TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

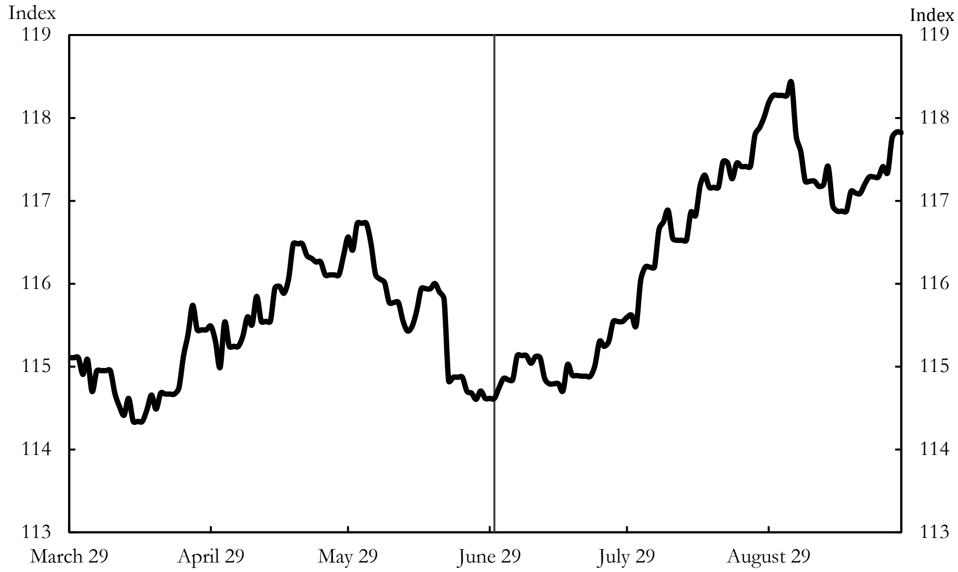
July – September 2019

During the third quarter of 2019, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, appreciated 3.1 percent, with the U.S. dollar strengthening notably against most major and emerging market currencies. The main factors supporting the U.S. dollar were the continued relative outperformance of the U.S. economy vis-à-vis most other jurisdictions, and safe-haven flows amid investor uncertainty stemming from the escalation in the U.S.-China trade conflict. The U.S. dollar was also reportedly supported by the higher level of U.S. yields relative to other major economies, even as interest rate differentials narrowed. On a bilateral basis, the U.S. dollar appreciated 4.4 percent against the euro, 4.1 percent against the Chinese renminbi, and 3.3 percent against the British pound, but was little changed 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 Lorie Logan, Senior Vice President, Federal Reserve Bank of New York, System Open Market Account Manager pro tem, describes the foreign exchange operations of the U.S. Department of the Treasury and the Federal Reserve System for the period from July through September 2019. Pedro Quintanilla-Dieck was primarily responsible for the preparation of the report.

