TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

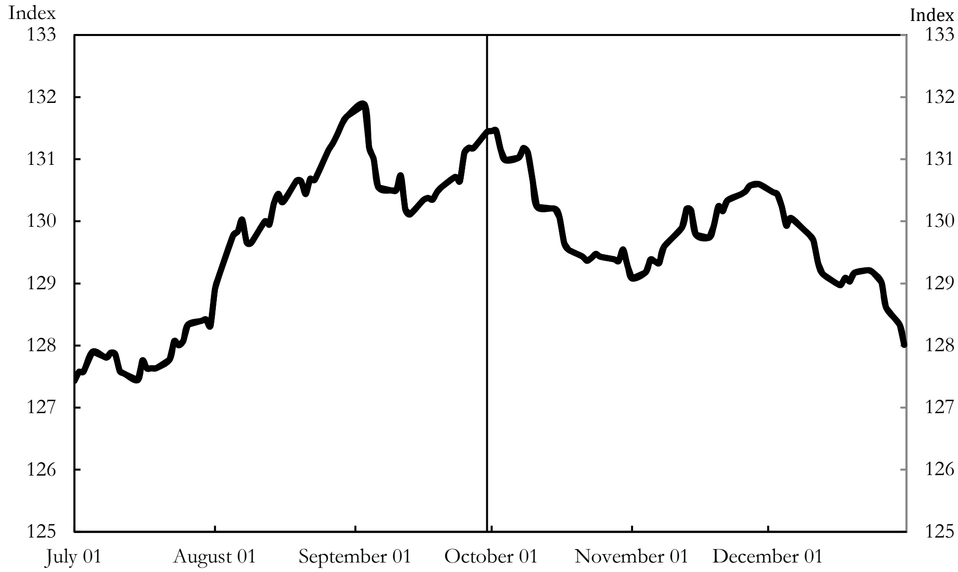
October – December 2019

During the fourth quarter of 2019, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, depreciated 2.6 percent as improved risk sentiment across global financial markets supported foreign currencies. The main factors cited as driving the dollar depreciation were the easing in U.S.–China trade tensions, a reduction in near-term Brexit-related risks, and improved global economic data. In addition, Federal Reserve policy expectations remained relatively little changed over the quarter, while expectations for a number of major central banks shifted away from further monetary policy easing. On a bilateral basis, the U.S. dollar depreciated 7.3 percent against the British pound, 4.1 percent against the Mexican peso, 2.8 percent against the euro, 2.6 percent against the Chinese renminbi, and 1.9 percent against the Canadian dollar, but appreciated 0.5 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 Lorie Logan, Executive Vice President, Federal Reserve Bank of New York, System Open Market Account Manager, 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 2019. Ben Silk was primarily responsible for the preparation of the report.

