TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

April–June 2008

During the second quarter of 2008, the dollar's trade-weighted exchange value appreciated 0.9 percent, as measured by the Federal Reserve Board's major currencies index. The dollar appreciated 0.2 percent against the euro and 6.5 percent against the yen. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

Although the trade-weighted exchange value of the dollar was largely range-bound during the second quarter, it did respond to changes in expectations for growth and inflation prospects in the United States and abroad. Consistently, bilateral exchange rates largely reflected changes in the monetary policy stances of the Federal Reserve, the European Central Bank (ECB), and the Bank of Japan (BoJ). In addition, rising commodity prices and continued pressures in the funding and credit markets were cited as important factors driving the changes in the exchange value of the dollar.

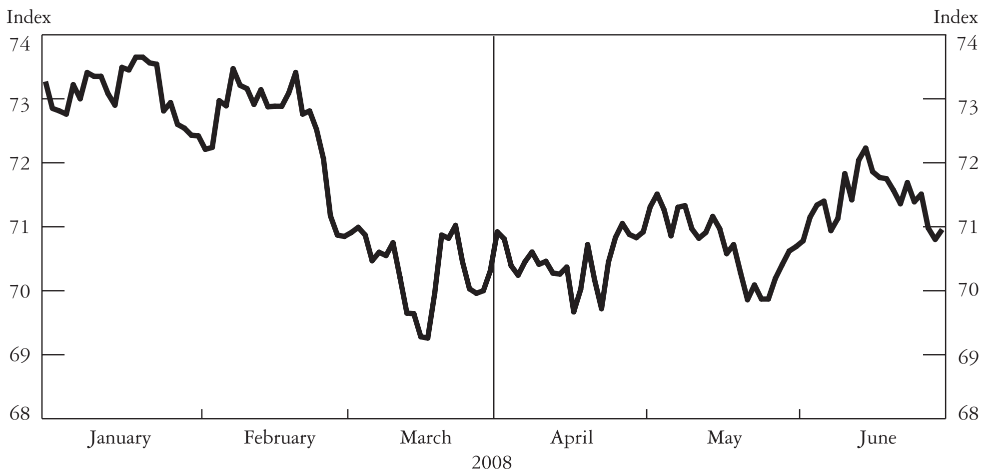
During the quarter, the euro–U.S. dollar currency pair traded in three distinct periods. Over the first three weeks of April, divergent relative growth expectations in the United States and the euro area as well as continued stress in the U.S. financial system contributed to the depreciation of the dollar to a new record level, slightly above $1.60 per euro. However, subsequent weaker-than-expected euro-area growth data prompted the dollar to recover to about the $1.54 per euro level by mid-May. For the remainder of the quarter, the dollar remained within this range, as market participants became increasingly uncertain about relative global growth and inflation outlooks and the likely central bank response.

Reacting to elevated demand for dollar funding, on May 2 the Federal Reserve Bank of New York announced an increase in the size of the temporary currency swap facilities with the ECB and the Swiss National Bank (SNB).[1]

This report, presented by William Dudley, Executive Vice President, Federal Reserve Bank of New York, and Manager of the System Open Market Account, describes the foreign exchange operations of the U.S. Department of the Treasury and the Federal Reserve System for the period from April through June 2008. Alex Cohen, Ilan Solot, and Niall Coffey were primarily responsible for preparation of the report.

