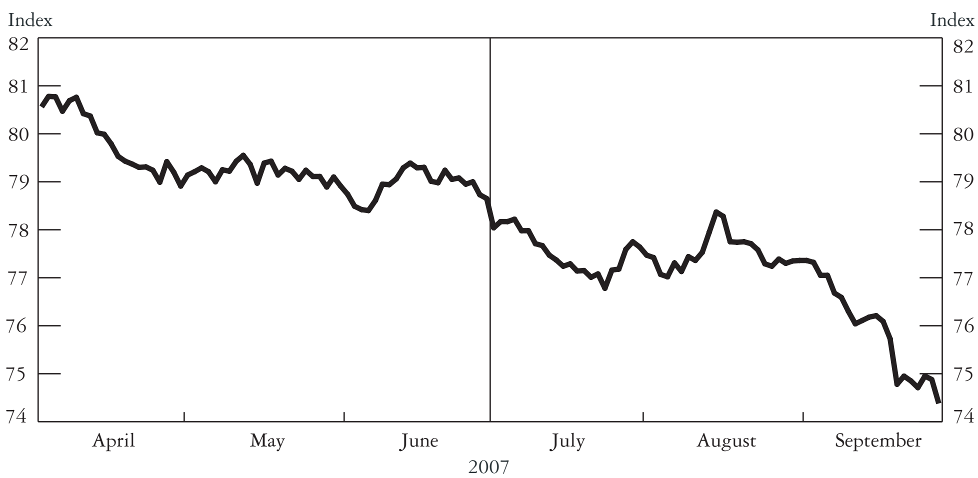
TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

July–September 2007

During the third quarter of 2007, the dollar's trade-weighted exchange value decreased 5.4 percent as measured by the Federal Reserve Board's major currencies index. The dollar depreciated 5.4 percent against the euro and 6.8 percent against the yen. With the exception of a brief period during mid-August when flight-to-safety concerns dominated, the dollar depreciated throughout the quarter, driven mainly by changes in relative growth expectations and interest rate differentials. Implied volatility on major currency pairs rose throughout the quarter and spiked significantly higher during mid-August, especially for the dollar-yen currency pair. U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

Chart 1

TRADE-WEIGHTED U.S. DOLLAR

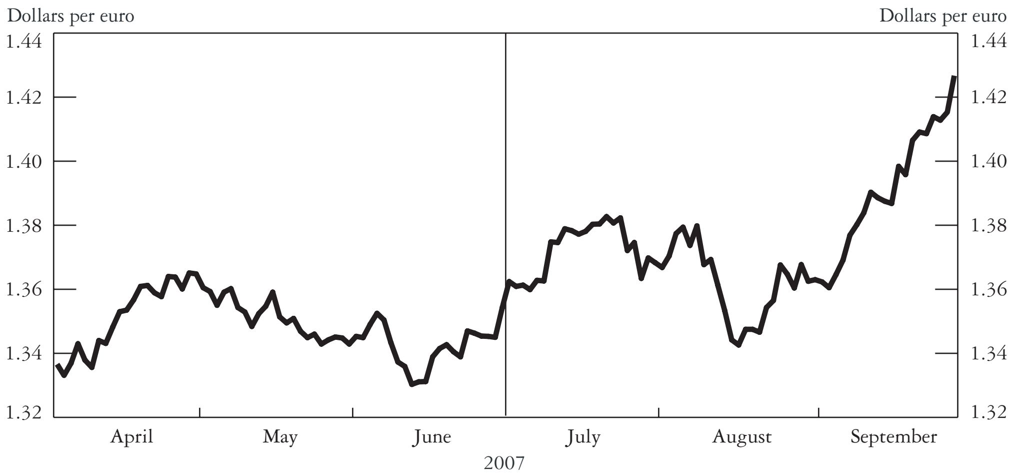


Source: Board of Governors of the Federal Reserve System.

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 July through September 2007. Matthew Lieber was primarily responsible for preparation of the report.