Chart 1

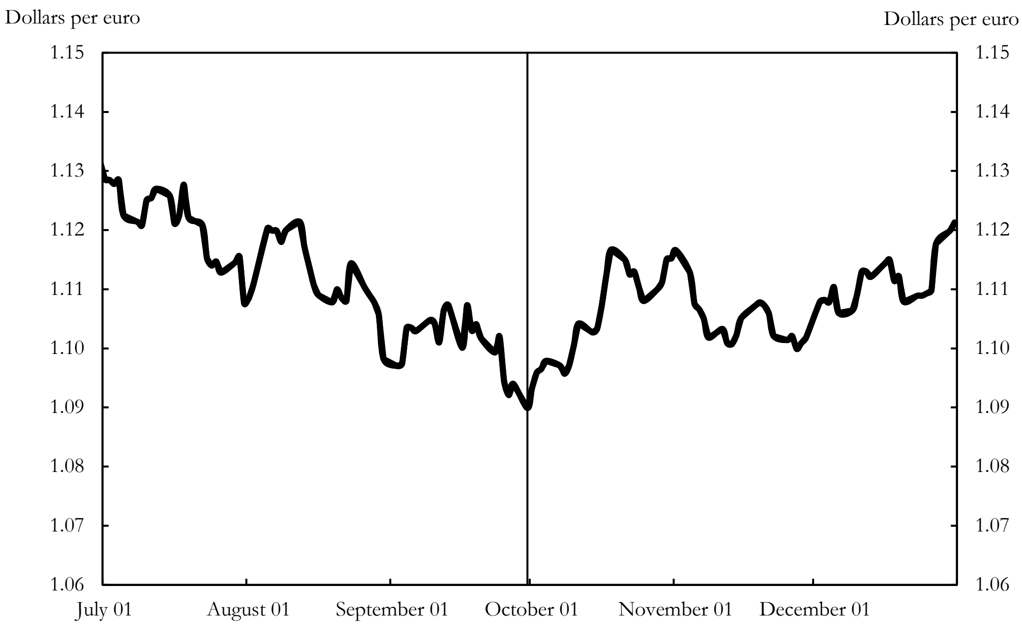
BROAD TRADE-WEIGHTED U.S. DOLLAR INDEX



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

Chart 2

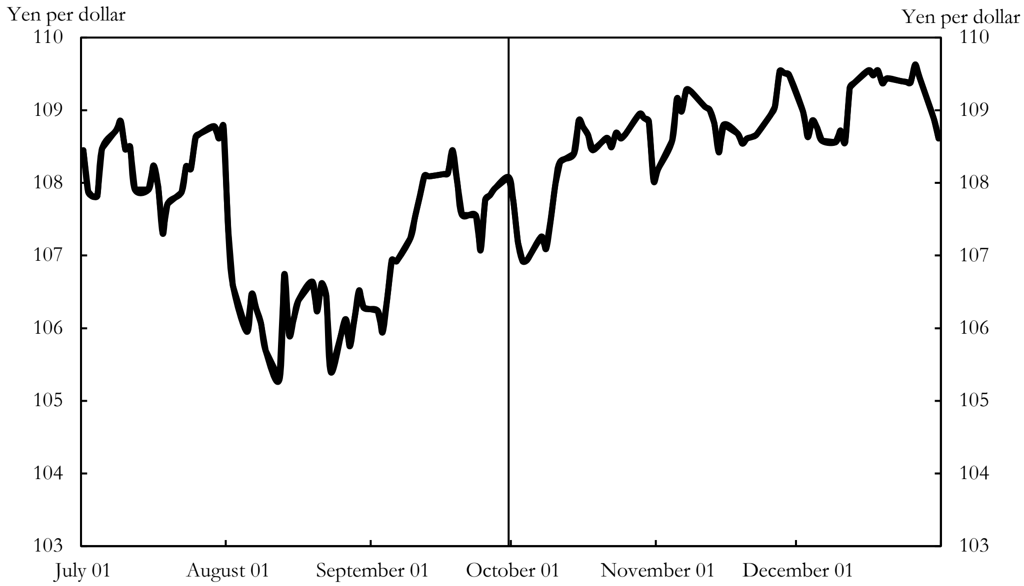
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

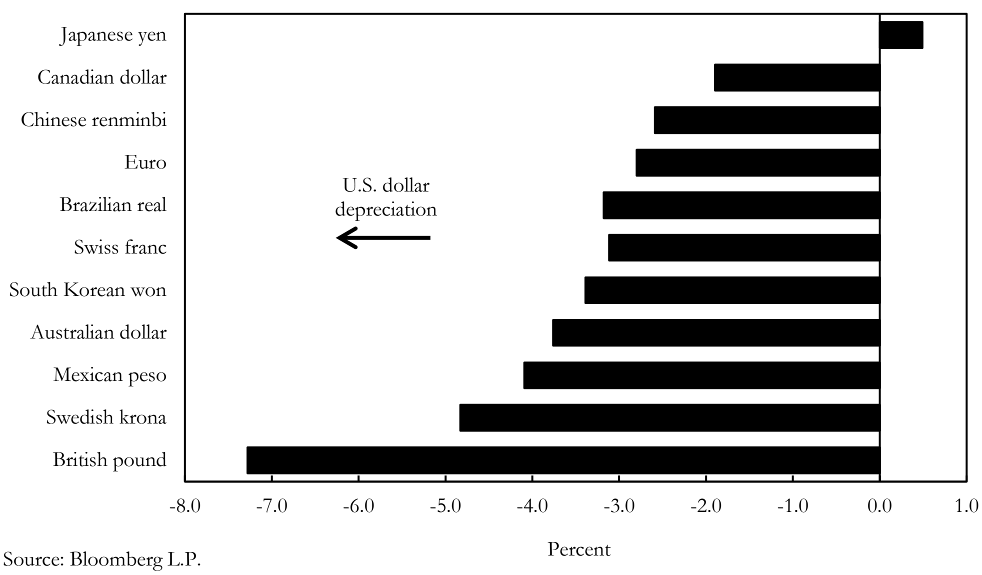
U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

Chart 4

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



Source: Bloomberg L.P.