Chart 1

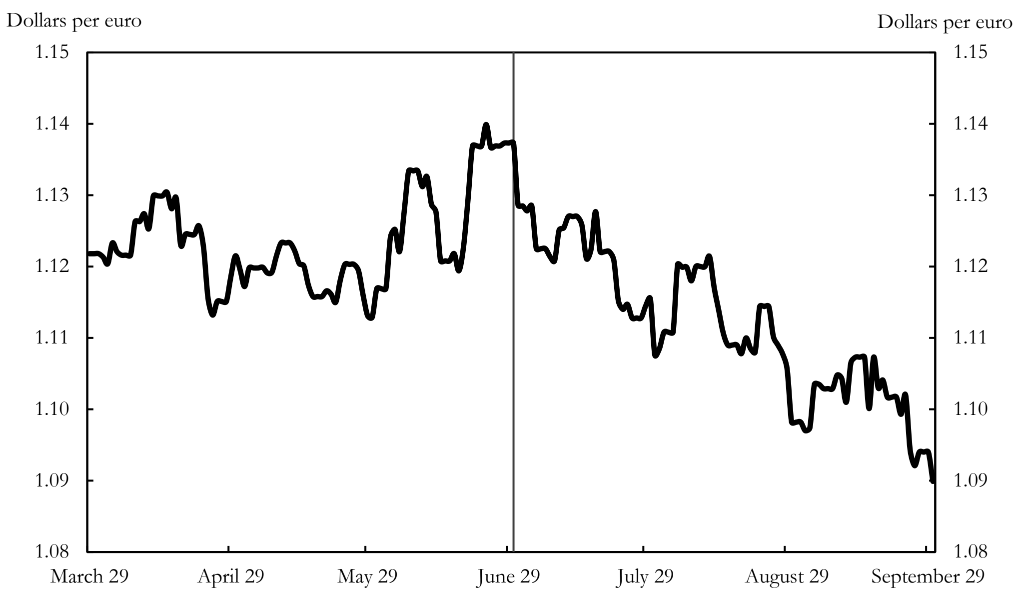
BROAD TRADE-WEIGHTED U.S. DOLLAR INDEX



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

Chart 2

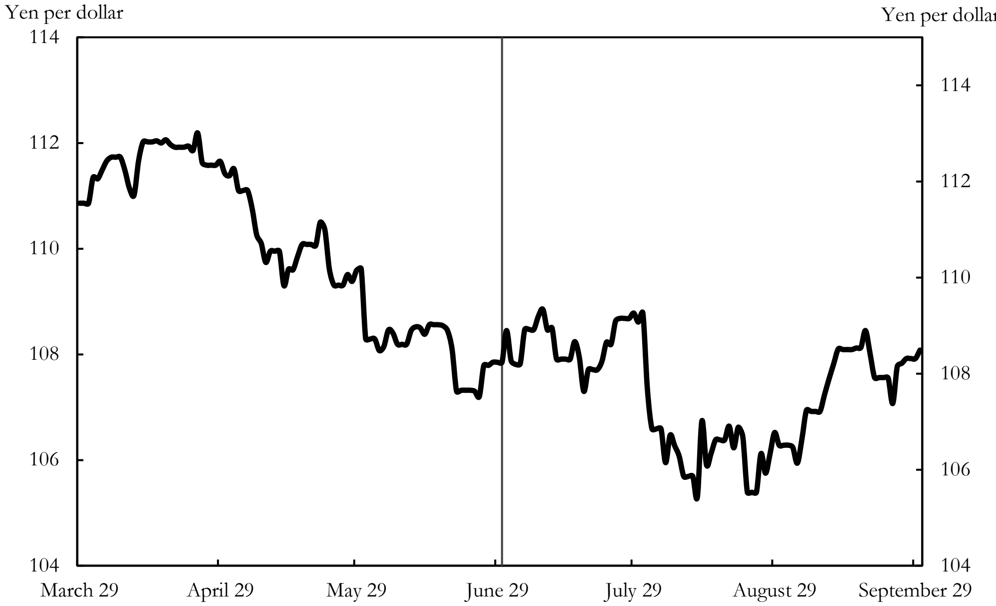
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

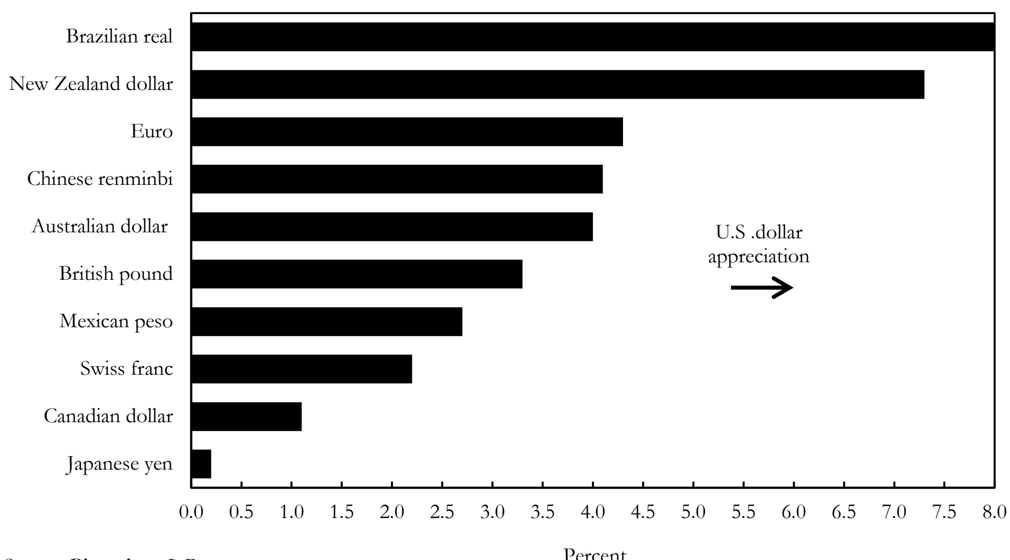
U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