Chart 2

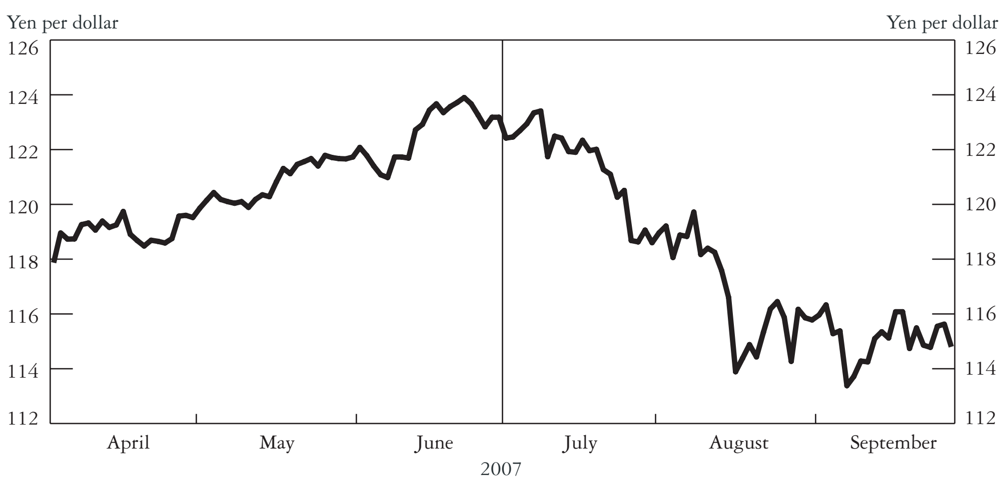
EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

Chart 3

U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

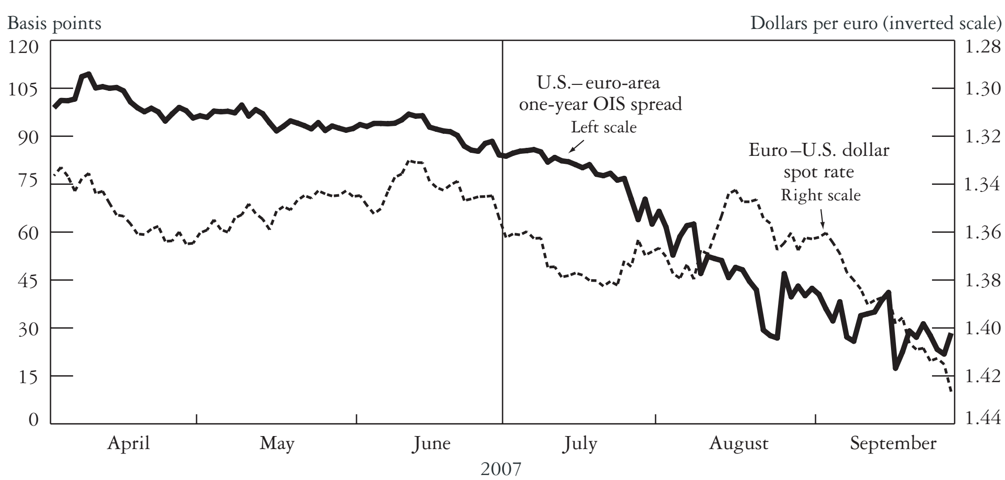
DOLLAR DEPRECIATES MODESTLY DURING JULY AS U.S. GROWTH AND POLICY RATE EXPECTATIONS ARE REVISED DOWNWARD

From the start of the quarter through the first week of August, the dollar depreciated modestly against most currencies, including the euro and yen. This period of dollar depreciation primarily reflected a downward revision to U.S. growth expectations and associated movements in interest rate differentials. The reduced growth expectations were driven by an increasingly negative outlook for the housing sector.

Monetary policy expectations in the United States continued to diverge from those in the euro area and Japan. Investors gradually priced in medium-term monetary easing by the Federal Open Market Committee (FOMC), while expectations for monetary tightening by the European Central Bank (ECB) and the Bank of Japan (BoJ) remained mostly steady. One-year overnight indexed swaps (OIS) referencing the federal funds effective rate declined about 20 basis points from the beginning of the quarter through August 8, whereas equivalent-maturity interest rate swaps linked to euro-area and Japanese policy rates were little changed. OIS are interest rate swaps whose rates can be considered market-based estimates of the daily average reference rate over the maturity of the swap.

