with a modest deceleration in growth from the end of last year. U.S. inflation pressures also remained subdued during the quarter. With respect to Federal Reserve communications, market participants broadly viewed the outcomes of the January and March Federal Open Market Committee (FOMC) meetings as consistent with a shift away from a tightening bias, and many specifically cited the larger-than-expected declines in the March Summary of Economic Projections median projections for the target federal funds rate from 2019 through 2021 as reinforcing this view. The market's repricing of Federal Reserve policy expectations contributed to a roughly 23 basis point decline in short-dated Treasury yields, narrowing the U.S. yield advantage vis-à-vis other major economies and weighing on the dollar.

[1] The Federal Reserve's broad trade-weighted dollar index is based on twenty-six currencies, including both major developed market currencies and currencies of other important trading partners of the United States, including emerging markets. Starting in February 2019, the trade weights in the index are based on trade in goods and services, whereas historically only trade in goods was used to determine the weights. Moreover, the weighting scheme and currency composition of the index have been revised, resulting in the addition of Vietnam and removal of Venezuela to reflect the most recent bilateral trade figures.

Chart 5

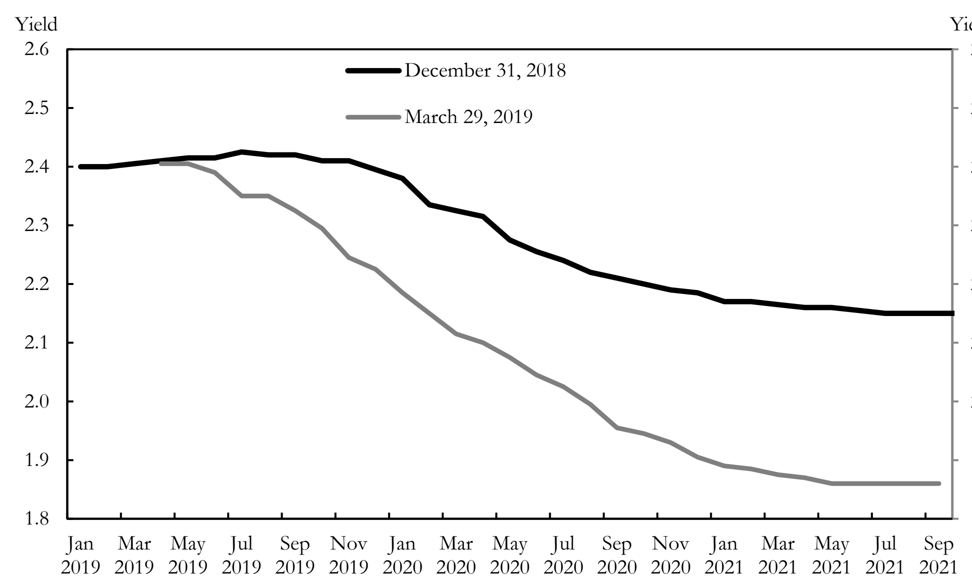
ADVANCED FOREIGN ECONOMIES DOLLAR INDEX AND WEIGHTED DEVELOPED MARKET INTEREST RATE DIFFERENTIAL



Sources: Bloomberg L.P.; Board of Governors of the Federal Reserve System; New York Fed staff calculations. Interest rate differential measured as U.S. interest rates minus developed market rates.

