TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

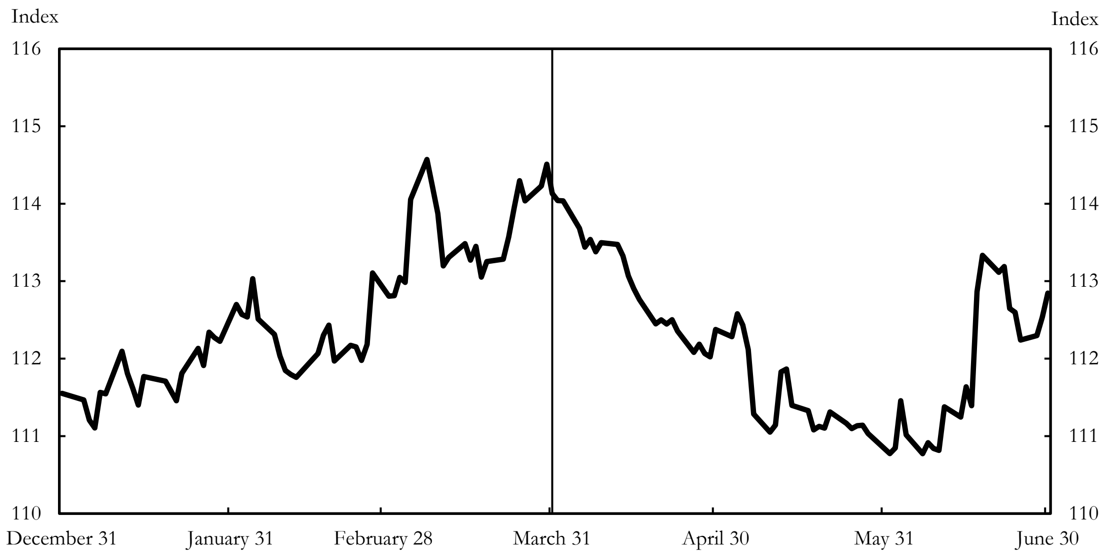
April – June 2021

During the second quarter of 2021, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, depreciated 1.1 percent on net amid declining U.S. yields and improved global growth and vaccination prospects. The resultant narrowing in interest rate differentials between the United States and its trading partners was associated with a steady depreciation of the U.S. dollar over most of the quarter. The dollar's net depreciation was limited, however, as a late-quarter increase in short-end U.S. rates following the June meeting of the Federal Open Market Committee supported the dollar against both G10 and emerging market currencies. On a bilateral basis, the U.S. dollar depreciated 2.4 percent against the Mexican peso, 1.3 percent against the Canadian dollar, 1.1 percent against the euro, and 0.4 percent against the British pound. In contrast, the U.S. dollar appreciated 0.4 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 April through June 2021. Andrew Coflan was primarily responsible for preparation of the report.