Chart 1

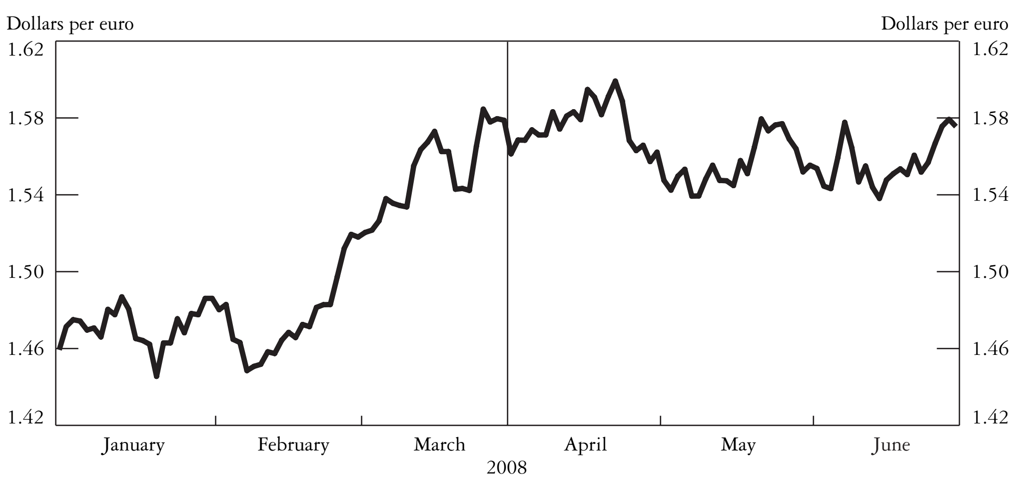
TRADE-WEIGHTED U.S. DOLLAR



Source: Board of Governors of the Federal Reserve System.

Chart 2

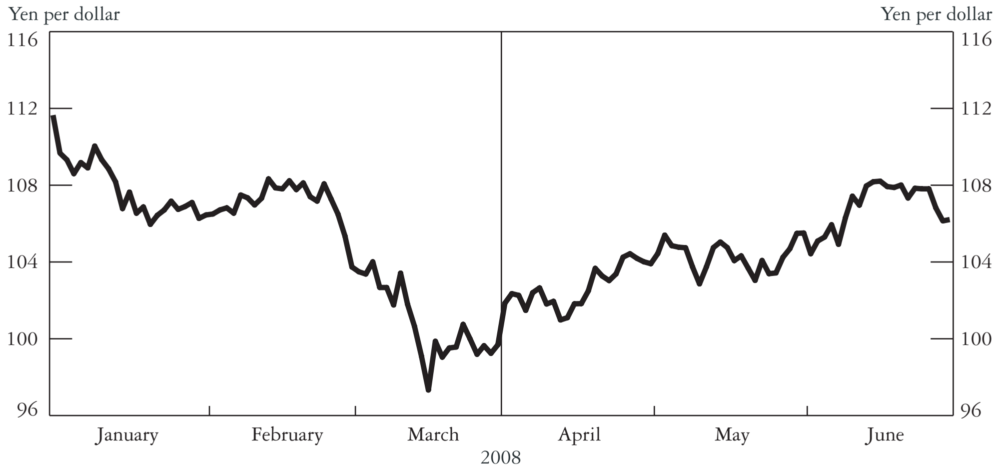
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

DOLLAR FALLS AGAINST THE EURO AND RISES AGAINST THE YEN AS INVESTORS REASSESS THE OUTLOOK FOR GROWTH IN G-3 ECONOMIES

During the first three weeks of April, the dollar was mixed against other Group of Three (G-3) economy currencies. The dollar depreciated 1.3 percent against the euro and appreciated 3.3 percent against the yen, reflecting shifting expectations for relative economic growth and policy rates in these economies.

Throughout the period, concerns about the U.S. economic outlook, which had increased during the previous two quarters, persisted as many market observers debated the likelihood of the United States entering a recession. Many observers continued to express concerns about signs of waning consumer confidence, weakness in the housing sector, and softening labor markets. Economic data releases in early April largely contributed to a pessimistic U.S. growth outlook. In particular, market participants focused on the lower-than-expected nonfarm payrolls report for March, as well as softer housing and consumption data. Furthermore, despite the improvement in liquidity conditions in the United States since the introduction of additional Federal Reserve lending facilities in mid-March, many participants continued to express concern that tightness in credit and lending conditions could weigh considerably on U.S. growth over time. These continued

[1] http://www.federalreserve.gov/newsevents/press/monetary/20080502a.htm

concerns about the impact of stress in the financial sector, combined with further signs of cyclical economic weakness in the United States, added to negative sentiment toward the dollar, particularly against the euro, because many market participants anticipated that growth in the euro area would remain resilient.

Early in the quarter, euro-area economic data was generally interpreted more positively. While some activity indicators showed signs of softening, most market participants expected that near-term economic activity in the euro area would expand moderately, albeit at a slower pace than that observed in recent quarters. Comments from ECB officials reinforced the view that euro-area growth would remain resilient, despite significant uncertainty about the macroeconomic background. On April 16, the euro-area consumer price index (CPI) rose at a higher-than-expected rate of 3.6 percent year-over-year, its fastest pace since June 1992, and oil prices continued to rise sharply to record levels. In response, several ECB officials expressed concern about inflationary pressures. ECB Governing Council Member Axel Weber reiterated that he considered euro-area inflation to be “alarmingly high,” and ECB President Trichet made comments that were interpreted as indicating vigilance against inflation as well as a mild upward bias to policy rates. The euro reached its highest level on record against the dollar, above $1.60, on April 22.