Chart 4

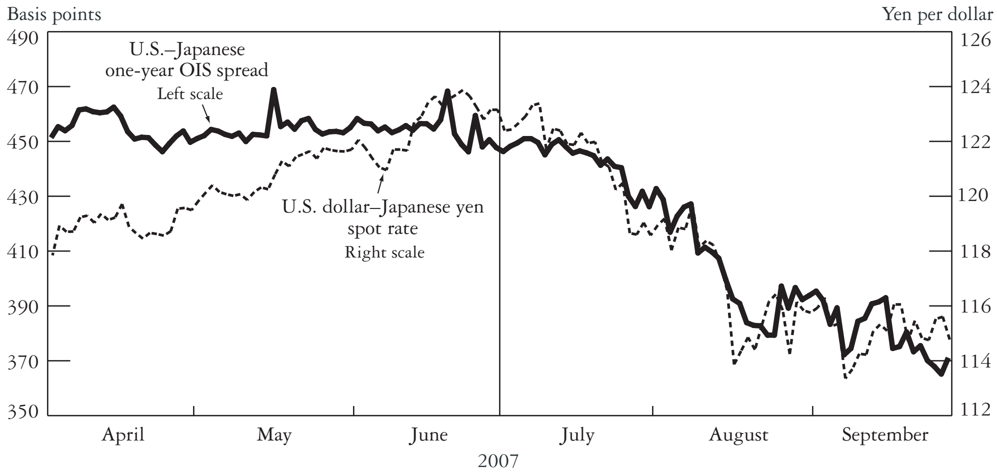
YIELD SPREAD BETWEEN U.S. AND EURO-AREA ONE-YEAR OVERNIGHT INDEXED SWAP (OIS) RATES



Source: Bloomberg L.P.

Chart 5

YIELD SPREAD BETWEEN U.S. AND JAPANESE ONE-YEAR OVERNIGHT INDEXED SWAP (OIS) RATES



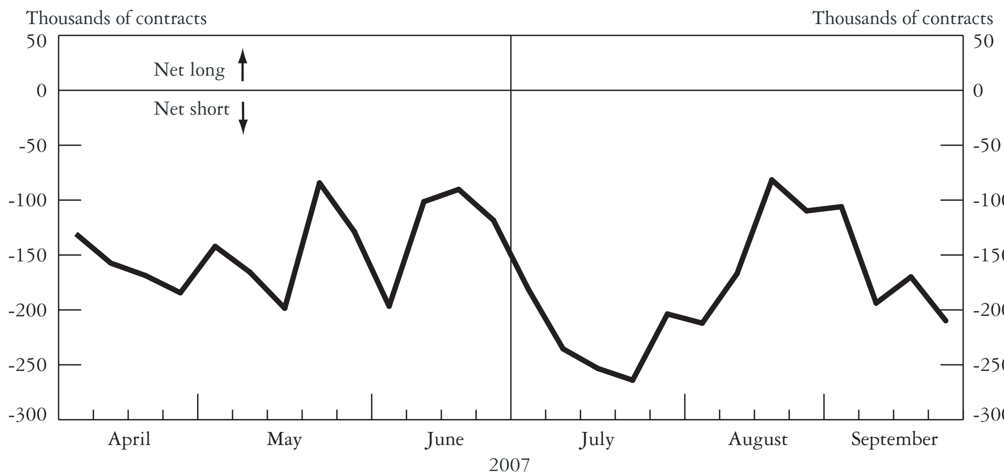
Source: Bloomberg L.P.

Also spurring the depreciation of the dollar during this period was the loss of confidence among investors in dollar-denominated assets and other complex financial instruments backed by subprime mortgages. Rating agency downgrades of some subprime mortgage-backed securities and changes to the rating methodology of these and other structured credit products contributed to investor unease. Growing uncertainty over the exposure of financial institutions to subprime mortgage and other credit markets further undermined market sentiment and led to a modest but steady increase in implied volatility across asset classes.

DOLLAR APPRECIATES DURING MID-AUGUST PERIOD OF FINANCIAL MARKET DISRUPTION

Between August 9 and August 16, the dollar appreciated notably against most major currencies, with the exception of the yen. During this period, subprime mortgage and general credit concerns spilled over into bank funding markets globally. Banks collectively became more cautious in their willingness to lend to other financial institutions on a term basis owing to their potential need for balance-sheet capacity to hold mortgage loans that could no longer be securitized, to backstop asset-backed commercial paper programs that were under stress, and to hold leveraged loans extended to finance private equity buyouts. In this environment of heightened uncertainty, the dollar appreciated 2.7 percent against the euro, and more than 8.1 percent against some higher yielding and emerging market currencies such as the Australian and New Zealand dollars and the Brazilian real. The dollar's appreciation appeared to be driven by increased risk aversion, as investors sought the perceived relative safety and liquidity of dollar-denominated assets. Many speculative investors unwound short dollar positions in order to reduce risk in their portfolios. The number of noncommercial net short positions in the dollar against all other currencies traded on the International Monetary Market (IMM) was reduced by more than half during this period.