U.S. DOLLAR DEPRECIATES BROADLY AMID RECOVERY OF GLOBAL RISK SENTIMENT

During the fourth quarter of 2019, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, depreciated 2.6 percent, with the U.S. dollar depreciating notably against nearly all major and emerging market currencies.[1] Market participants broadly cited the reduction in U.S.–China trade tensions as the primary driver of dollar depreciation; the dollar had appreciated during escalations in trade tension in previous quarters owing to the currency's perceived safe-haven status and the view that the U.S. economy would be less negatively affected by a trade war than the economies of some U.S. trading partners. Specifically, news indicating that a "Phase One" trade deal would be signed and would eventually lead to U.S. tariff reductions on Chinese imports helped drive broad depreciation of the dollar. Separately, contacts cited a reduced probability of a disorderly Brexit in the near term following political headlines indicating a greater willingness on the part of the U.K. government to reach a Brexit deal, as well as the subsequent Conservative Party victory in the U.K. general election. This development was also noted as driving positive global risk sentiment and broad dollar depreciation in the fourth quarter.

In addition, market contacts viewed some signs of improvement in global economic data as supporting foreign currencies against the dollar. In particular, Purchasing Managers' Index (PMI) prints suggested that the global manufacturing cycle may be starting to improve after months of decline. Moreover, other data indicated that economic growth in China may be stabilizing. These data partially reduced market concerns related to the possibility of a global recession, which had supported the dollar in recent quarters. In addition, the economic data partially moderated market expectations that the U.S. economy will continue to grow faster than the economies of most U.S. trading partners.

Market contacts further cited the relative changes in monetary policy expectations for major central banks as contributing to U.S. dollar depreciation. Although the Federal Reserve cut interest rates at its October policy meeting, the market-implied path of U.S. monetary policy in 2020 shifted moderately higher over the fourth quarter. Contacts attributed this price movement to Federal Open Market Committee communications that were interpreted as indicating a greater reluctance to cut interest rates going forward than markets had previously discounted. However, markets continued to price approximately one 25 basis point interest rate cut in 2020. Outside the United States, communications from major central banks were perceived as indicating a reduced likelihood of near-term monetary policy accommodation, and were cited as driving a larger increase in market pricing of foreign interest rates than occurred in the United States.

[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.

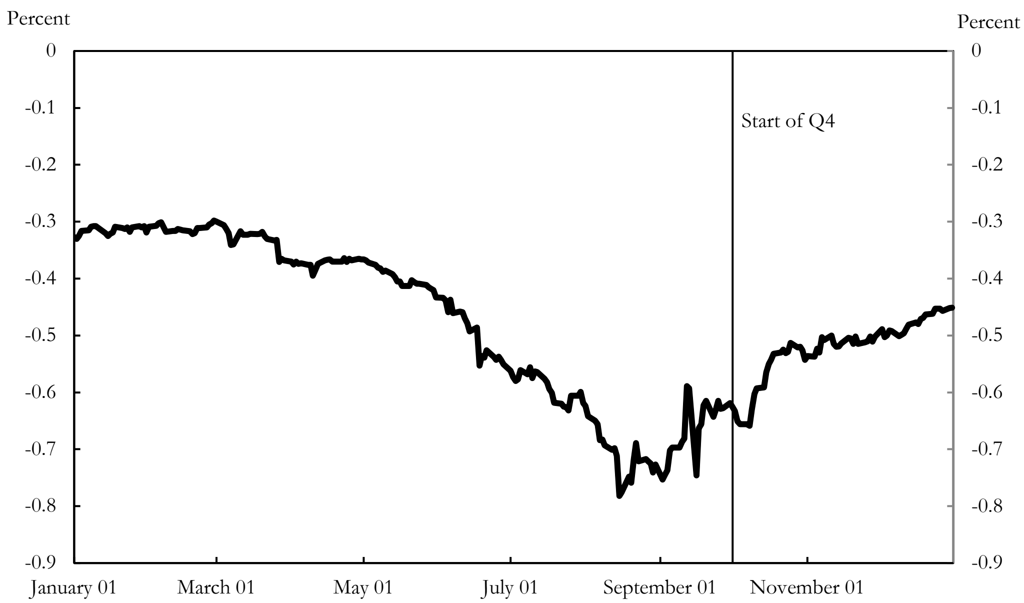
EURO APPRECIATES ON POSITIVE ECONOMIC NEWS, REDUCED EXPECTATIONS FOR ECB EASING

The U.S. dollar depreciated 2.8 percent against the euro in the fourth quarter, amid a reduction in expectations for further interest rate cuts by the European Central Bank (ECB) and somewhat improved economic data in the euro area.