Chart 4

U.S. DOLLAR PERFORMANCE AGAINST DEVELOPED AND EMERGING MARKET CURRENCIES DURING THE THIRD QUARTER



Source: Bloomberg L.P.

U.S. DOLLAR APPRECIATES BROADLY AMID THE OUTPERFORMANCE OF THE U.S. ECONOMY AND AN ESCALATION IN THE U.S.-CHINA TRADE CONFLICT

During the third quarter of 2019, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, appreciated 3.1 percent, with the U.S. dollar strengthening notably against most major and emerging market currencies.[1] One key factor cited as contributing to the dollar's appreciation was the continued relative outperformance of the U.S. economy vis-à-vis most other jurisdictions. Most U.S. economic indicators exceeded expectations, while economic data in most other jurisdictions, particularly in Europe and China, came in well below consensus expectations, weighing on the global growth outlook. The second key factor cited as contributing to the dollar's appreciation was the escalation in the U.S.-China trade conflict in August. According to market participants, this rise in trade tensions exacerbated global growth concerns and drove safe-haven demand for dollars.

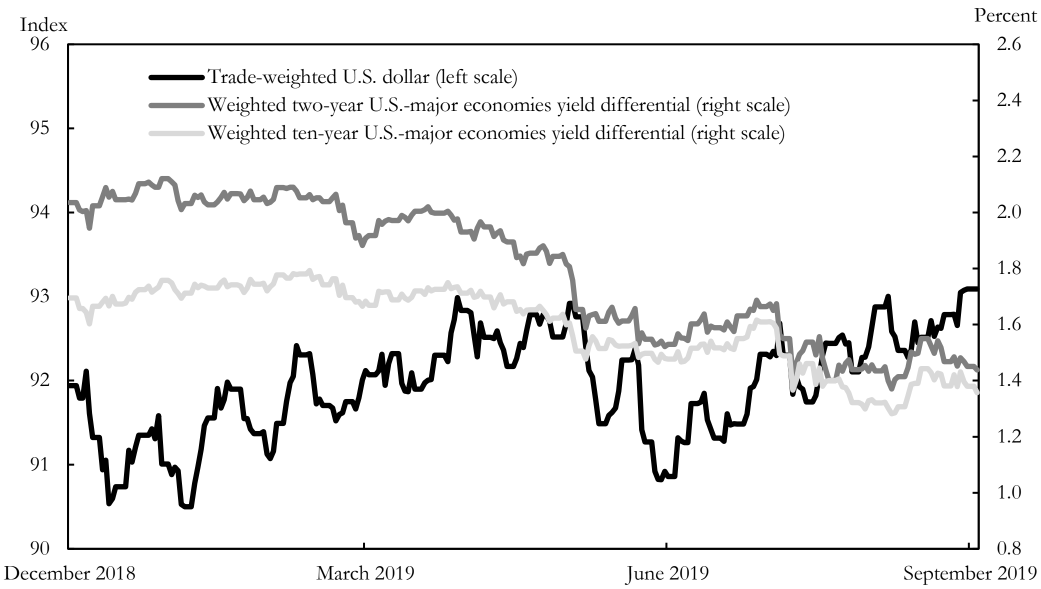
The U.S. dollar was also reportedly supported by the level of U.S. interest rates, which remain high relative to prevailing rates in other major economies. Indeed, the dollar remained the highest-yielding G-10 currency despite the narrowing of these interest rate differentials following the Federal Reserve's cuts to the target range for the federal funds rate in July and September. The Federal Reserve's reductions in the target range for the federal funds rate and rising global growth concerns were seen as contributing to the roughly 13 and 34 basis point declines in two-year and ten-year Treasury yields over the quarter, respectively.