Investor sentiment toward both the Japanese economic outlook and the yen deteriorated early in the quarter, particularly following the release of the BoJ’s first-quarter Tankan survey, which showed a broad-based decline in the economic outlook for Japanese manufacturers. The BoJ’s monthly economic and financial developments report on April 9 was interpreted as emphasizing increased downside risks to Japanese growth, particularly from rising material and energy prices. In addition, the dollar’s gains against the yen stemmed from a moderation of risk aversion among investors observed during the first quarter. At that time, heightened concerns about solvency risk in the U.S. financial sector had contributed to a sharp rise in the yen. Starting in April, the improvement of liquidity conditions led to improved investor sentiment across financial markets. In particular, market participants reported increased demand for foreign assets from Japanese institutional and retail investors. These shifts in portfolio flows were also reportedly supported by the passage of Japan’s March fiscal year-end.

Changes to the April 13 statement by the Group of Seven (G-7) finance ministers garnered some debate. They stated, “. . . since our last meeting, there have been at times sharp fluctuations in major currencies, and we are concerned about their possible implications for economic and financial stability.” Many market observers expressed surprise at the statement and interpreted it as a sign of escalating concerns among G-7 policymakers about exchange rates, in part caused by the increased volatility that had been observed across asset markets during the first quarter. Nonetheless, despite some debate among market participants, the release of the G-7 statement had little sustained impact on exchange rate movements.

DOLLAR GAINS AGAINST THE EURO AND YEN AS EXPECTATIONS FOR GROWTH OVERSEAS SHIFT DOWNWARD

From mid-April to mid-May, incoming economic data led many market observers to question their outlook for relative growth prospects in the euro area and the United States. During this period, the dollar appreciated about 2.2 percent against the euro, fully reversing the price action observed during the first few weeks of the quarter. Investors' perceptions regarding the outlook for the U.S. economy held relatively steady throughout the period. Most market observers continued to express concerns about the outlook for real U.S. growth because of the softness in labor markets, the ongoing correction in the housing sector, and the possibility that continued tightness in credit and lending markets could weigh heavily on growth over time. Reflecting the continued downside risks to economic growth, on April 30 the Federal Open Market Committee (FOMC) voted 8-2 to cut the federal funds target rate by 25 basis points to 2.00 percent. Many observers interpreted the accompanying statement as indicating that the FOMC viewed the risks to growth and inflation as more balanced. Therefore, many attached an increased probability that the committee may soon choose to pause in its series of rate cuts, which had begun in September 2007.

Economic data in the euro area contrasted with that observed earlier in the quarter and was generally interpreted as indicating mounting downside risks to growth. In particular, the decline in the German IFO Institute's April business sentiment index on April 24 led many market observers to believe that a cyclical turning point in euro-area economic activity may be approaching. Subsequently, lower-than-expected German retail sales and declining euro-area consumer confidence data reinforced the notion of moderating demand and led many observers to anticipate that the ECB could soon begin to lower policy rates. Positive sentiment toward the euro also waned as investors noted signs of deteriorating economic conditions in several peripheral euro-area economies, particularly Spain and Ireland. The euro's depreciation during this period was supported, in part, by continued comments from euro-area policymakers about the exchange rate. In particular, many market observers highlighted comments from Eurogroup President Jean-Claude Juncker, French Finance Minister Christine Lagarde, and ECB Governing Council Member Klaus Liebscher, expressing concern about volatility in the euro's exchange rate value. These remarks were largely interpreted as signaling official concern about the potential impact of euro appreciation on the region's export competitiveness. On the margin, some observers also suggested that the dollar was supported by media reports speculating that U.S. policymakers favored an appreciation of the dollar against the euro.