Chart 1

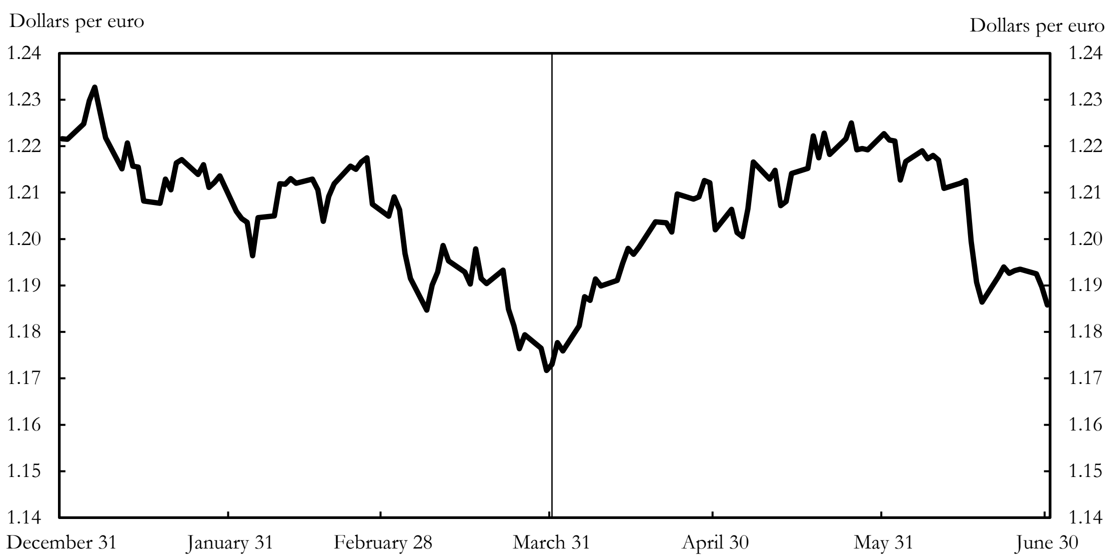
BROAD TRADE-WEIGHTED U.S. DOLLAR INDEX



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

Chart 2

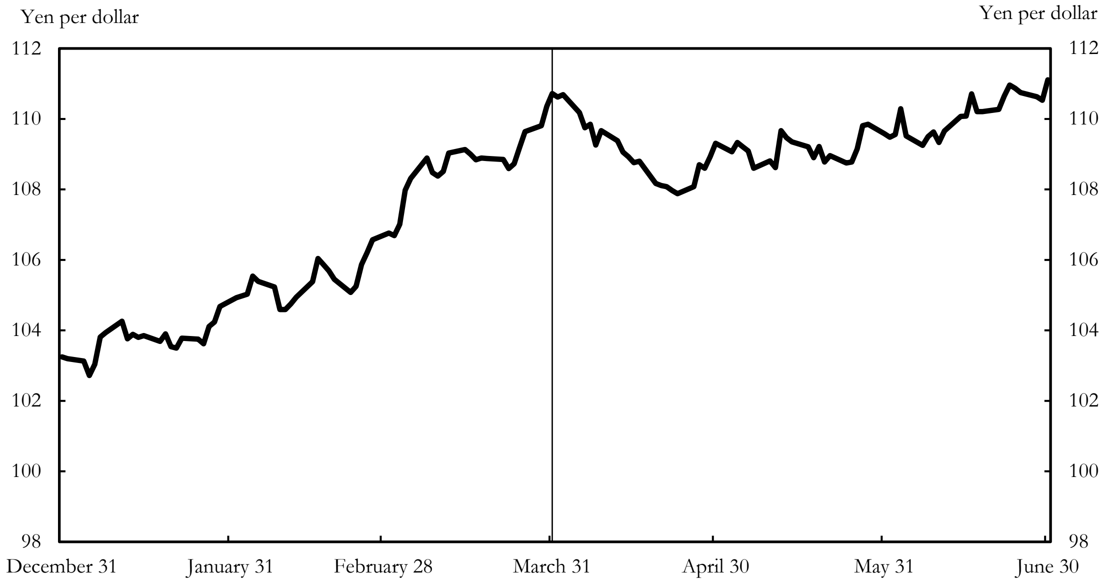
EURO−U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

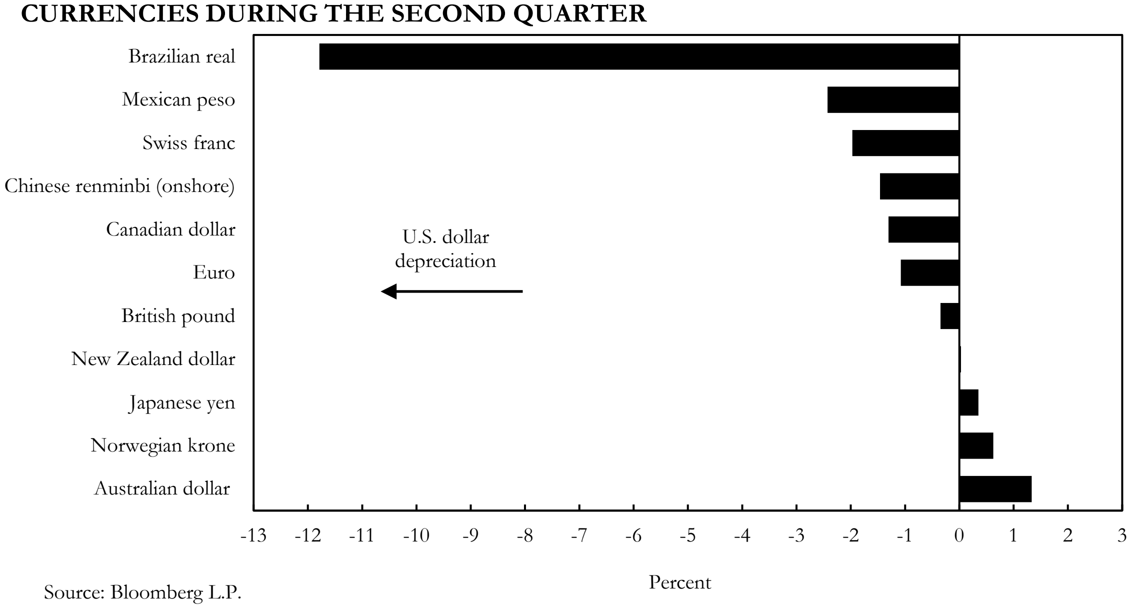
U.S. DOLLAR−YEN EXCHANGE RATE



Source: Bloomberg L.P.