Chart 6

MARKET-IMPLIED RATES ON FEDERAL FUNDS FUTURES



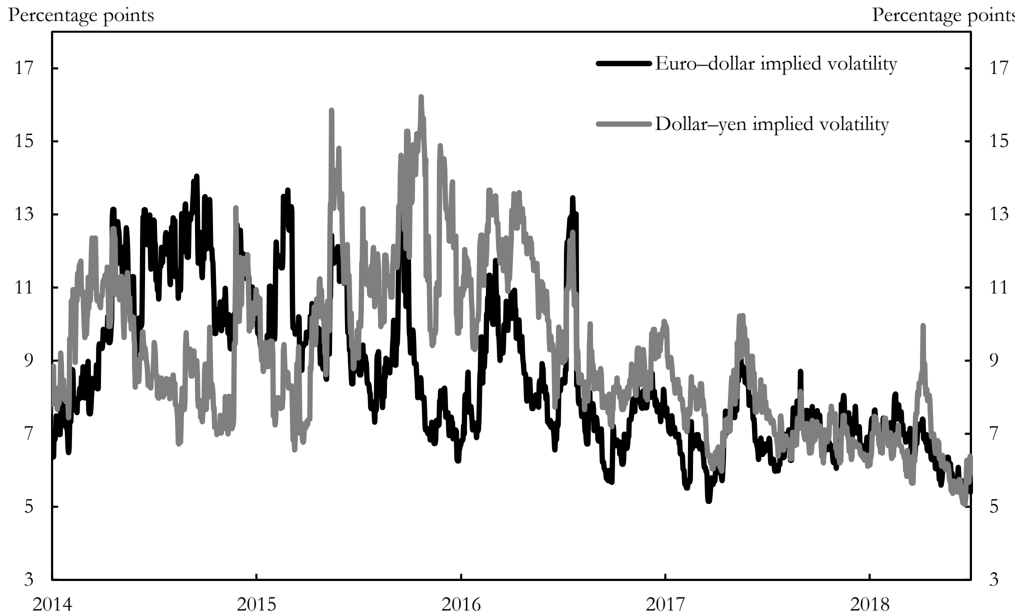
Source: Bloomberg L.P.

However, the aforementioned depreciation pressures were offset to an extent by the relative outperformance of the U.S. economy vis-à-vis other major economies, as well as the shift toward a more accommodative stance by other major central banks. At its March meeting, the European Central Bank (ECB) extended its forward guidance, indicating that it expects no rate hikes at least through December 2019. Shortly thereafter, the Bank of Canada (BoC) noted increased uncertainty regarding the timing of future rate increases, while communication from the Reserve Bank of Australia and Reserve Bank of New Zealand signaled a greater likelihood of decreases in their respective policy rates in the future. Most central banks in advanced economies highlighted increased downside risks to global growth, with the ECB and BoC lowering their domestic growth forecasts through 2020. Similarly, in regard to growth, market participants' downward revisions to U.S. growth forecasts were matched by equal or greater downgrades to growth forecasts in other jurisdictions, particularly in Europe.

The perceived shift by these central banks toward a more accommodative stance resulted in lower rates in their respective jurisdictions, leaving U.S. interest rate differentials vis-à-vis other advanced economies relatively unchanged. Toward the end of the quarter, however, U.S. interest rate differentials vis-à-vis other advanced economies narrowed modestly following the March FOMC meeting, though the dollar remained supported as global economic data, particularly in Europe and China, printed below expectations. Taken together, the perceived synchronized shift by a number of G10 central banks toward a more accommodative stance has reduced both current and expected monetary policy divergence, contributing to a notable reduction in foreign exchange volatility. Indeed, measures of option-implied volatility on several major currency pairs declined to multiyear lows during the quarter.

Chart 7

ONE-MONTH IMPLIED VOLATILITY ACROSS MAJOR CURRENCY PAIRS



Source: Bloomberg L.P.

EURO DEPRECIATES AS THE ECB EXTENDS FORWARD RATE GUIDANCE

The U.S. dollar appreciated 2.2 percent against the euro in the first quarter, as the ECB added incremental accommodation amid a more pronounced slowdown in European growth, putting depreciation pressure on the euro. At its March policy meeting, the ECB extended the forward guidance horizon for key interest rates through at least the end of 2019, with the previous horizon extending through at least the summer. Additionally, the ECB announced a new round of targeted longer-term refinancing operations (TLTROs) to be launched in September. Moreover, the ECB downgraded its growth forecasts through 2020 and cut its forecast for 2021 inflation from 1.8 percent to 1.6 percent. Market-implied expectations for a policy rate increase by the ECB shifted out to the first quarter of 2021, compared with the second half of 2020 at the beginning of the period.