However, other major central banks were also seen as maintaining or shifting further toward an accommodative monetary policy stance, placing downward pressure on interest rates in their respective jurisdictions. At its September meeting, the European Central Bank (ECB) announced a comprehensive easing package and strengthened its forward guidance on monetary policy by signaling its intention to keep its policy rates at current or lower levels until the inflation rate rises closer to its objective. Meanwhile, the Reserve Bank of Australia cut its policy rate by 25 basis points at its September meeting and the Reserve Bank of New Zealand cut its policy rate by 50 basis points at its August meeting. Overall, policy communications from most central banks in advanced economies highlighted increased downside risks to global growth. This left U.S. interest rate differentials vis-à-vis other advanced economies only modestly narrower.

[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.

Chart 5

BROAD TRADE-WEIGHTED U.S. DOLLAR INDEX AND SOVEREIGN INTEREST RATE DIFFERENTIALS



Sources: Bloomberg L.P.; Board of Governors of the Federal Reserve System; New York Fed staff calculations.

EURO DEPRECIATES AS THE ECB DELIVERS A COMPREHENSIVE EASING PACKAGE

The U.S. dollar appreciated 4.4 percent against the euro in the third quarter, as the ECB delivered a multifaceted easing package in response to a further slowdown in euro area growth. Specifically, at its September meeting, the ECB cut the deposit rate by 10 basis points to negative 0.50 percent and announced an open-ended asset purchase program of €20 billion per month starting November 1. In addition, the ECB signaled its intention to keep its policy rates at or below current levels until the inflation rate rises closer to its objective, announced more generous terms for targeted longer-term refinancing operations, and introduced a deposit tiering facility designed to allow the ECB to keep policy rates at or below current levels while alleviating pressures on bank profitability. In June, the ECB also cut its inflation projection for 2021 from 1.6 percent to 1.5 percent and downgraded its 2020 growth forecast from 1.4 percent to 1.2 percent. Expectations for an easing package by the ECB were gradually priced in by market participants and contributed to the dollar's appreciation against the euro.

The ECB's easing package came as economic activity in the euro area continued to decelerate, led by weakness in the manufacturing sector and affecting predominantly export-oriented countries like Germany. Most notably, Purchasing Manager's Index readings for the eurozone and Germany fell further below the 50-point level, indicating contractions in manufacturing activity. Meanwhile, headline and core inflation continued to fall below the ECB's target of below but close to 2 percent during the quarter, and market-based measures of euro area inflation expectations continued to hover near historic lows.