Chart 4

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



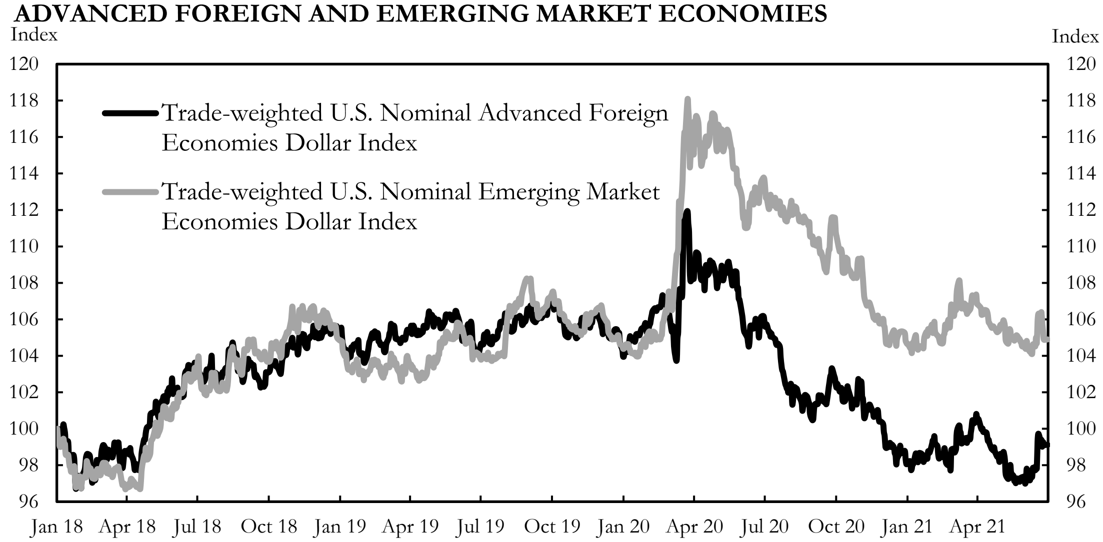
Source: Bloomberg L.P.

U.S. DOLLAR DEPRECIATES ON DECLINING U.S. YIELDS, POSITIVE RISK SENTIMENT, AND NARROWING U.S. GROWTH ADVANTAGE

During the second quarter of 2021, the U.S. dollar, as measured by the Federal Reserve Board's broad trade-weighted dollar index, depreciated 1.1 percent on net amid declining U.S. yields and improved global growth and COVID-19 vaccination prospects.[1] The resultant narrowing in interest rate differentials (IRDs) between the United States and its trading partners was associated with a steady depreciation of the U.S. dollar over most of the quarter. While the broad dollar steadily depreciated over April and May, declining nearly 3 percent by early June, it retraced much of this move in the last two weeks of the quarter following the June meeting of the Federal Open Market Committee (FOMC) as market-based expectations for the path of policy moved higher. The dollar's net depreciation over the quarter was broad-based, with emerging market currencies contributing more than advanced market currencies to the broad dollar move.

Chart 5

U.S TRADE-WEIGHTED DOLLAR PERFORMANCE VERSUS ADVANCED FOREIGN AND EMERGING MARKET ECONOMIES



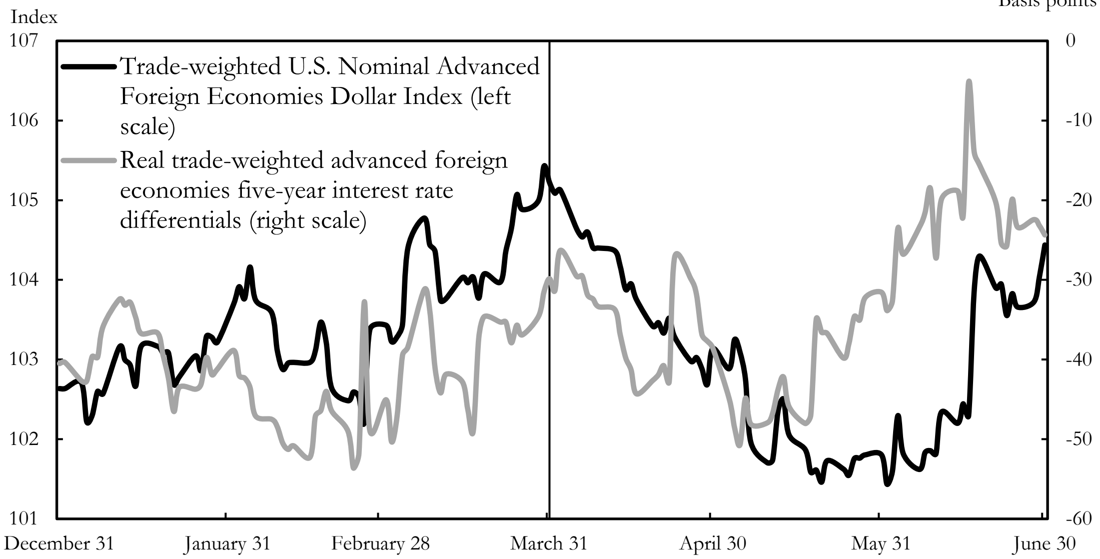
Source: Bloomberg L.P.

Note: Values indexed to January 1, 2018.

[1] The Federal Reserve's broad trade-weighted dollar index is based on twenty-six currencies, including major advanced market currencies and currencies of other important trading partners of the United States, including emerging markets.