Forward interest rates in the euro area shifted significantly higher in the weeks after the ECB cut its benchmark deposit rate by 10 basis points to -0.50 percent at its September policy meeting. Market pricing for euro Overnight Indexed Swaps (OIS) moved from approximately 20 basis points of rate cuts to zero cuts over the ensuing twelve months. This shift was primarily driven by comments from ECB Governing Council speakers, which market participants interpreted as indicating a greater reluctance to implement further policy rate cuts than had previously been assumed. Prior to the September ECB meeting, euro OIS markets priced expectations for the ECB's deposit rate to decline to approximately -0.7 percent over the next year; this pricing stood at around -0.5 percent at year-end, consistent with the ECB keeping policy rates on hold (Chart 5).

Chart 5

MARKET PRICING OF EUROPEAN ONE-YEAR FORWARD OVERNIGHT INDEXED SWAPS



Source: Bloomberg L.P.

In addition to policy guidance, market participants cited a slight improvement in European economic data as supporting the euro and possibly indicating a bottoming out of the trend of disappointing data prints. Specifically, euro area industrial production data printed at positive growth levels on a monthly basis, following declines for much of the year; meanwhile, euro area composite PMI data edged slightly higher to levels consistent with low growth. While manufacturing data continued to print in contractionary territory, employment and the services sector remained resilient. Finally, contacts cited the easing of U.S.–China trade tensions as reducing fears of a European recession, given the euro area economy's significant exposure to international trade.

DE-ESCALATION OF U.S.–CHINA TRADE TENSIONS DRIVES RENMINBI APPRECIATION

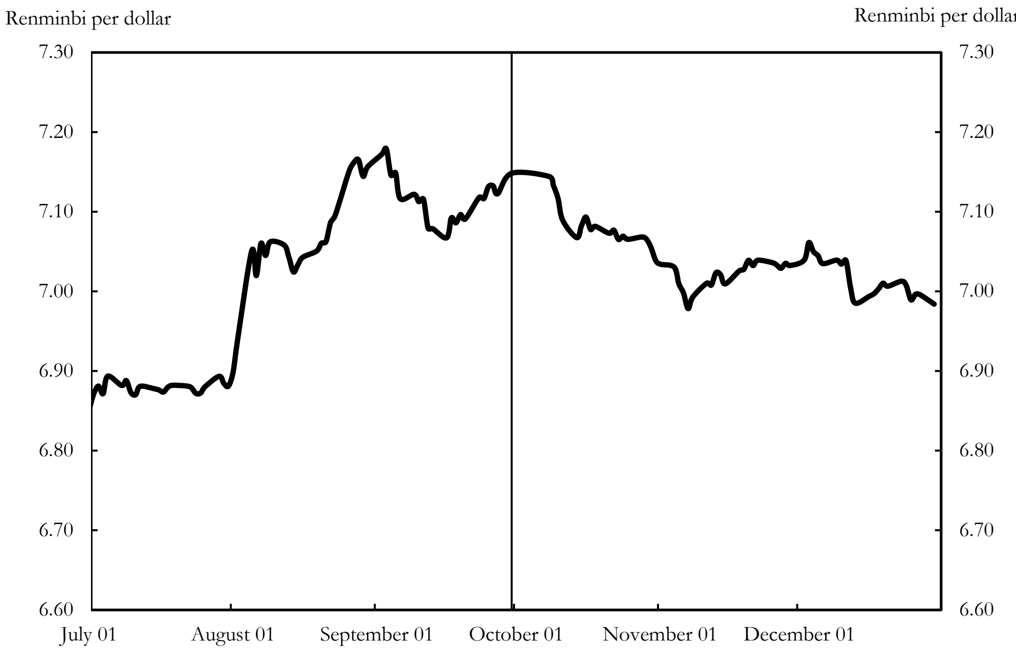
The U.S. dollar depreciated 2.6 percent against the Chinese renminbi over the quarter, with contacts primarily ascribing the movement to the mid-December announcement of a "Phase One" trade deal between the United States and China, as well as to growing market optimism earlier in the quarter that a deal would eventually be reached. This agreement followed a series of escalations in the U.S.–China trade conflict in the second and third quarters of 2019, which had increased investor concerns about Chinese and global growth and consequently led to renminbi depreciation against the dollar during that time.