ESCALATION OF U.S.-CHINA TRADE TENSIONS WEIGHS ON THE RENMINBI AND OTHER EMERGING MARKET CURRENCIES

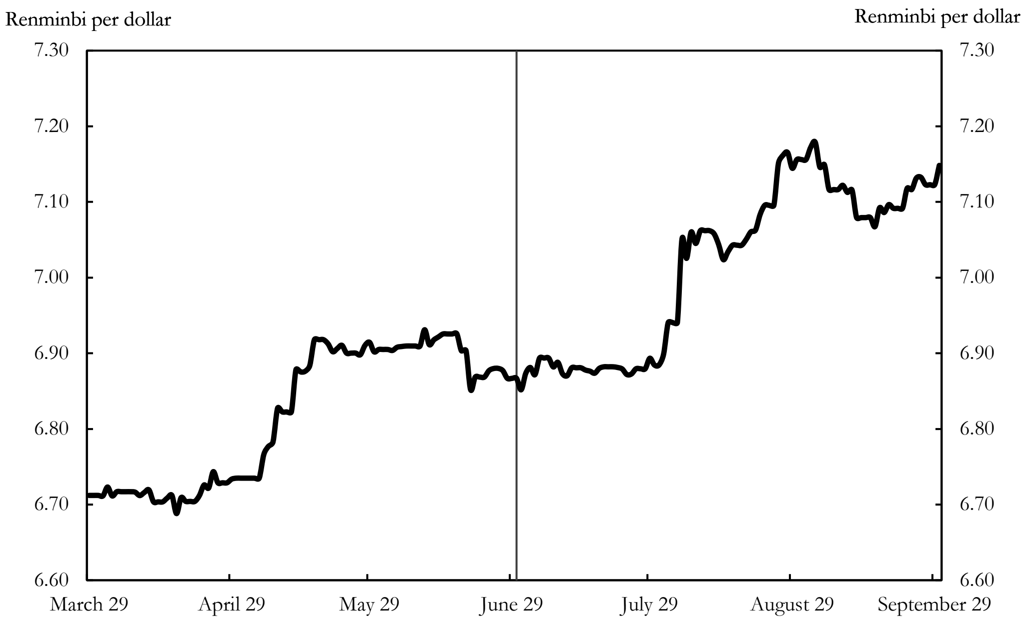
The U.S. dollar appreciated 4.1 percent against the Chinese renminbi following a series of escalations in the U.S.-China trade conflict, developments that increased investor concerns about Chinese and global growth. The U.S administration unexpectedly announced in early August that it would impose a 10 percent tariff on $300 billion of Chinese imports to the United States. A number of further escalations followed in late August, including the announcement of a new round of tariffs on U.S. goods imposed by China, followed by a subsequent announcement by the U.S. administration of a further increase in the tariff rate on all Chinese imports.

Soon after the U.S. administration's initial tariff announcement, the renminbi depreciated 1.5 percent and breached CNY7.0 per dollar, a psychologically important level for market participants that had not been reached since 2008. The renminbi's depreciation through the CNY7.0 per dollar level occurred after the People's Bank of China (PBoC) set the renminbi's central parity rate ("fixing")—which determines the midpoint of the renminbi's daily trading band with the dollar—at a weaker-than-expected level, which was viewed as signaling a willingness to permit renminbi depreciation given the additional tariff increase. Later that week, the U.S. administration formally named China a currency manipulator under the Omnibus Trade and Competitiveness Act of 1988.

However, the PBoC set the fixing significantly stronger than market expectations for the rest of the quarter, which contributed to some stabilization in the renminbi against the U.S. dollar. Late in the quarter, the U.S. temporarily postponed a 5 percentage point increase in the tariff rate on $250 billion of Chinese imports, and Chinese officials announced that they would exempt U.S. commodity exports from the new tariffs, further supporting the renminbi.

Chart 6

U.S. DOLLAR–CHINESE RENMINBI (ONSHORE) EXCHANGE RATE



Source: Bloomberg L.P.

Elsewhere, the U.S. dollar appreciated 3.3 percent against emerging market currencies in the third quarter, as measured by the Federal Reserve's trade-weighted emerging market economies dollar index.[2] The appreciation was primarily attributed to the escalation in U.S.-China trade tensions, which exacerbated global growth concerns and thereby increased global risk aversion. Amid the deteriorating global economic outlook and easing of monetary policy by central banks in some advanced economies, central banks in certain emerging markets, such as China, Mexico, Indonesia, and Brazil, cut their respective policy rates, further weighing on those countries' respective currencies.

Separately, the Argentine peso depreciated approximately 26 percent against the U.S. dollar, on net, in the third quarter amid broad emerging market weakness and idiosyncratic political developments within Argentina. Specifically, the unexpected and resounding defeat of Argentina's president in primary elections in August drove a significant increase in market uncertainty regarding future economic policy, leading to a more than 30 percent depreciation of the peso. Amid mounting domestic challenges and external vulnerabilities, the government announced that it would extend payment maturities on local sovereign debt and negotiate a re-profiling of longer-term foreign debt, which

[2] The Federal Reserve's Emerging Market Economies Dollar Index, formerly known as 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.

market participants viewed as driving further peso depreciation and market volatility, and which ultimately culminated in the imposition of capital controls shortly thereafter.