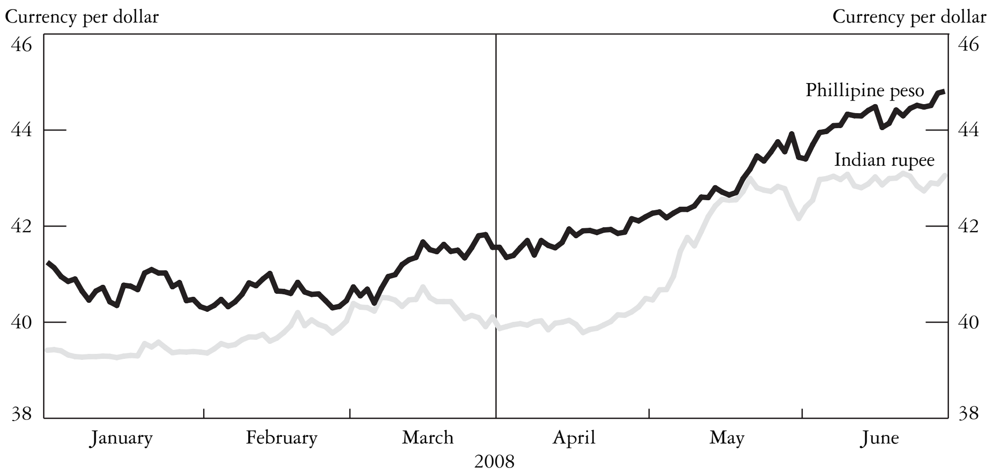
The dollar traded against the yen in a relatively narrow range between ¥103 and ¥105 from late-April until the end of May. The Golden Week holidays in Japan during early May reportedly contributed to the relatively subdued price action as many investors scaled back on speculative trading activity. Still, sentiment toward the Japanese economic outlook continued to deteriorate as Japan's housing sector showed further signs of slowing and softer machine orders and consumer confidence data led to reduced expectations for aggregate demand.

Notably, uncertainty about the broader outlook for Asian economies increased during the period, as concerns regarding the sharp rise in energy and commodity prices led many to increasingly question the real growth outlook in these economies. Many emerging Asian asset markets and currencies declined over most of the quarter, owing to a deterioration in terms of trade for these countries, waning investor sentiment toward risky assets, and rising inflation driven by a combination of buoyant domestic demand, negative real interest rates, and higher food and energy prices. For example, the Philippine peso and Indian rupee depreciated about 7.2 percent and 6.8 percent, respectively, during the quarter. In response, policymakers in the region sought to stem rising inflationary pressures through a combination of regulatory measures such as subsidies, import tax reductions, export tax increases, and price controls. However, as oil prices continued to rise, subsidies put pressure on government budgets in many of these economies, eventually causing Malaysia, Taiwan, and Indonesia to reduce their oil subsidies.

More generally, some market participants expressed uncertainty about the ability of emerging market economies with fixed exchange rate regimes to counter inflationary pressures. Speculation persisted that the Middle East Gulf Cooperation Council (GCC) countries may choose to adjust their currency regimes, particularly to revalue their long-standing fixed exchange rates against the dollar at a higher level. However, some analysts questioned the appropriateness of such a policy move, noting that domestic inflation in the GCC economies stemmed mainly from overly accommodative monetary policy and increases in commodity prices.

Chart 4

U.S. DOLLAR–PHILIPPINE PESO AND U.S. DOLLAR–INDIAN RUPEE EXCHANGE RATES



Source: Bloomberg L.P.

DOLLAR TRADES IN A RANGE AGAINST THE EURO BUT RISES AGAINST THE YEN AS INVESTORS FOCUS ON THE IMPACT OF RISING COMMODITY PRICES AND INFLATION

From mid-May through the end of June, the euro–U.S. dollar exchange rate traded within a range of $1.54 to $1.59. Still, the exchange value of the dollar fluctuated against the euro over this period as economic data varied and uncertainty about the impact of rising energy and commodity prices on the outlook for relative growth and inflation rose significantly. These factors led many market participants to express uncertainty about the economic prospects and monetary policy outlook in both the United States and the euro area. During the period, market participants debated the implications of official commentary regarding the dollar.

Beginning in mid- to late May, sentiment toward relative growth prospects diverged again, as euro-area growth data printed above expectations, but U.S. growth data declined. The sustained rise of energy prices to new record highs and continued comments from ECB officials expressing vigilance against inflation also supported the euro's gains against the dollar. Reflecting this shift in the outlook for relative growth and monetary policy, the yield spread of the benchmark two-year German Schatz over the two-year U.S. Treasury note widened from about 150 basis points to about 225 basis points by early June, a factor that supported the euro's rise to $1.58 against the dollar.