Regarding the Phase One deal, the U.S. administration announced that it would (1) cancel the new round of tariffs that were set to be imposed on December 15, and (2) reduce existing tariff rates on $120 billion of Chinese imports (implemented in September) from 15 percent to 7.5 percent. Although the released deal summary left many details undisclosed, and the deal's terms were not fully revealed until the mid-January signing, market participants took a broadly positive view of the news during the fourth quarter, and fully expected the deal would be signed in January.

Late in the quarter, the renminbi was also supported by some stronger-than-expected economic data, which analysts viewed as sending a positive signal regarding China's near-term growth outlook. Specifically, November industrial production, retail sales, and industrial profits data all printed above expectations. Moreover, official manufacturing and Caixin PMI data in China generally beat expectations and rose above the 50-point level, which some contacts have perceived as implying a recovery in manufacturing activity in China.

Chart 6

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



Source: Bloomberg L.P.

EMERGING MARKET CURRENCIES BROADLY APPRECIATE ON IMPROVED GLOBAL RISK SENTIMENT

The U.S. dollar depreciated 2.8 percent against emerging market currencies in the fourth quarter, as measured by the Federal Reserve's trade-weighted Emerging Market Economies Dollar Index.[2] The appreciation in emerging market currencies was primarily attributed to the broad improvement in global risk sentiment in general, and to improved Chinese growth expectations due to trade-related news and improved Chinese data in particular, given the high trade volumes between China and many emerging market economies.

The emerging market currency appreciation was broad-based, with nearly all major emerging market currencies appreciating against the dollar. Of note, the U.S. dollar depreciated 4.1 percent against the Mexican peso, which contacts attributed to the passage of the U.S.–Mexico–Canada Agreement

[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.]

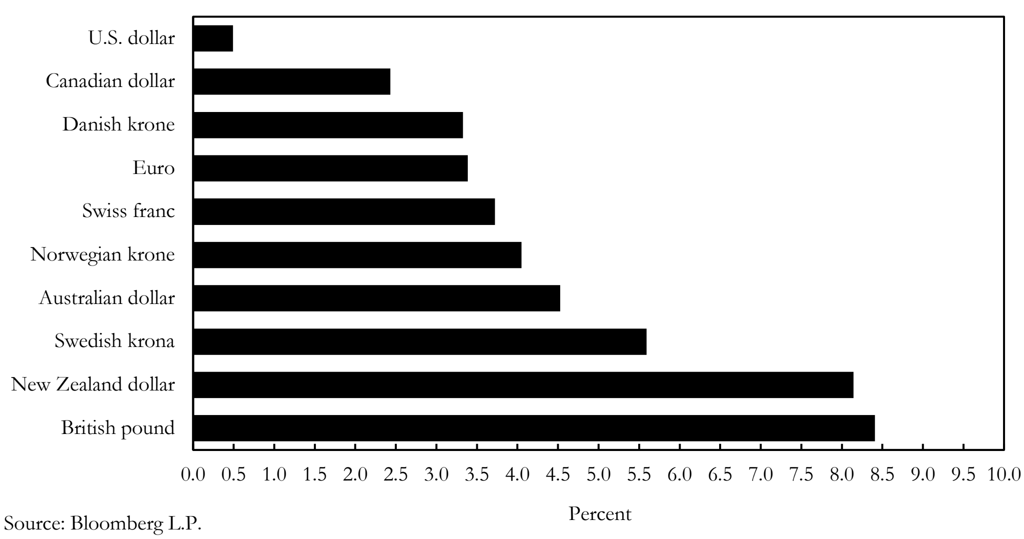
(USMCA) trade deal, the relatively high level of Mexican real interest rates during a period of broad emerging market currency appreciation, and the Banco de Mexico reducing policy rates by less than some market participants had expected. More broadly, emerging market currencies linked to commodities and global risk cycles, including the South African rand, Colombian peso, and Russian ruble, were among the strongest performers, given the global rally in risk assets and the 4.0 percent increase in the Bloomberg Commodity Index. Asian currencies with strong trade ties to China appreciated, with market participants citing the improved Chinese economic outlook and renminbi strength as drivers. Similarly, non-euro area European Union (EU) member currencies also appreciated, given their high exposures to the euro area economy and typically high correlations to the euro. Finally, the Chilean peso and Argentine peso depreciated 3.1 and 3.8 percent, respectively, as political developments spurred capital outflows from these countries.