JAPANESE YEN LITTLE CHANGED ON NET AMID MULTIPLE CROSS-CURRENTS

The U.S. dollar was little changed on net against the Japanese yen during the third quarter amid multiple cross-currents. The yen was supported by safe-haven flows due to market concerns over slowing global growth and rising trade tensions. The Japanese yen was also supported by slightly narrower U.S.–Japanese interest rate differentials amid additional monetary accommodation from the Federal Reserve, while the Bank of Japan's monetary policy stance was largely unchanged. The spread of the two-year U.S. Treasury yield to Japanese equivalents narrowed by approximately 4 basis points during the quarter.

However, appreciation pressures were offset by strong demand for U.S. securities from Japanese investors due to the relative attractiveness of positive-yielding U.S. assets. Indeed, recent data released by Japan's Ministry of Finance indicate roughly $16 billion of net Japanese purchases of U.S. sovereign securities in July 2019, which compares with roughly $5 billion in the same month last year.[3]

BRITISH POUND DEPRECIATES AMID ONGOING POLITICAL UNCERTAINTY

The U.S. dollar appreciated 3.3 percent against the British pound during the third quarter as political developments were perceived as increasing the probability that the United Kingdom would exit from the European Union (EU) without a deal in place. After taking office in July, Prime Minister Boris Johnson reaffirmed his commitment to have the United Kingdom leave the European Union on October 31 with or without a deal. Consistent with heightened uncertainty, three-month U.S. dollar–British pound option-implied volatility remained elevated. However, the risk of a no-deal Brexit was perceived to have receded modestly late in the quarter after the U.K. Parliament passed a law requiring the prime minister to seek an extension of the Article 50 deadline with the European Union if a deal was not secured by October 19.[4]

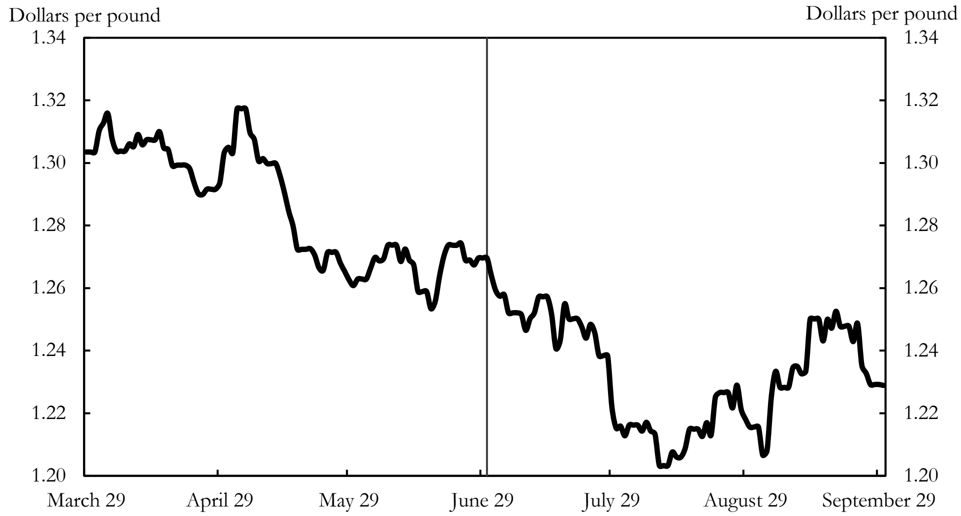
Amid Brexit uncertainty and a weaker outlook for global growth, the Bank of England (BoE) revised its near-term GDP forecasts lower at its September Monetary Policy Committee meeting, though it kept its policy rate unchanged at 0.75 percent and continued to reiterate its conditional tightening bias.

[3] This includes net Japanese purchases of U.S. Treasuries and U.S. agency bonds.

[4] Indeed, on October 17, a deal was reached between the United Kingdom and the European Union. Afterward, the U.K. Parliament voted to delay a definitive vote on the revised deal. Prime Minister Johnson also requested an extension to the October 31 withdrawal deadline.