Chart 6
NET U.S. DOLLAR POSITION HELD BY NONCOMMERCIAL ACCOUNTS ON THE INTERNATIONAL MONETARY MARKET

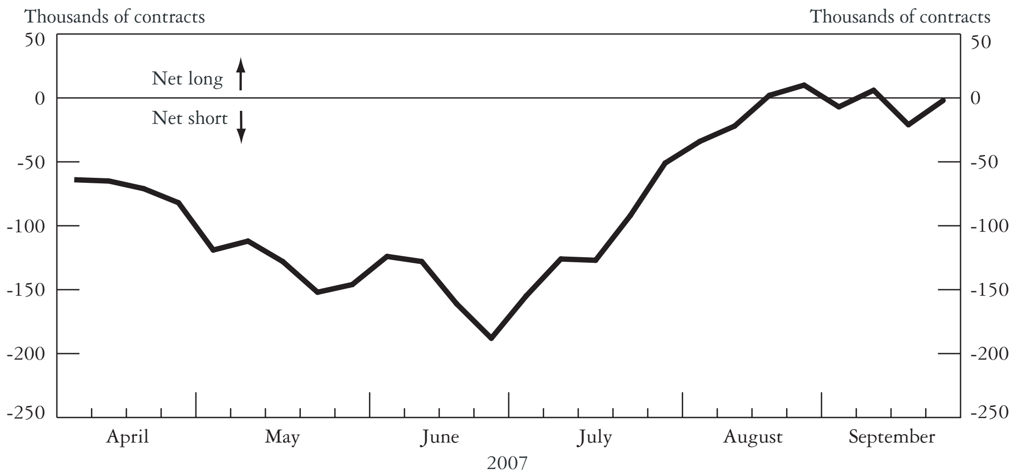


Source: Bloomberg L.P.

This decline in risk appetite was also characterized by a sharp appreciation of the yen against most currencies, prompted in part by the unwinding of carry trades. On August 16, the yen appreciated 2.3 percent against the dollar and as much as 5.8 percent against higher yielding currencies such as the Australian dollar. Market participants that had previously held large short yen positions unwound a sizable portion of these positions. Speculative trading accounts liquidated a significant portion of their short yen exposure and the number of noncommercial net short positions in the yen against the dollar fell sharply, according to the IMM. Japanese retail margin traders also reduced their short yen positions substantially.

Chart 7

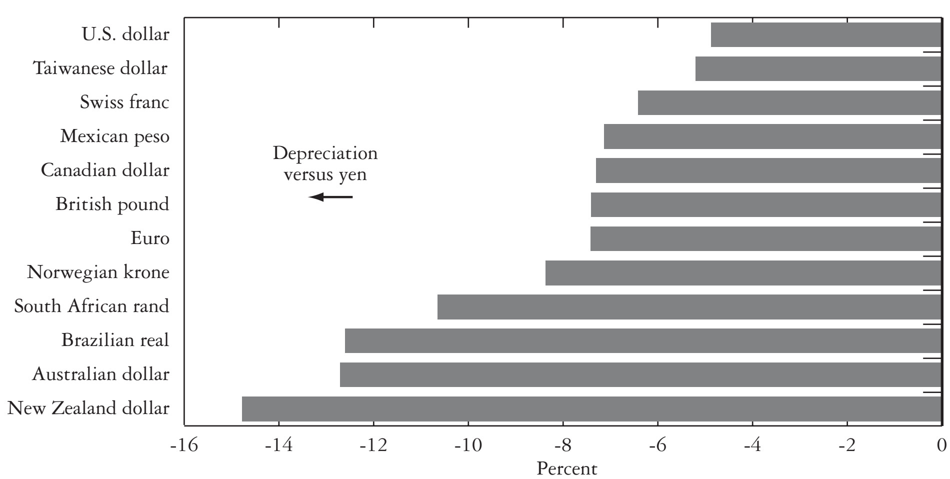
NET JAPANESE YEN POSITION HELD BY NONCOMMERCIAL ACCOUNTS ON THE INTERNATIONAL MONETARY MARKET



Source: Bloomberg L.P.