JAPANESE YEN DEPRECIATES MODESTLY AMID LIMITED DOMESTIC NEWS

The U.S. dollar appreciated 0.5 percent against the Japanese yen during the fourth quarter, as the yen depreciated against all major developed market currencies. Contacts cited the risk-positive global environment as driving yen depreciation; as a "safe haven" currency, the Japanese yen typically appreciates when global risk assets decline, and depreciates when global risk assets increase. Consistent with this pattern, futures market data indicated a shift from long to short market positioning in the yen in the fourth quarter. The Bank of Japan left monetary policy unchanged, as had been generally expected. Meanwhile, domestic economic data releases were not seen as materially affecting the U.S. dollar–Japanese yen exchange rate during the quarter.

Chart 7

G10 CURRENCY PERFORMANCE AGAINST THE JAPANESE YEN



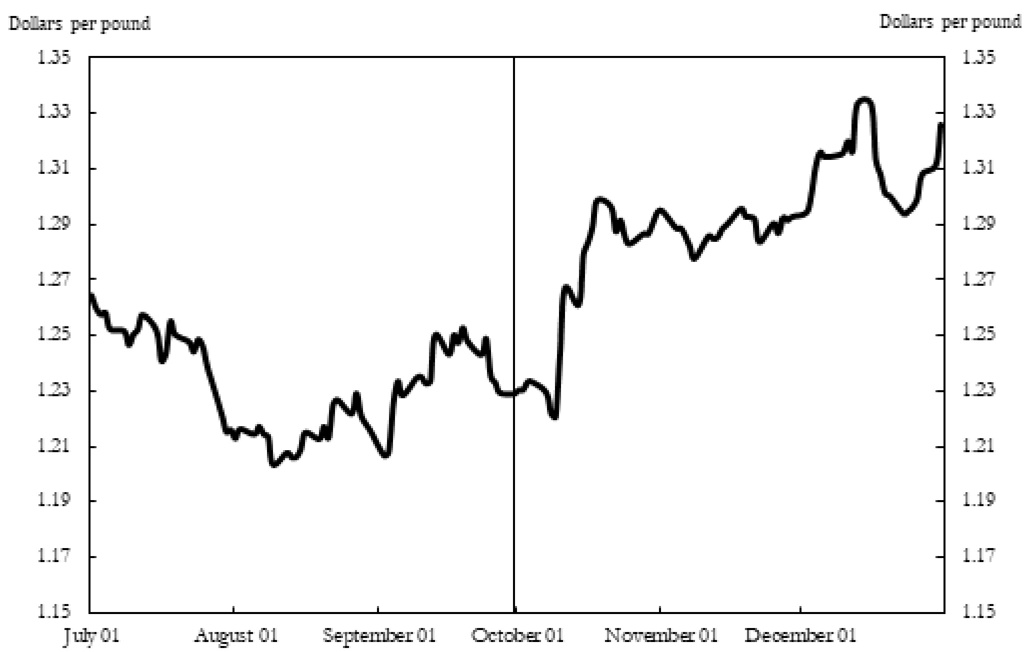
Source: Bloomberg L.P.

BRITISH POUND APPRECIATES AS NEAR-TERM BREXIT RISKS REMOVED

The U.S. dollar depreciated 7.3 percent against the British pound over the quarter; the pound appreciated against all major currencies during this time. Contacts attributed the pound strength to the significant reduction in near-term Brexit risk caused by the U.K. government's expression of greater willingness to reach an agreement with the EU than had previously been assumed, as well as expectations—eventually realized—that the Conservative Party would achieve a significant majority in the U.K.'s December general elections. Markets interpreted these political developments as ensuring parliamentary passage of a Withdrawal Agreement Bill,[3] which had previously been defeated in the U.K. House of Commons. Consistent with a perceived reduction in risks, implied volatility on pound–dollar options declined significantly over the quarter, indicating a lower price to hedge against changes in the exchange rate (Chart 9). Furthermore, market expectations shifted toward a lower likelihood of Bank of England policy easing over the next year, given improved expectations for the U.K. economy owing to the removal of the risk of a disorderly Brexit in the near term, as well as the broader improvement in global economic expectations.