Chart 7

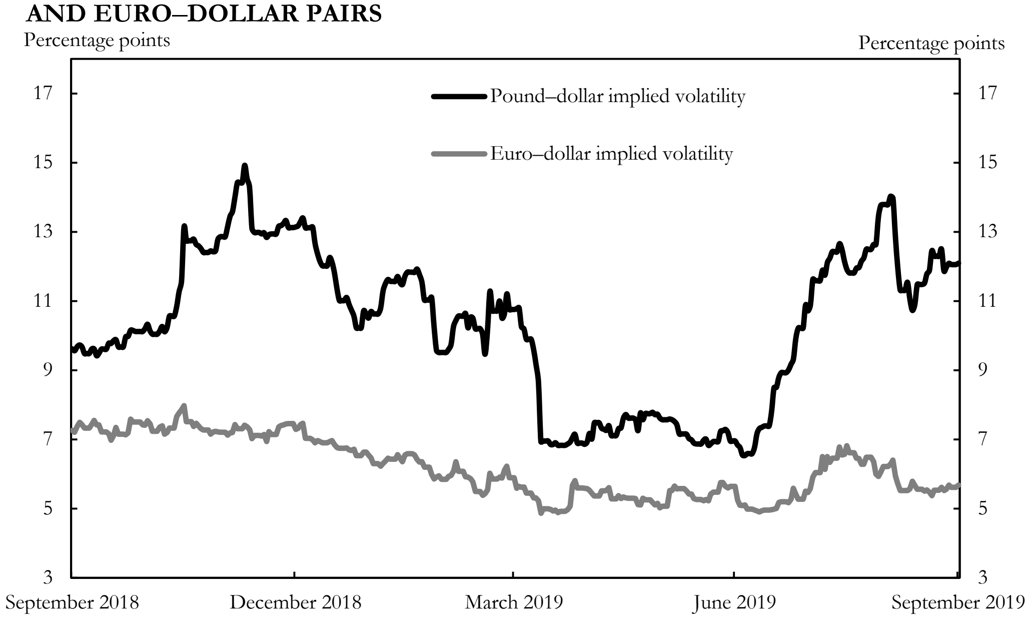
BRITISH POUND–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 8

THREE-MONTH IMPLIED VOLATILITY ACROSS POUND–DOLLAR AND EURO–DOLLAR PAIRS



Source: Bloomberg L.P.

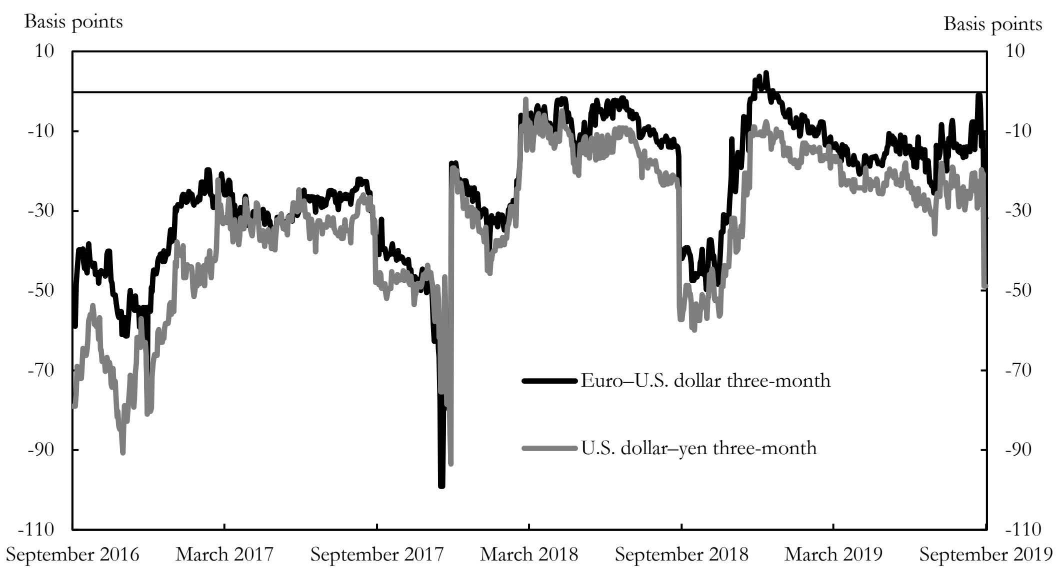
VOLATILITY IN FOREIGN EXCHANGE SWAP MARKETS GENERALLY LIMITED; BASIS SPREADS NARROW