The ECB's decision came amid signs of an ongoing growth slowdown in the euro area. Most notably, the Eurozone manufacturing Purchasing Managers' Index (PMI) printed well below consensus expectations and fell below 50, which is commensurate with economic contraction. Major European countries continued to see a downward trend in their PMI data. Consistent with this trend, the European Commission cut its 2019 growth forecasts for all of the euro area's major economies.

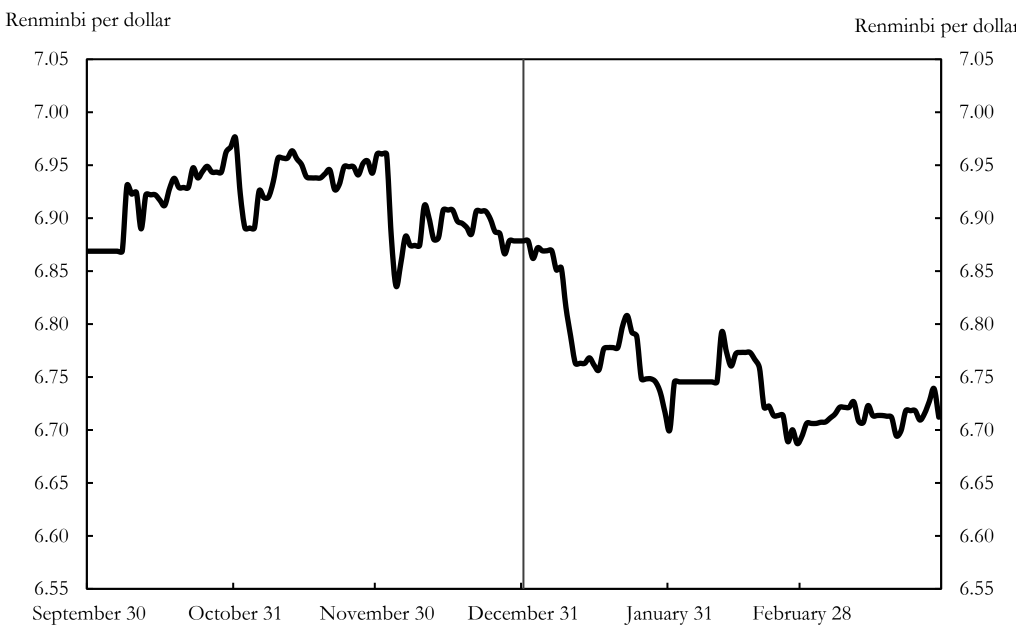
EASING OF U.S.-CHINA TRADE TENSIONS SUPPORTS THE RENMINBI AND OTHER EMERGING MARKET CURRENCIES

The U.S. dollar depreciated 2.4 percent against the Chinese renminbi due to a perceived easing in U.S.-China trade tensions in addition to the aforementioned decline in expectations for the path of the policy rate in the United States. Early in the quarter, reports of multiple concessions by Chinese officials, including on key structural issues, as well as perceived flexibility by U.S. negotiators, supported the renminbi, which appreciated to levels last seen in July 2018. In late February, sentiment was further improved by the postponement of a planned March 1 increase in U.S. tariff rates from 10 percent to 25 percent on $200 billion in Chinese imports. Taken together, these developments raised market expectations for a U.S.-China trade deal, improving the outlook for Chinese exports and supporting the renminbi.

These renminbi-supportive factors were seen as partly counterbalanced by signs of deceleration in the Chinese economy. Most Chinese economic data releases—including industrial production, fixed asset investment, and manufacturing PMI—continued to decelerate and generally printed below consensus forecasts during the first quarter. However, on net, Chinese aggregate financing data for January and February indicated higher-than-expected loan growth, which was seen as supporting the outlook for the renminbi later in the quarter.