Chart 8

JAPANESE YEN AGAINST SELECTED CURRENCIES FROM AUGUST 9 TO AUGUST 16, 2007

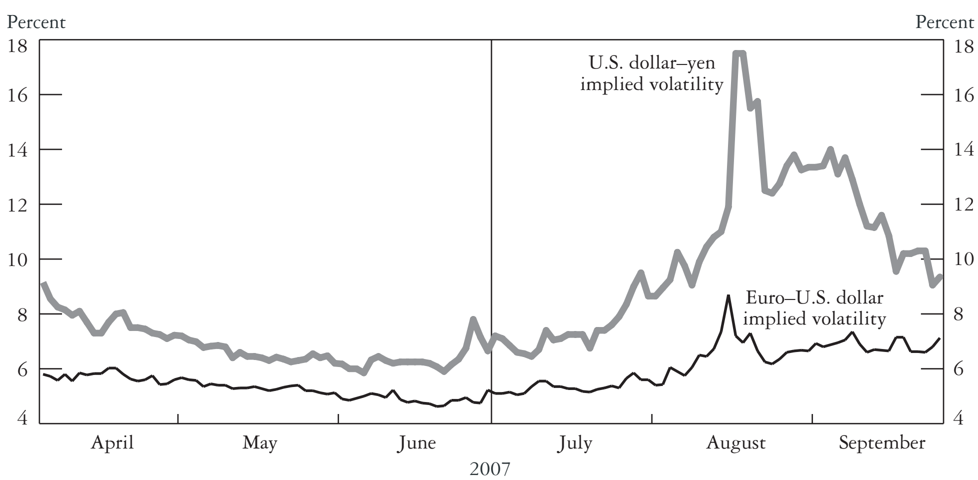


Source: Bloomberg L.P.

During this period, implied volatilities for the dollar-yen currency pair reached their highest levels since 1998. Additionally, the difference between the implied volatility price of similar call and put options on the dollar-yen currency pair moved to historically extreme levels. This development, reflected by risk reversal option prices, indicated significant investor demand for protection against further yen appreciation. The increase in implied volatility may have been exacerbated by the greater use of the yen as a proxy hedging strategy against general declines in risk appetite. Certain asset prices have become increasingly correlated during recent periods of market stress. As a result, some investors may have found it relatively cost efficient to hedge against portfolio losses by using options on the yen. Implied volatility for the euro–U.S. dollar currency pair also increased during this period, but to a much lesser extent.

Chart 9

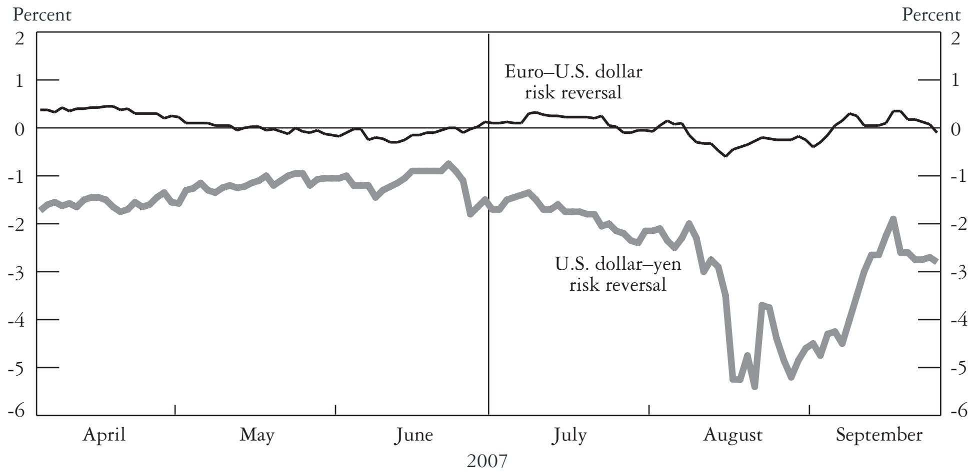
ONE-MONTH EURO–U.S. DOLLAR AND U.S. DOLLAR–YEN IMPLIED VOLATILITY



Source: Bloomberg L.P.

Chart 10

ONE-MONTH TWENTY-FIVE-DELTA EURO–U.S. DOLLAR AND U.S. DOLLAR–YEN RISK REVERSALS



Source: Bloomberg L.P.