Chart 8

BRITISH POUND–U.S. DOLLAR EXCHANGE RATE

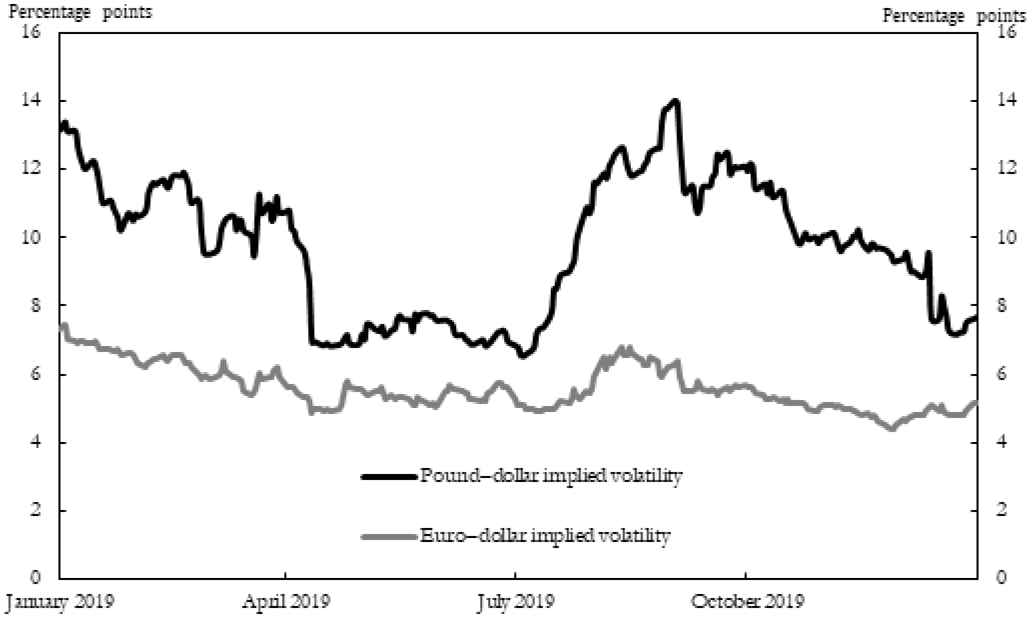


Source: Bloomberg L.P.

[3] The name of a bill by which the U.K. parliament enshrines the terms of a U.K.–EU separation agreement into U.K. law, thereby legally ratifying Brexit.

Chart 9

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



Source: Bloomberg L.P.

However, significant uncertainty remains regarding the future trading relationship between the EU and the U.K. Indeed, the Withdrawal Agreement only covers the terms of the U.K. leaving the EU; the two sides are set to begin negotiations regarding their future trading relationship in early 2020. Market participants note that there is a risk of the U.K. leaving the European single market at the end of the year with no new trade deal negotiated, given Prime Minister Johnson's stated opposition to extending the interim transition period.

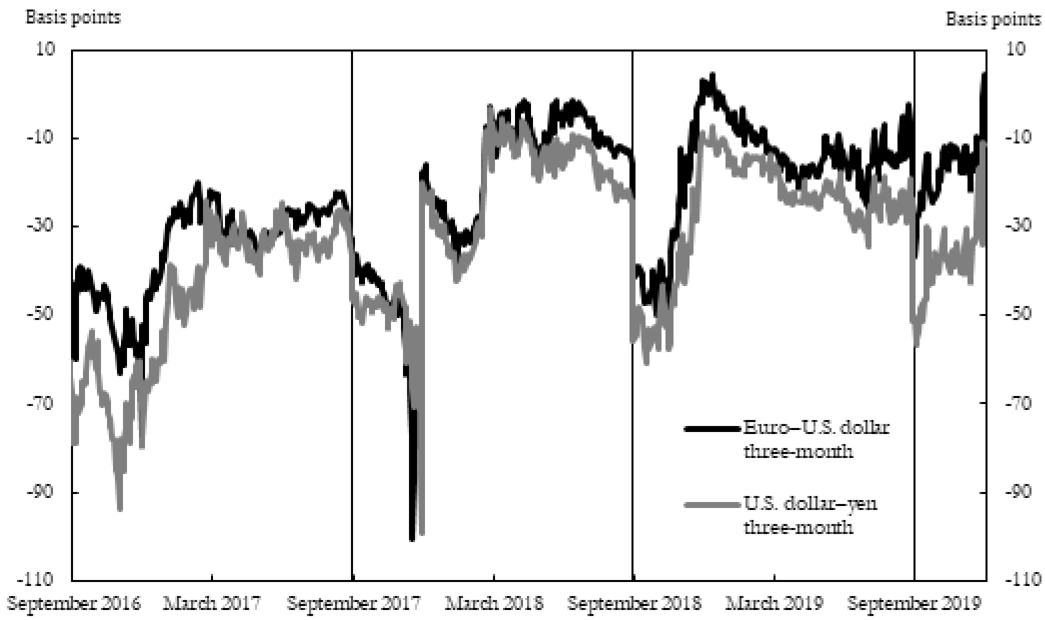
VOLATILITY IN FOREIGN EXCHANGE SWAP MARKETS GENERALLY LIMITED