Chart 8

U.S. DOLLAR–CHINESE RENMINBI EXCHANGE RATE



Source: Bloomberg L.P.

More broadly, the easing in trade tensions was viewed by market participants as modestly supporting emerging market currencies at the start of the year. Emerging market currencies in aggregate, as measured by the trade-weighted Emerging Market Economies Dollar Index, strengthened 2.1 percent against the U.S. dollar in January amid these developments.[2] However, this trend largely reversed later in the quarter amid signs of weakening global growth, and emerging market currencies ended the quarter roughly 1 percent higher, on net.

RECOVERY IN GLOBAL RISK SENTIMENT DRIVES MODEST JAPANESE YEN DEPRECIATION

After appreciating almost 4 percent against the U.S. dollar in the fourth quarter of 2018, the Japanese yen partially reversed trend and depreciated 1.1 percent during the first quarter of 2019. The depreciation of the yen was viewed as consistent with the improvement in global investor sentiment and stabilization across equity markets following the considerable volatility exhibited in the final months of 2018. Global equity indices rebounded during the first quarter, with the S&P 500 gaining roughly 13 percent. Such moves traditionally coincide with yen depreciation, as Japanese investors seek higher returns abroad. Consistent with this development, market participants pointed to increased purchases of U.S securities by Japanese investors seeking relatively attractive U.S. yields (compared to those in Japan) as weighing on the yen. Accordingly, recent data released by Japan's Ministry of Finance indicate roughly $10 billion of Japanese portfolio inflows into U.S. sovereign bonds and notes on a net basis during the first two months of 2019, compared to approximately $44 billion of net portfolio outflows from U.S. sovereign securities during 2018.

Separately, on January 3, the Japanese yen experienced a so-called "flash event" during early Asian trading hours, appreciating approximately 4 percent against the U.S. dollar, 7 percent against the Australian dollar, and 9 percent against the Turkish lira. However, the moves mostly retraced within an hour. Market participants largely pointed to technical factors as driving the moves, including a triggering of stop-loss orders related to Japanese retail accounts, though they noted that the yen was receiving support at this time amid lingering equity market volatility and some incremental signals of global growth concerns. The event occurred at a time of day when currency market liquidity is typically at its thinnest, and was likely exacerbated by the fact that Japanese markets were closed for a holiday.

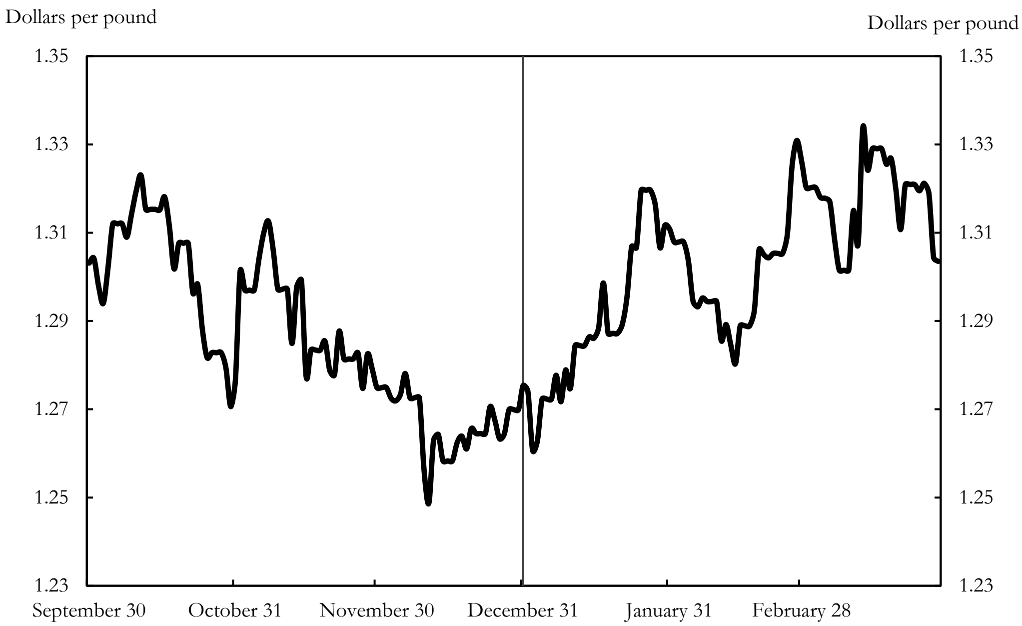
[2] The Federal Reserve's Emerging Market Economies Dollar Index, formerly known as the Other Important Trading Partners (OITP) index, is a weighted average of the foreign exchange value of the U.S. dollar against a subset of emerging market currencies. For more information on the index, see [Revisions to the Federal Reserve Dollar Indexes].