Chart 6

U.S TRADE-WEIGHTED ADVANCED FOREIGN ECONOMIES DOLLAR INDEX VERSUS REAL INTEREST RATE DIFFERENTIALS



Source: Bloomberg L.P.; staff calculations

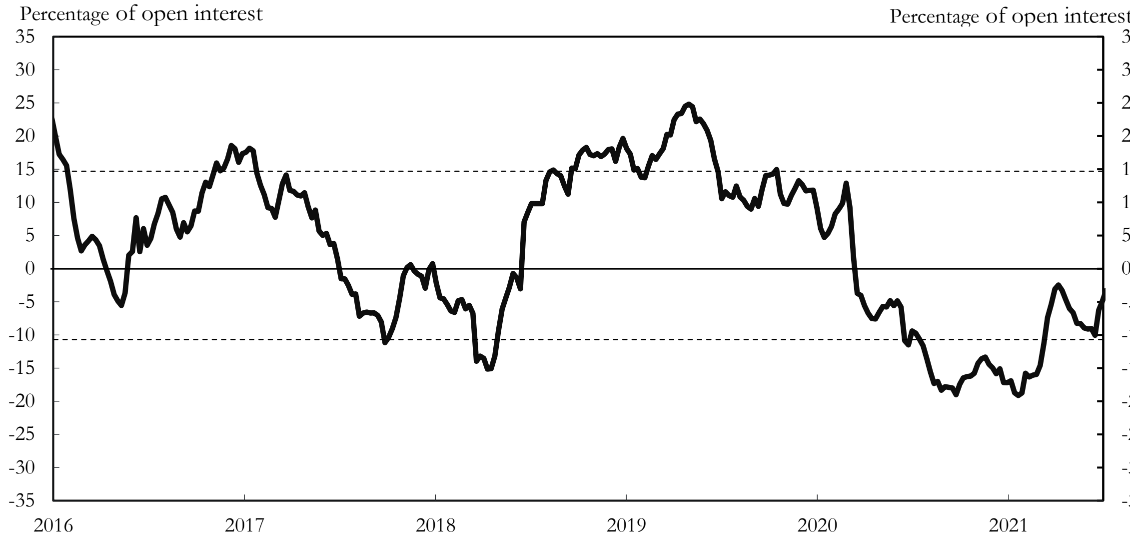
During much of the quarter, dollar depreciation was attributed to positive global risk sentiment and a narrowing in IRDs between the United States and its trading partners. Risk sentiment was largely buoyed by continued progress in COVID-19 vaccination efforts in major economies, such as the euro area, which allowed these economies to narrow the gap in vaccination rates with the United States. The improved vaccination outlook, in turn, led to upward revisions to global growth expectations, reducing the relative expected economic outperformance of the United States and leading investors to shift away from the dollar in favor of currencies more closely correlated with the global growth cycle.

IRDs were viewed as a key driver of the U.S. dollar's price action over the quarter. The moves in IRDs were primarily due to changes in U.S. Treasury yields, which declined over the beginning of the quarter amid market expectations that the Federal Reserve would maintain its accommodative monetary policy stance. On a trade-weighted basis, IRDs between the United States and its trading partners narrowed over the quarter, especially at longer tenors, reducing the relative advantage of U.S. yields and driving the depreciation of the U.S. dollar.

The dollar's steady depreciation reversed sharply late in the quarter, however, as market participants reassessed the future path of monetary policy following the June FOMC meeting. Specifically, the release of the Summary of Economic Projections indicated a median target rate projection of two interest rate hikes in 2023, earlier than market expectations. This contributed to a sharp rise in U.S. short-end rates, as well as a 1.1 percent appreciation of the U.S. dollar against the euro and a 0.6 percent appreciation against the yen on June 16. Of note, some investors have suggested that the dollar's appreciation following the June FOMC meeting was likely exacerbated by speculative investors exiting their short positions.

Chart 7

AGGREGATE U.S. DOLLAR NET LONG POSITIONING VERSUS MAJOR CURRENCIES



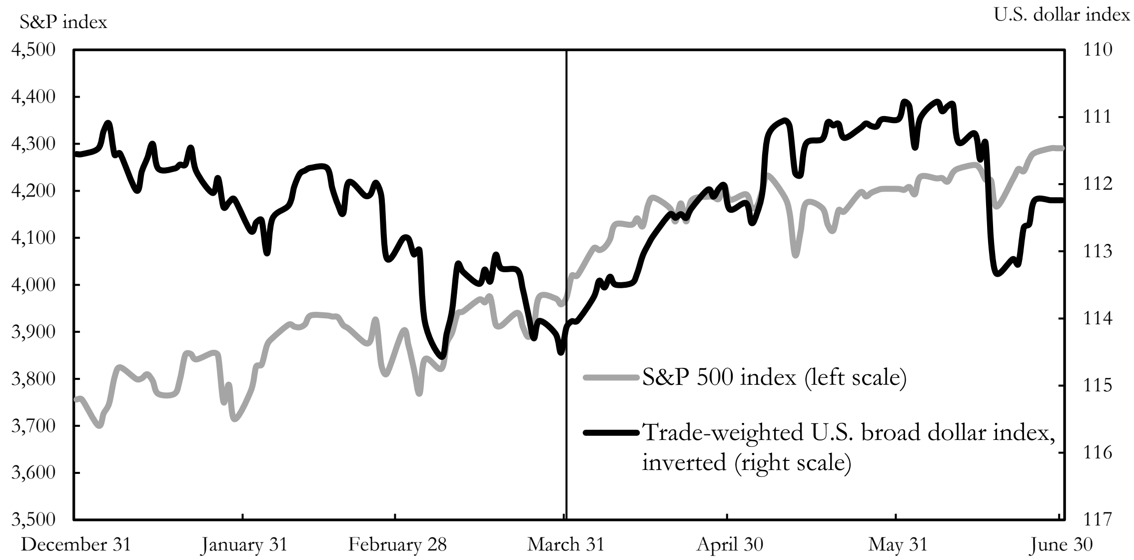
Sources: Commodity Futures Trading Commission, Bloomberg L.P.