During the third quarter, three-month foreign exchange swap-implied basis spreads of key U.S. dollar currency pairs for the most part remained within the narrow levels generally exhibited since early 2018. However, in very short-dated tenors, from overnight up to one week, foreign exchange swap-implied basis spreads exhibited considerable volatility in the second half of September, as notable volatility in U.S. money market rates impacted pricing in the foreign exchange swap market. However, outside of short-dated tenors, foreign exchange swap market conditions remained minimally changed. Consistent with a pattern seen in previous years, three-month foreign exchange swap basis spreads of major currency pairs widened in late September as these contracts began to capture funding demand at year-end.

According to market participants, the general narrowness of foreign exchange swap basis spreads since early 2018 reflects two factors. First, the overall flatness of the U.S. Treasury yield curve has reduced the relative, foreign exchange-hedged return on 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 have helped reduce constraints on banks' supply of U.S. dollars in the foreign exchange swap market, especially around quarter- and year-end dates.

Chart 9

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 September 30, the value of the U.S. Treasury's Exchange Stabilization Fund (ESF) foreign-currency-denominated assets totaled $20.5 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account (SOMA) holdings of foreign-currency-denominated assets also totaled $20.5 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, the Federal Reserve and U.S. Treasury's foreign exchange reserves can be invested in German, French, Dutch, and Japanese government obligations and in instruments at official institutions, such as the Bank for International Settlements and foreign central banks. To the greatest extent practicable, the investments are split evenly between the SOMA and the ESF.

As of September 30, the euro reserves held by both the SOMA and the ESF totaled $23.7 billion, a decrease from $24.7 billion on June 30, owing to foreign exchange translation effects as the dollar appreciated against the euro. Cash held in euro-denominated deposits at official institutions decreased to $12.9 billion from the prior quarter balance of $13.4 billion, while direct holdings of euro-denominated government securities decreased to $10.8 billion from $11.3 billion. The amount of yen-denominated deposits and government securities held by the SOMA and the ESF remained unchanged relative to the prior quarter at $17.3 billion.

Liquidity Swap Arrangements with Foreign Central Banks

As of September 30, the ECB had $973 million of swaps outstanding. The Bank of Japan, Bank of Canada, BoE, and Swiss National Bank did not have any dollar swaps outstanding at the end of the quarter.

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. There were no small-value exercises during the third 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, June 30, 2019[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, September 30, 2019[a]
Federal Reserve System Open Market Account (SOMA)						
Euro	12,354	0	(9)	0	(509)	12,203
Japanese yen	8,668	0	0	0	(22)	8,646
Total	21,022	0	(8)	0	(531)	20,482

		Changes in Balances by Source				
	Carrying Value, June 30, 2019[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, September 30, 2019[a]
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	12,335	0	(9)	0	(509)	11,818
Japanese yen	8,668	0	0	0	(22)	8,646
Total	21,002	0	(8)	0	(530)	20,464

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 September 30, 2019

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets	**11,817.7**	**11,835.9**
Cash held on deposit at official institutions	6,434.8	6,453.1
Marketable securities held under repurchase agreements[b]	0.0	0.0
Marketable securities held outright	5,382.8	5,382.8
German government securities	1,255.7	1,255.7
French government securities	2,707.2	2,707.2
Dutch government securities	1,419.9	1,419.9
Japanese yen-denominated assets	**8,646.2**	**8,646.2**
Cash held on deposit at official institutions	7,597.6	7,597.6
Marketable securities held outright	1,048.6	1,048.6
Reciprocal currency arrangements		
European Central Bank[c]		973
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 September 30, the SOMA and the ESF euro portfolios had Macaulay durations of 20.84 and 20.88 months, respectively; both the SOMA and ESF yen portfolios had Macaulay durations of 1.20 months.

[b] Sovereign debt obligations of Belgium, France, Germany, Italy, 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 Mexico.

Table 3

RECIPROCAL CURRENCY ARRANGEMENTS

Millions of U.S. Dollars

Institution	Amount of Facility	Outstanding as of September 30, 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	973
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	973
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	9,000	0
	9,000	0