BRITISH POUND REMAINS SENSITIVE TO BREXIT-RELATED UNCERTAINTY

The British pound continued to experience volatility amid ongoing uncertainty regarding the United Kingdom's withdrawal from the European Union (EU), though on net it appreciated 2.2 percent against the U.S. dollar during the quarter. Market participants viewed political developments during the quarter as somewhat reducing the probability of a no-deal "Brexit" scenario, which was viewed as supporting the currency.

Chart 9

BRITISH POUND–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Specifically, despite setbacks to efforts to secure approval of a withdrawal agreement in Parliament, expectations for an extension of applicable deadlines and a more orderly Brexit increased throughout the quarter. Indeed, the EU offered an unconditional extension of the original Brexit date, from March 29 to April 12, reducing the potential for a no-deal Brexit event, which is viewed by market participants as the most disruptive scenario for the pound.[3]

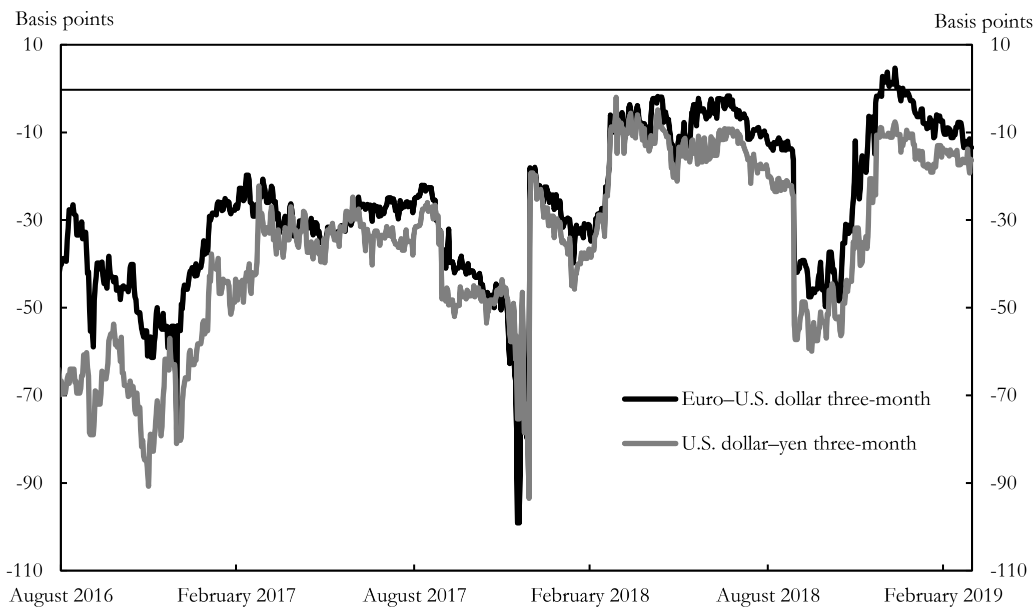
[3] However, after the first quarter, EU officials extended the U.K.'s membership through October 31, 2019.