Around this time, many market observers increasingly debated the extent to which the dollar's multiyear depreciation may have contributed to the rise in oil prices. Some argued that a strong positive demand effect exists, whereby dollar depreciation leads to increased demand for oil in overseas economies whose currencies have appreciated against the dollar. However, most observers firmly believe that currency movements have had a relatively limited impact on the rise in oil prices. Specifically, market participants note that the price of oil has risen significantly in terms of all major currencies, and oil consumption has not grown to a greater degree in those countries that have seen the largest appreciation of their domestic exchange rates against the dollar. Rather, most observers conclude that shifts in the underlying global demand for and supply of oil have been the principal drivers of the increase in prices. The level of investment in oil supply capacity has not matched the rise in demand for oil, which has grown substantially, due in part to the urbanization and globalization of many emerging market economies. Over the quarter, the front-month West Texas Intermediate (WTI) crude oil futures contract rose by over $40 per barrel, while the euro–U.S. dollar currency pair traded in a relatively tight range.

Against the backdrop of a sharp rise in commodity prices, higher-than-expected inflation readings, and signs of rising inflation expectations, both FOMC Chairman Bernanke and ECB President Trichet expressed increased vigilance against inflationary pressures. In addition, the FOMC Chairman's comments about the dollar garnered some attention and contributed to its appreciation to about $1.54 against the euro. Market participants noted Chairman Bernanke's statement that the Federal Reserve and the U.S. Treasury were working closely to monitor exchange rate movements, especially his comment that the Federal Reserve was "attentive to the implications of changes in the value of the dollar for inflation and inflation expectations." Market participants agreed that Chairman Bernanke's remarks indicated an increased official focus on the dollar, but they were divided on the implications of these comments on the U.S. monetary and foreign exchange policy outlook. Additionally, some pointed to comments from Treasury Secretary Paulson earlier that same week as indicating increased official focus on exchange rates.

Generally, near-term expectations about FOMC policy rate expectations shifted significantly higher during early June. During the first two weeks of June, the implied rate on the September 2008 eurodollar futures contract rose as much as 50 basis points. The June 25 FOMC statement noted that downside risks to growth had diminished somewhat, while the upside risks to inflation and inflation expectations had increased. Despite the FOMC commentary, the amount of expected FOMC policy rate increases subsequently declined as U.S. economic data showed further signs of slowing, and concerns remained over potential write-downs and losses in the U.S. financial sector.

In contrast, ECB President Trichet's comments following the June 5 ECB policy decision were interpreted as signaling a strong likelihood that the ECB Governing Council would raise policy rates by 25 basis points at its July meeting. Consistently, the implied rate on the September 2008 euribor futures contract rose almost 30 basis points during the first half of June. However, expectations for ECB policy rate increases moderated over the second half of June, owing in part to comments from ECB officials playing down the likelihood of a series of rate increases as well as weaker-than-expected growth data. On balance, however, most analysts continued to expect that growth in the region would prove relatively more resilient than in the United States, a factor that supported the euro against the dollar.

Starting in mid-May, the dollar appreciated about 3.3 percent against the yen, reaching its highest level against the yen in four months, on June 16, at about ¥108 per dollar. Over this period, Japanese economic data continued to show signs of slowing economic activity. In particular, retail sales slowed even further as signs of weakness in the housing sector emerged and Japan's unemployment rate rose modestly from 3.9 to 4.0 percent. On the whole, many market participants suggested that an environment of slowing global growth and rising commodity prices could weigh on the competitiveness of Japan's export sector, which remained a key contributor to domestic growth. On May 20, the BoJ voted to leave policy rates stable at 0.5 percent. Comments from BoJ Governor Shirakawa were interpreted as emphasizing downside risks to growth and reduced willingness to raise policy rates despite the global rise in energy and food prices. Even with weaker-than-expected data, the Japanese yen appreciated moderately toward ¥106 during the last two weeks of the quarter, as demand for the yen from Japanese exporters reportedly increased and continued concerns about the health of the U.S. financial sector weighed on the dollar.