Notes: Aggregate includes U.S. dollar positioning relative to the euro, the Japanese yen, the British pound, the Swiss franc, the Canadian dollar, the Australian dollar, and the New Zealand dollar. Net long positioning is calculated as the difference between noncommercial long and short positioning, divided by total open interest. Dotted lines represent the 25th and 75th percentiles for historic dollar positioning.

U.S. economic data over the quarter had mixed implications for the dollar. Most notably, May's release of significantly weaker-than-expected nonfarm payroll data for the month of April—266,000 jobs added compared to consensus expectations of 1 million—led to a 0.8 percent depreciation of the U.S. dollar against the euro, as analysts interpreted the data as potentially forestalling Federal Reserve rate increases. However, U.S. consumer price inflation, which printed above market expectations over the quarter, had relatively little apparent impact on the dollar, as investors evaluated the extent to which inflationary drivers were transitory or would impact Federal Reserve policy considerations in the near term.

Chart 8

U.S TRADE-WEIGHTED NOMINAL BROAD DOLLAR INDEX AND S&P 500 INDEX PERFORMANCE



Source: Bloomberg L.P.

EURO APPRECIATES AS U.S. RATES DECLINE, EUROPEAN VACCINE PROGRESS ACCELERATES

The U.S. dollar depreciated 1.1 percent against the euro in the second quarter amid a narrowing in IRDs between the U.S. and major euro area economies, led primarily by declines in U.S. yields, and continued eurozone vaccination progress. Many investors attributed the euro's appreciation over the first two months of the quarter to the euro area's continued progress on vaccination distribution, which narrowed the vaccination gap with the United States. This, in turn, contributed to upward revisions to the euro area growth outlook. Euro appreciation over the quarter partly reversed late in the quarter, however, following the June FOMC meeting and the sharp rise in U.S. short-end rates.

European Central Bank (ECB) developments were not seen as having a material impact on the exchange rate over the quarter. At its April meeting, the ECB left its policy rates unchanged and announced that it would conduct asset purchases under its Pandemic Emergency Purchase Program at a "significantly" higher pace in the second quarter than the first. At its June meeting, the ECB confirmed that this increased purchase pace would also continue for the third quarter, resulting in minimal price action in the euro. Statements made by policymakers, which reiterated that the ECB remained far away from its goals, were viewed by market contacts as relatively more accommodative, particularly compared to statements made by Federal Reserve officials following the June FOMC meeting.

JAPANESE YEN DEPRECIATES MODESTLY AS U.S. YIELDS DRIVE PRICE ACTION

The U.S. dollar appreciated modestly against the Japanese yen during the second quarter., appreciating 0.4 percent on net. The relatively minor net change occurred amid some intraquarter volatility, as the yen appreciated as much as 2.6 percent against the U.S. dollar early in the quarter before gradually retracing through the end of the quarter, driven primarily by fluctuations in U.S. Treasury yields.

The Bank of Japan (BoJ) undertook limited policy action during the second quarter, maintaining its policy rate, yield target, and asset purchase pace. It extended pandemic-related financing programs through the end of March 2022.

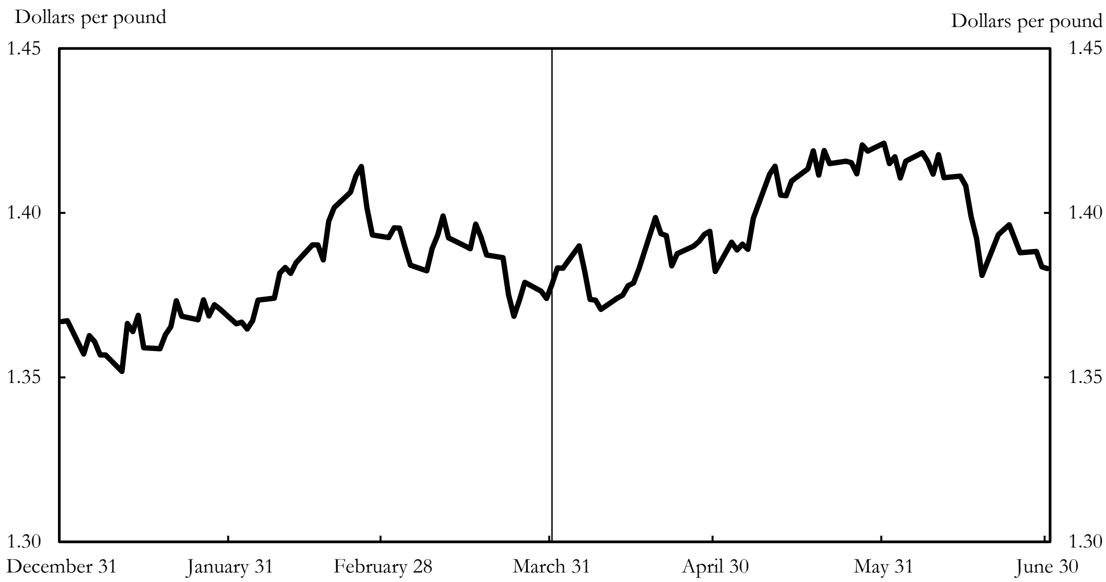
BRITISH POUND APPRECIATES MODESTLY ON FLUCTUATING YIELD DIFFERENTIALS

The U.S. dollar depreciated 0.4 percent on net against the British pound in the second quarter, driven largely by IRDs. Market participants noted that COVID-19 and political developments had only a modest impact on the British pound. COVID-19 over the quarter was viewed as less impactful despite rising instances of the Delta variant, as widespread vaccinations were seen by investors as contributing to low hospitalization numbers. Meanwhile, the U.K. election in mid-May, which was interpreted as forestalling a second Scottish independence referendum, resulted in a 1.5 percent appreciation of the British pound against the U.S. dollar in the week following the election.