DOLLAR DEPRECIATION RESUMES FOLLOWING FEDERAL RESERVE INTERMEETING POLICY ACTION AND STATEMENT

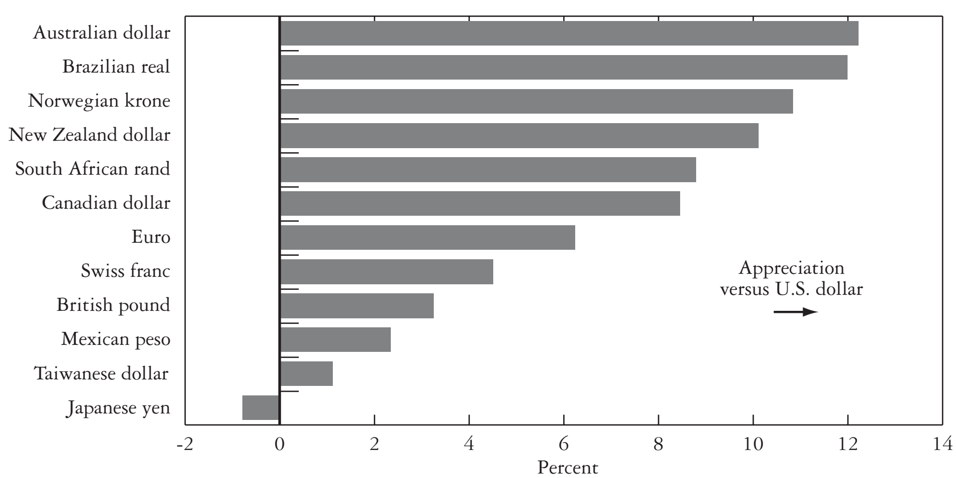
Dollar depreciation resumed following two Federal Reserve announcements on August 17. The Federal Reserve Board approved a 50 basis point reduction, to 5.75 percent, in the primary credit facility rate, and the FOMC issued an intermeeting policy statement that was perceived as shifting the committee's balance-of-risks assessment about the economic outlook. Market participants interpreted these actions as signaling an increased likelihood of near-term policy easing by the FOMC. Expectations for monetary easing solidified following the release of the August payroll employment report, which initially reported a 4,000 drop in payrolls for August and downward revisions to the prior two months.

Interest rate differentials continued to move against the dollar during this period. In contrast with increased expectations for near-term easing by the FOMC, interest rate expectations for the ECB and the BoJ were scaled back only slightly and continued to price in steady policy rates over the medium term. Market participants interpreted the main factors driving U.S. monetary policy, namely the contraction in the housing market and the potential for tighter financial conditions to restrain activity, as likely to impact the United States to a greater extent than foreign economies. The pace of dollar depreciation quickened following the 50 basis point reduction in the target federal funds rate by the FOMC on September 18. The magnitude of the interest rate cut surprised some market participants, and negative sentiment toward the dollar intensified. Toward the end of the quarter, the dollar reached its lowest level on record against the euro, above 1.42 dollars per euro.

From August 17 through the end of the quarter, the dollar depreciated against all major currencies, with the exception of the yen. The dollar was little changed against the yen because a general increase in risk appetite led to a revival in carry trades and yen weakness. The increase in risk appetite began following the Federal Reserve policy announcements on August 17, as market participants became more confident that policy action would be taken to alleviate the stresses in financial markets. Consistent with this trend, measures of implied volatility in currency markets declined, but closed the quarter at higher levels than those that prevailed before the onset of the market turbulence.

Chart 11

U.S. DOLLAR AGAINST SELECTED CURRENCIES FROM AUGUST 17 TO SEPTEMBER 30, 2007



Source: Bloomberg L.P.

FUNCTIONING OF FOREIGN EXCHANGE SWAPS MARKET WAS SEVERELY IMPAIRED DURING MARKET DISRUPTION

From mid-August to mid-September, trading liquidity in the foreign exchange swaps market was severely impaired. The deterioration in liquidity in the underlying term dollar, euro, and sterling money markets made it difficult to identify the appropriate interest rates at which to price forward transactions. As a result, trading volumes in the foreign exchange swaps market diminished considerably, trade sizes were significantly smaller, and bid-ask spreads on transactions were much wider than normal. Additionally, concerns about counterparty credit risk prompted some market makers to temporarily withdraw from the market. Credit tiering also became evident, with counterparties viewed as less creditworthy finding it more difficult and costly to transact, compared with those counterparties perceived to be more creditworthy. By the end of the quarter, liquidity in the foreign exchange swaps market improved, consistent with the improvement in the underlying term funding markets. However, conditions had not returned to what had been considered normal for the past few years.