TEMPORARY RECIPROCAL CURRENCY ARRANGEMENTS EXPANDED WITH OTHER CENTRAL BANKS

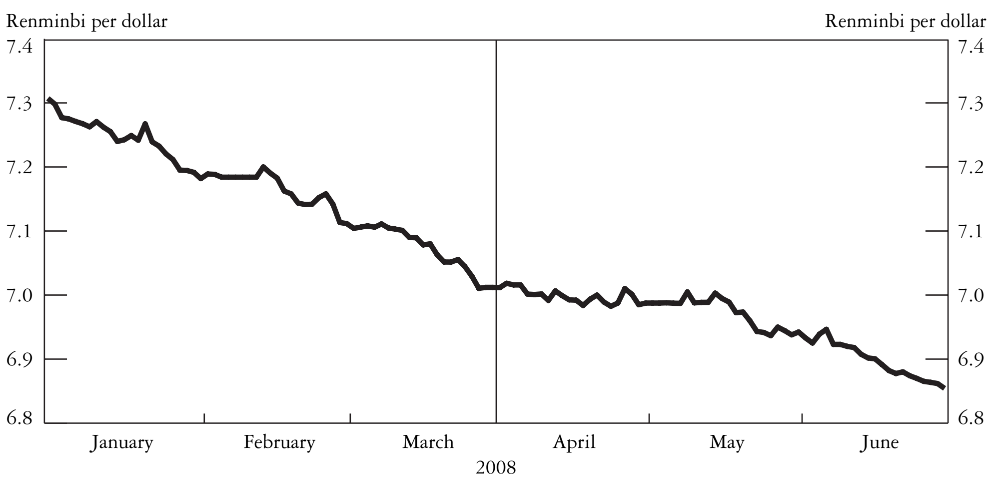
To address liquidity pressures in funding markets, on May 2 the FOMC authorized increases in the existing temporary reciprocal currency arrangements (swap lines) with the ECB and the SNB, extending their terms through January 30, 2009. Under the new terms of the facilities, the ECB and SNB would be able to draw up to $50 billion and $12 billion, respectively, in exchange for local currency. These amounts reflect increases of $20 billion to the ECB and $6 billion to the SNB and were in addition to the amounts authorized for the previous facilities. Accordingly, the ECB and SNB were able to increase the sizes of their auctions of dollar funding to locally eligible institutions.

PACE OF CHINESE RENMINBI APPRECIATION AGAINST THE U.S. DOLLAR SLOWS

During the second quarter, the Chinese renminbi appreciated about 2.3 percent, modestly less than the 4.2 percent appreciation observed during the first quarter. Beginning in mid-April, the pace of Chinese renminbi appreciation slowed notably for a one-month period. Market participants cited various factors as possibly contributing to the slower pace of Chinese renminbi appreciation at this time. Some participants suggested that the Chinese monetary authorities were becoming more cautious about the pace of renminbi appreciation, given its impact on export competitiveness and the perception that a steady pace of appreciation attracts unwanted speculative capital flows into China. Others noted that, at this time, the trade-weighted Chinese renminbi appreciated consistent with the rise of the dollar against other major currencies. On the whole, market participants continued to expect a steady appreciation of the renminbi, consistent with measures taken by the People's Bank of China to address inflationary pressures. At the end of the first quarter, nondeliverable forward contracts indicated that market participants expected the Chinese currency to appreciate approximately 6.4 percent against the U.S. dollar over the next twelve months, down from the 10.8 percent appreciation expected at the end of the first quarter.

Chart 5

U.S. DOLLAR–CHINESE RENMINBI EXCHANGE RATE



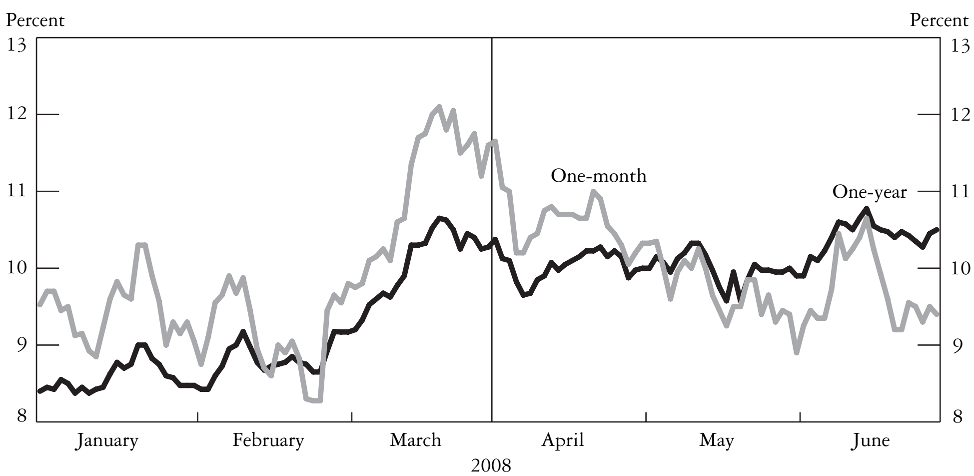
Source: Bloomberg L.P.