Three-month foreign exchange swap basis spreads of key U.S. dollar currency pairs entered the fourth quarter trading at wide levels, with pricing capturing higher funding costs over the turn of the year—amid pre-funding activity from market participants—but narrowed significantly over the quarter. Market participants characterized year-end trading dynamics in the foreign exchange swap market as smoother than in prior years, which was largely attributed to liquidity-providing operations conducted by the Federal Reserve Bank of New York that were aimed at preventing the return of the funding stress exhibited in U.S. domestic money markets in mid- to late September. According to market participants, the return of swap basis spreads to near zero at the end of the quarter reflected two factors.

First, the overall flatness of the U.S. Treasury yield curve observed for most of 2019 has reduced the relative return of U.S. dollar assets, resulting in lower demand for dollar funding and hedging in the foreign exchange swap market. Second, market participants cited banks' continued improved balance sheet management following changes in the regulatory environment over the past several 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 December 31, the value of the U.S. Treasury's Exchange Stabilization Fund (ESF) foreign-currency-denominated assets totaled $20.8 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account (SOMA) holdings of foreign-currency-denominated assets also totaled $20.8 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 December 31, the euro reserves held by both the SOMA and the ESF totaled $24.3 billion, an increase from $23.7 billion on September 30, owing to foreign exchange translation effects as the dollar depreciated against the euro. Cash held in euro-denominated deposits at official institutions increased to $13.8 billion from the prior quarter balance of $12.9 billion, while direct holdings of euro-denominated government securities decreased to $10.6 billion from $10.8 billion. The amount of yen-denominated deposits and government securities held by the SOMA and the ESF decreased to $17.2 billion from the prior quarter's balance $17.3 billion.

Liquidity Swap Arrangements with Foreign Central Banks

As of December 31, the ECB had $3.7 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.

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, September 30, 2019 [a]	Net Purchases and Sales [b]	Investment Earnings [c]	Realized Gains/Losses on Sales [d]	Unrealized Gains/Losses on Foreign Currency [e]	Carrying Value, December 31, 2019 [a]
Federal Reserve System Open Market Account (SOMA)						
Euro	11,836	0	(10)	0	349	12,175
Japanese yen	8,646	0	0	0	(45)	8,602
Total	20,482	0	(10)	0	305	20,777

		Changes in Balances by Source				
	Carrying Value, September 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, December 31, 2019 [a]
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	11,818	0	(10)	0	349	12,157
Japanese yen	8,646	0	0	0	(45)	8,602
Total	20,464	0	(10)	0	304	20,758

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 "day of" accrual method.

[b]Net purchases and sales include foreign currency purchases related to official activity, and 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, 2019

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets:	**12,156.6**	**12,175.4**
Cash held on deposits at official institutions	6,872.3	6,891.0
Marketable securities held under repurchase agreements[b]	0.0	0.0
Marketable securities held outright	5,284.3	5,284.3
German Government securities	1,166.6	1,166.6
French Government securities	2,657.2	2,657.2
Dutch Government securities	1,460.6	1,460.6
Yen-denominated assets:	**8,601.8**	**8,601.8**
Cash held on deposit at official institutions	7,752.0	7,752.0
Marketable securities held outright	849.8	849.8
Reciprocal currency arrangements:		
European Central Bank[c]		3,728
Bank of Japan[c]		0
Swiss National Bank[c]		0
Bank of Canada[c]		0
Bank of England[c]		0
Banco de Mexico[c]		0

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

[a]As of December 31st, the SOMA and the ESF euro portfolios had Macaulay durations of 19.51 and 19.54 months, respectively; both the SOMA and ESF yen portfolios had Macaulay durations of 0.85 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 December 31, 2019
	Federal Reserve System Open Market Account (SOMA)	
Reciprocal Currency Arrangement		
Bank of Canada	2,000	0
Banco de Mexico	9,000	0
Standing Dollar Liquidity Swap Arrangement		
European Central Bank	No preset limit	3,728
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	3,728
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 Mexico	3,000	0
	3,000	0