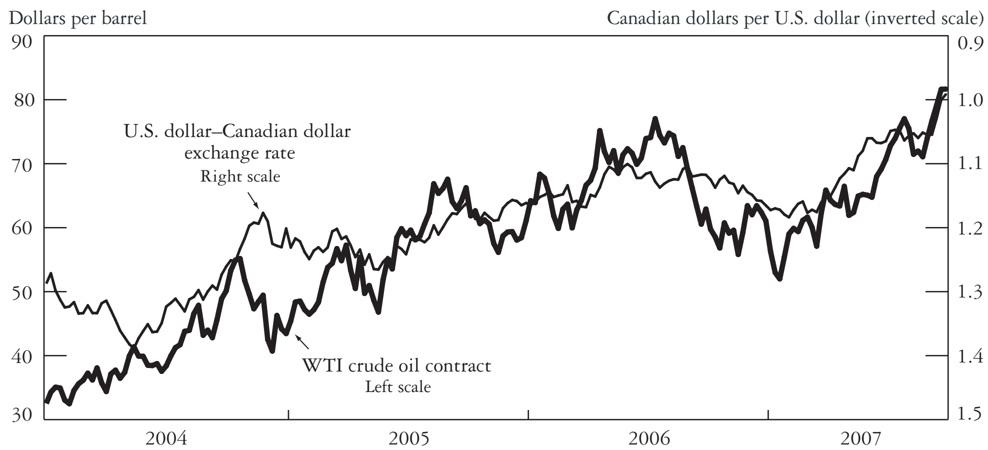
Despite the impairment to the swaps market, spot foreign exchange market liquidity for major currencies was generally healthy during the quarter. During the period of heightened foreign exchange volatility in mid-August, the spot market functioned reasonably well. Trading volumes on interdealer electronic broking platforms were extremely high, and increased intermediation by interbank participants was evident. Bid-ask spreads widened only modestly for standard trade sizes.

CANADIAN DOLLAR APPRECIATES SIGNIFICANTLY ON RISING COMMODITY PRICES AND NARROWING INTEREST RATE DIFFERENTIALS

The Canadian dollar continued to appreciate against the U.S. dollar and other major currencies. During the third quarter, the Canadian dollar appreciated 6.9 percent against the U.S. dollar, bringing year-to-date appreciation to around 15.0 percent. Late in the quarter, the Canadian dollar broke through parity with the U.S. dollar for the first time in over thirty years. The continued strength in oil and other commodity prices, resulting in improved terms of trade, supported the Canadian dollar. Also supportive of the Canadian dollar was the perception that the Canadian economy would be relatively well insulated from the housing-related growth slowdown in the United States. Although expectations for policy firming by the Bank of Canada were pared back, relative interest rate differentials moved in favor of the Canadian dollar versus the U.S. dollar.

Chart 12

U.S. DOLLAR–CANADIAN DOLLAR AND FRONT-MONTH WEST TEXAS INTERMEDIATE (WTI) CRUDE OIL FUTURES CONTRACT



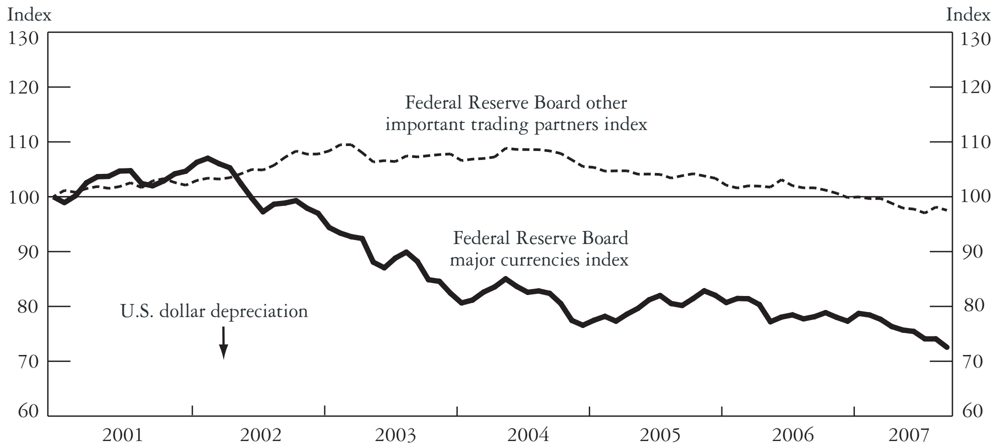
Source: Bloomberg L.P.