OPTION-IMPLIED VOLATILITY OF G-3 CURRENCIES FALLS DURING THE SECOND QUARTER

During the second quarter, option-implied volatility of the euro–U.S. dollar and U.S. dollar–yen currency pairs declined steadily, reversing the sharp rise in implied volatility that had occurred during the first quarter. At that time, increased concerns about the U.S. financial sector led to a marked deterioration in investor risk appetite and a sharp rise in actual and implied volatility across many major financial markets.

Chart 6

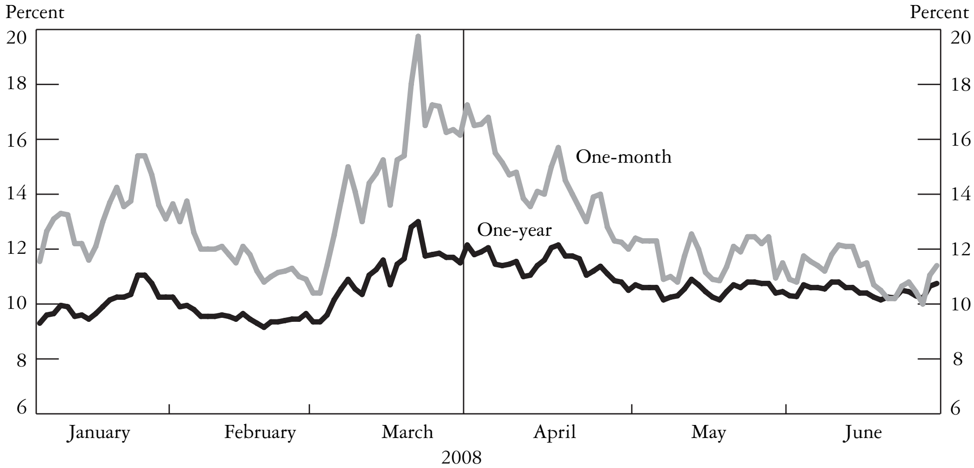
ONE-MONTH AND ONE-YEAR EURO–U.S. DOLLAR IMPLIED VOLATILITY



Source: Bloomberg L.P.

Chart 7

ONE-MONTH AND ONE-YEAR U.S. DOLLAR–YEN IMPLIED VOLATILITY



Source: Bloomberg L.P.

TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE RESERVES

The U.S. monetary authorities did not undertake any intervention operations during the quarter. At the end of the quarter, the current value of the Federal Reserve System's Open Market Account holdings was $87.8 billion—consisting of $24.8 billion of foreign exchange reserve portfolio investments and $63.0 billion of outstanding swaps with the ECB and SNB—and the current value of the U.S. Treasury's Exchange Stabilization Fund was $24.8 billion, comprised of euro and yen holdings. The U.S. monetary authorities invest their foreign currency balances in a variety of instruments that yield market-related rates of return and have a high degree of liquidity and credit quality. To the greatest extent practicable, the investments are split evenly between the System Open Market Account and the Exchange Stabilization Fund.

As noted previously, to facilitate the functioning of financial markets and provide liquidity in U.S. dollars abroad, on December 12, 2007, the FOMC authorized temporary reciprocal currency arrangements with the ECB and the SNB. Holdings related to these arrangements are included in the System Open Market Account for the first quarter. On May 2, these drawdown limits were increased to $50 billion for the ECB and $12 billion for the SNB, and the terms of these agreements were extended to January 30, 2009. As of June 30, the ECB had drawn down $50 billion, while the SNB had drawn down $12 billion.