The Bank of England held its policy rate and asset purchase targets unchanged over the quarter, although in May it slowed its weekly pace of purchases in what was characterized as an operational decision. The pound was little changed in response to these events, however, as measures to remove accommodation were seen by investors as in line with those of other major central banks against the backdrop of the global growth recovery.

Chart 9

BRITISH POUND–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

EMERGING MARKET AND COMMODITY-SENSITIVE CURRENCIES APPRECIATE AMID POLICY RATE INCREASES AND RISING COMMODITY PRICES

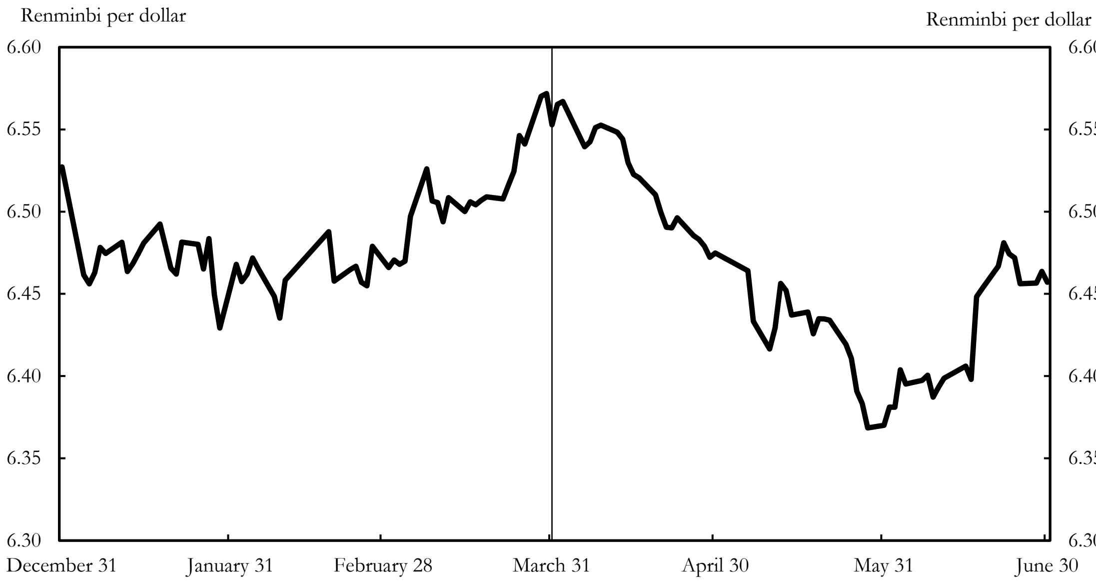
The U.S. dollar depreciated 1.5 percent against emerging market currencies in the second quarter, as measured by the Federal Reserve's trade-weighted Emerging Market Economies Dollar Index, amid multiple cross currents.[2] Emerging market currencies were supported by declining U.S. Treasury yields, relatively contained interest rate volatility, and rising commodity prices amid an improving global growth outlook. Emerging market economies benefited significantly from the global economic recovery, with upward growth revisions in those economies that had previously lagged the global recovery, particularly in Latin America. However, the Federal Reserve's perceived less-accommodative stance at the June FOMC meeting weighed on emerging market currencies and partially offset these gains.

[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.]

Policy rate increases in some emerging market economies were viewed as an important factor supporting emerging market currencies against the dollar during the quarter. Central banks in Brazil, Mexico, Hungary, the Czech Republic, and Russia all increased rates over the quarter. Currencies of these countries tended to outperform during the quarter, including a 2.5 percent appreciation of the Mexican peso and a 13.4 percent appreciation of the Brazilian real. Rate increases in these countries were generally motivated by rising inflationary pressures stemming from supply chain disruptions, higher commodity prices, and increased domestic growth momentum. The U.S. dollar depreciated 1.5 percent against the onshore Chinese renminbi in the second quarter, driven by improving Chinese economic data and continued portfolio inflows into China's onshore markets.