FOREIGN EXCHANGE SWAP MARKET GENERALLY STABLE; BASIS SPREADS NARROW

During the first quarter, three-month foreign exchange swap basis spreads of key U.S. dollar currency pairs generally remained within the narrow levels exhibited throughout most of 2018. According to market participants, the narrowness of foreign exchange swap basis spreads, compared to those of prior years, reflects two factors. First, the overall flatness of the U.S. Treasury yield curve has reduced the relative hedged return of U.S. dollar assets, resulting in lower demand for dollar funding and hedging in the foreign exchange swap market. Second, banks' ongoing adjustment to changes in the regulatory environment and corresponding improvement in their balance sheet management has helped reduce constraints on banks' supply of U.S. dollars in the foreign exchange swap market, especially around quarter- and year-end dates, relative to previous years.

Chart 10

FOREIGN EXCHANGE SWAP-IMPLIED BASIS SPREADS



Source: Bloomberg L.P.

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 March 31, the value of the U.S. Treasury's Exchange Stabilization Fund (ESF) foreign-currency-denominated assets totaled $21 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account (SOMA) holdings of foreign-currency-denominated assets also totaled $21 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 euro reserves remained invested on an outright basis in German, French, and Dutch bonds, while their yen reserves are mostly invested in cash deposits at the Bank of Japan, with a small portion in 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 March 31, the euro reserves held by both the SOMA and the ESF totaled $24.4 billion, a decrease from $24.9 billion, owing to foreign exchange translation effects as the dollar appreciated against the euro. Cash held in euro-denominated deposits at official institutions was unchanged from the prior quarter at $12.8 billion, while direct holdings of euro-denominated government securities decreased to $11.6 billion from $12.1 billion. The amount of yen-denominated deposits and government securities held by the SOMA and the ESF decreased to $16.9 billion from $17 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 first quarter, the Desk entered into a small-value euro-denominated repurchase agreement.

Liquidity Swap Arrangements with Foreign Central Banks

As of March 31, the ECB had $1.4 billion of swaps outstanding. The Bank of Japan, Bank of Canada, Bank of England, and 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

		Changes in Balances by Source				
	Carrying Value, December 31, 2018[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, 2019[a]
Federal Reserve System Open Market Account (SOMA)						
Euro	12,458	0	(8)	0	(248)	12,203
Japanese yen	8,520	0	0	0	(75)	8,445
Total	20,979	0	(7)	0	(323)	20,648

		Changes in Balances by Source				
	Carrying Value, December 31, 2018[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, 2019[a]
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	12,439	0	(7)	0	(247)	12,184
Japanese yen	8,520	0	0	0	(75)	8,445
Total	20,959	0	(7)	0	(323)	20,629

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 March 31, 2019

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets	**12,184.1**	**12,203.0**
Cash held on deposit at official institutions	6,372.9	6,391.8
Marketable securities held under repurchase agreements[b]	0.0	0.0
Marketable securities held outright	5,811.2	5,811.2
German government securities	1,300.1	1,300.1
French government securities	3,018.8	3,018.8
Dutch government securities	1,492.2	1,492.2
Japanese yen-denominated assets	**8,445.1**	**8,445.1**
Cash held on deposit at official institutions	7,311.2	7,311.2
Marketable securities held outright	1,133.9	1,133.9
Reciprocal currency arrangements		
European Central Bank[c]		1,365
Bank of Japan[c]		0
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 March 31st, the SOMA and the ESF euro portfolios had Macaulay durations of 23.56 and 23.59 months, respectively; both the SOMA and ESF yen portfolios had Macaulay durations of 1.97 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 March 31, 2019
	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	1,365
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	1,365
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