A significant portion of the U.S. monetary authorities' foreign exchange reserves is invested in European and Japanese government securities. On an outright basis, the U.S. monetary authorities hold German, French, and Japanese government securities. Under euro-denominated repurchase agreements, the U.S. monetary authorities accept sovereign debt backed by the full faith and credit of the following governments: Belgium, France, Germany, Italy, the Netherlands, and Spain. Foreign currency reserves are also invested at the Bank for International Settlements and in facilities at other official institutions. As of June 30, direct holdings of foreign government securities totaled $22.3 billion, split evenly between the System Open Market Account and the Exchange Stabilization Fund. Foreign government securities held under repurchase agreements totaled $6.7 billion at the end of the quarter and were also split evenly between the two authorities.

Table 1

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

Millions of Dollars

		Change in Balance by Source				
	Carrying Value March 31, 2008[a]	Net Purchases and Sales[b]	Investment Earnings[c]	Realized Gains/Losses on Sale[d]	Unrealized Gains/ Losses on Foreign Currency Revaluation[e]	Carrying Value June 30, 2008[a]
Federal Reserve System						
Open Market Account (SOMA)						
Euro	30,945.4	35,000.0	386.1	0	240.0[f]	66,571.6
Swiss franc	6,107.4	6,000.0	58.9	0	69.0[f]	12,235.3
Yen	9,547.5	0.0	15.6	0	(568.5)	8,994.7
Total	46,600.3	41,000.0	460.7	0	(259.4)	87,801.6
U.S. Treasury Exchange						
Stabilization Fund (ESF)						
Euro	15,704.0	0	150.0	0	(55.5)	15,798.5
Yen	9,547.5	0	15.6	0	(568.5)	8,994.7
Total	25,251.5	0	165.6	0	(623.9)	24,793.2

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, swap drawings and repayments, and warehousing.

[c] Investment earnings include accrued interest and amortization on outright and swap-related holdings.

[d] Gains and losses on sales are calculated using average cost.

[e] Reserve asset balances are revalued daily at the noon buying rates.

[f] Valuation adjustments on swap-related euro and Swiss franc holdings do not affect profit and loss because the impact is offset by the unwinding of the forward contract on the repayment date.

Table 2

BREAKDOWN OF FOREIGN RESERVE ASSETS HELD

Carrying Value in Millions of Dollars, as of June 30, 2008

	U.S. Treasury Exchange Stabilization Fund (ESF)[a]	Federal Reserve System Open Market Account (SOMA)[a]
Euro-denominated assets:	**15,798.5**	**66,571.6**
Cash held on deposit at official institutions	7,336.8	7,363.1
Other assets[b]	—	50,746.7
Marketable securities held under repurchase agreements[c]	3,340.1	3,340.1
Marketable securities held outright	5,121.6	5,121.6
German government securities	2,260.3	2,260.3
French government securities	2,861.4	2,861.4
Swiss-franc-denominated assets:	—	**12,235.3**
Other assets[b]	—	12,235.3
Yen-denominated assets:	**8,994.7**	**8,994.7**
Cash held on deposit at official institutions	2,971.0	2,971.0
Marketable securities held outright	6,023.7	6,023.7

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

[a]As of June 30, euro and yen portfolios had Macaulay durations of 8.6 months and 11.7 months, respectively, for both the ESF and SOMA portfolios.

[b]Category represents carrying value of outstanding reciprocal currency swaps with the European Central Bank and Swiss National Bank.

[c]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 Dollars

Institution	Amount of Facility	Outstanding as of June 30, 2008
	Federal Reserve System Open Market Account (SOMA)	
Bank of Canada	2,000	0
Bank of Mexico	3,000	0
European Central Bank[a]	50,000	50,000
Swiss National Bank[a]	12,000	12,000
Total	67,000	62,000
	U.S. Treasury Exchange Stabilization Fund (ESF)	
Bank of Mexico	3,000	0
Total	3,000	0

[a] Temporary 180-day swap arrangement.

Table 4

DAILY SWAP FACILITY ACTIVITY

Billions of Dollars

Date	Drawings	Repayments	Amount Outstanding
		European Central Bank (ECB)	
April 10	15.0	—	30.0
April 24	15.0	15.0	30.0
May 8	25.0	15.0	40.0
May 22	25.0	15.0	50.0
June 5	25.0	25.0	50.0
June 19	25.0[a]	25.0	50.0
		Swiss National Bank (SNB)	
April 24	6.0	6.0	6.0
May 8	6.0	—	12.0
May 22	6.0	6.0	12.0
June 5	6.0	6.0	12.0
June 19	6.0[a]	6.0	12.0

[a] Maturity date of July 3, 2008.