Chart 10

U.S. DOLLAR−ONSHORE RENMINBI EXCHANGE RATE



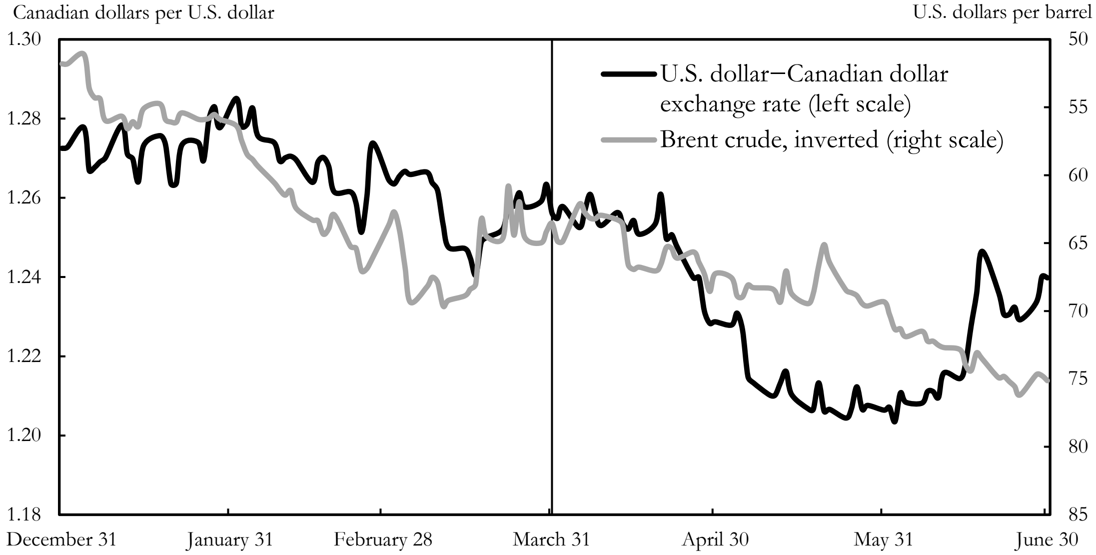
Source: Bloomberg L.P.

Commodity-sensitive currencies were supported by the broader trends of rising COVID-19 vaccination rates and the resultant rebound in expectations for global growth. Brent crude oil prices rose 18 percent over the quarter on strong demand signals as well as geopolitical events, including the U.S. decision to pause talks on Iranian crude oil sanctions.

The U.S. dollar depreciated 1.3 percent against the Canadian dollar over the quarter, movement that was attributed to rising crude oil prices and policy actions by the Bank of Canada (BoC). In April, the central bank reduced the pace of its weekly purchases under its quantitative easing program, marking the BoC as one of the first advanced economy central banks to reduce its pandemic-related asset purchases. The Canadian dollar reversed some of its appreciation against the U.S. dollar toward the end of the quarter, however, owing to the broader U.S. dollar appreciation following the June FOMC meeting, as market participants anticipated a narrowing gap between the two central banks in terms of policy stance.

Chart 11

U.S DOLLAR−CANADIAN DOLLAR EXCHANGE RATE AND CRUDE OIL PRICES

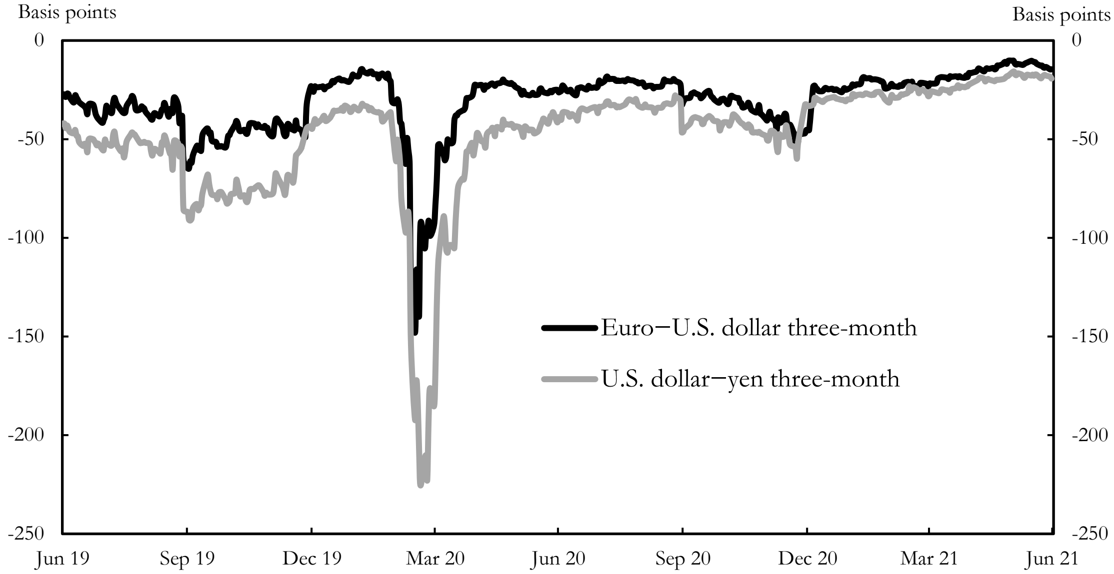


Source: Bloomberg L.P.

FOREIGN EXCHANGE SWAP MARKETS REMAIN STABLE AMID ABUNDANT LIQUIDITY

Foreign exchange swap market pricing and trading conditions remained stable in the second quarter due to abundant liquidity, supporting the return of foreign exchange swap-implied rates to pre-pandemic levels. Three-month foreign exchange swap basis spreads of key U.S. dollar currency pairs continued to narrow throughout the second quarter. Market participants attributed the smooth market conditions over the second quarter to ample dollar liquidity as well as the backstop of the Federal Reserve's U.S. dollar liquidity swap facilities.

Chart 12
FOREIGN EXCHANGE SWAP-IMPLIED BASIS SPREADS



Sources: Bloomberg L.P.; staff calculations.

U.S. DOLLAR LIQUIDITY SWAP ARRANGEMENTS WITH FOREIGN CENTRAL BANKS

Aggregate swaps outstanding of the standing and temporary dollar liquidity swap arrangements with foreign central banks declined to roughly $0.6 billion by the end of the second quarter of 2021, compared to $2.5 billion at the end of the first quarter of 2021 and a peak of nearly $450 billion in late May 2020. Market participants noted that the further decline in swaps outstanding reflected continued stabilization of trading conditions in offshore dollar funding markets with balanced dollar supply and demand dynamics.[3]

With respect to the *standing dollar liquidity swap arrangements*, the Federal Reserve had a total of $0.3 billion of swaps outstanding at the end of the quarter. As of June 30, the ECB had $0.3 billion of swaps outstanding. The BoJ, BoC, BoE, and Swiss National Bank did not have any dollar swaps outstanding at the end of the quarter.

[3] Consistent with the current Authorization for Foreign Currency Operations, the Desk conducts small-value exercises for the standing liquidity swap arrangements as a matter of prudent advance planning. No inference about policy should be drawn from these exercises.

With respect to the *temporary swap lines* with nine additional central banks, the Federal Reserve had a total of $0.3 billion of swaps outstanding with these central banks at the end of the quarter. As of June 30, Banco de México had $0.3 billion of swaps outstanding. The Monetary Authority of Singapore, Danmarks Nationalbank, Bank of Korea, Norges Bank, Sveriges Riksbank, Reserve Bank of Australia, Reserve Bank of New Zealand, and Banco Central do Brasil did not have any dollar swaps outstanding at the end of quarter.

The Federal Reserve's temporary U.S. dollar liquidity swaps are currently set to expire on December 31, 2021, as announced on June 16, 2021.

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 $21.2 billion, comprised of euro and yen holdings. The Federal Reserve System Open Market Account (SOMA) holdings of foreign-currency-denominated assets also 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.[4]

In terms of the investment eligibility, 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 June 30, the U.S. dollar value of euro-denominated deposits and government securities held by the SOMA and the ESF increased to $25.6 billion from $25.3 billion on March 31. The U.S. dollar value of yen-denominated deposits and government securities decreased to $16.8 billion from the prior quarter's balance of $16.9 billion. These changes are largely driven by foreign exchange translation effects.

[4] 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.

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, March 31, 2020[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, June 30, 2021[a]
Federal Reserve System Open Market Account (SOMA)						
Euro	12,683	0	(11)	0	114	12,785
Japanese yen	8,451	0	(0)	0	(33)	8,417
Total	21,134	0	(11)	0	80	21,202

		Changes in Balances by Source				
	Carrying Value, March 31, 2021[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, June 30, 2021[a]
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	12,663	0	(11)	0	113	12,766
Japanese yen	8,451	0	(0)	0	(33)	8,417
Total	21,114	0	(11)	0	80	21,183

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, 2021

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets	**12,765.6**	**12,785.2**
Cash held on deposit at official institutions	6,650.2	6,669.8
Marketable securities held under repurchase agreements[b]	0.0	0.0
Marketable securities held outright	6,115.3	6,115.3
German government securities	1,034.6	1,034.6
French government securities	2,420.1	2,420.1
Dutch government securities	2,660.6	2,660.6
Yen-denominated assets	**8,417.3**	**8,417.3**
Cash held on deposit at official institutions	7,838.9	7,838.8
Marketable securities held outright	578.5	578.5

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 21.80 and 21.83 months, respectively; both the SOMA and ESF yen portfolios had Macaulay durations of 0.18 months.

[b] Sovereign debt obligations of Belgium, France, Germany, Italy, the Netherlands, and Spain are currently eligible collateral for reverse repo transactions.

Table 3

RECIPROCAL CURRENCY ARRANGEMENTS

Millions of U.S. Dollars

Institution	Amount of Facility	Outstanding as of June 30, 2021
	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	Unlimited	318
Swiss National Bank	Unlimited	0
Bank of Japan	Unlimited	0
Bank of Canada	Unlimited	0
Bank of England	Unlimited	0
		318
Temporary dollar liquidity swap arrangements		
Banco Central do Brasil	60,000	0
Banco de México	60,000	250
Bank of Korea	60,000	0
Danmarks Nationalbank	30,000	0
Monetary Authority of Singapore	60,000	0
Norges Bank	30,000	0
Reserve Bank of Australia	60,000	0
Reserve Bank of New Zealand	30,000	0
Sveriges Riksbank	60,000	0
		250
Standing foreign currency liquidity swap arrangements		
European Central Bank	Unlimited	0
Swiss National Bank	Unlimited	0
Bank of Japan	Unlimited	0
Bank of Canada	Unlimited	0
Bank of England	Unlimited	0
		0
	U.S. Treasury Exchange Stabilization Fund (ESF)	
Banco de México	9,000	0
	9,000	0