EMERGING MARKET CURRENCIES APPRECIATE AGAINST THE DOLLAR DURING THE QUARTER

Most emerging market currencies appreciated against the dollar during the quarter; however, they did so on a generally smaller scale than did most developed market currencies. Many emerging market currencies depreciated substantially during the period of market disruption in mid-August as investors reduced risk in their portfolios. Toward the end of the quarter, some attention was placed on the currencies of economies with relatively inflexible exchange rate regimes. In an environment of dollar depreciation, large external surpluses, and local inflationary pressures, some began to question whether currency pegs to the U.S. dollar and other similar arrangements would continue to prove sustainable. Such currency policies may have helped cause exchange rate adjustments more broadly to be uneven in recent years. The bulk of the adjustments has been reflected in European currencies, currencies of commodity-exporting countries with flexible exchange rates, and selected emerging market currencies.

Chart 13

U.S. DOLLAR AGAINST MAJOR AND EMERGING MARKET CURRENCIES



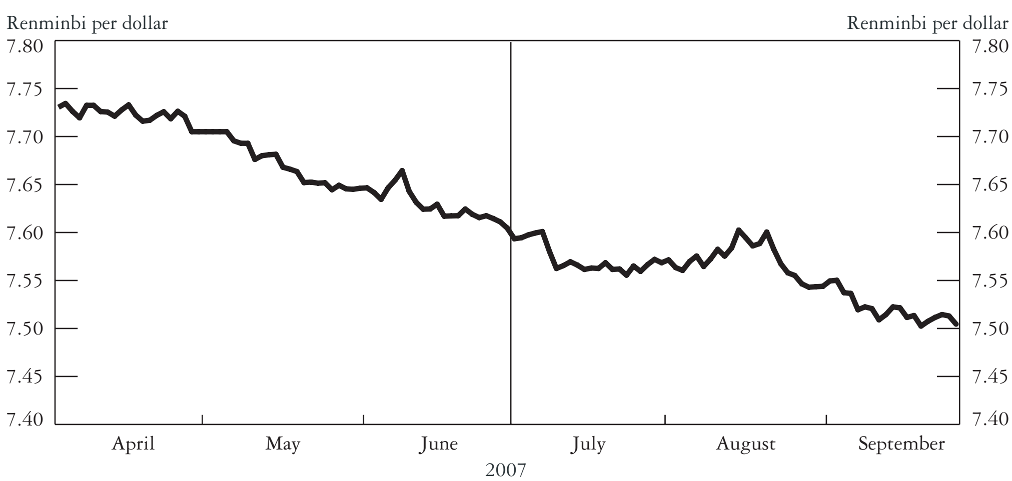
Source: Bloomberg L.P.

Note: Index starting December 31, 2000.

In this context, there was continued focus on movements in the Chinese currency. The Chinese renminbi appreciated 1.4 percent against the dollar during the third quarter, about the same as the 1.5 percent appreciation that occurred during the second quarter. As of the end of the third quarter, non-deliverable forward contracts were consistent with a further 5 to 6 percent appreciation of the Chinese renminbi against the U.S. dollar over the next twelve months.

Chart 14

U.S. DOLLAR–CHINESE RENMINBI EXCHANGE RATE



Source: Reuters.

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 values of euro and yen reserve holdings totaled $22.14 billion for the Federal Reserve System Open Market Account and $22.12 billion for the Treasury's Exchange Stabilization Fund. 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.

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 September 30, direct holdings of foreign government securities totaled $20.1 billion, split evenly between the Federal Reserve and the Treasury. Foreign government securities held under repurchase agreements totaled $4.9 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

	Carrying Value June 30, 2007[a]	Change in Balance by Source: Net Purchases and Sales[b]	Investment Earnings[c]	Realized Gains/Losses on Sale[d]	Unrealized Gains/ Losses on Foreign Currency Revaluation[e]	Carrying Value September 30, 2007[a]
Federal Reserve System Open Market Account (SOMA)						
Euro	13,069.4	0	131.3	0	679.2	13,879.9
Yen	7,688.7	0	12.6	0	563.2	8,264.5
Total	20,758.1	0	143.9	0	1,242.4	22,144.4
U.S. Treasury Exchange Stabilization Fund (ESF)						
Euro	13,047.8	0	131.0	0	678.0	13,856.8
Yen	7,688.7	0	12.6	0	563.3	8,264.6
Total	20,736.5	0	143.6	0	1,241.3	22,121.4

[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 daily foreign currency purchases from cash collected on maturities and coupons. In case of intervention or other official activity, amounts would be reflected and details footnoted.

[c] Investment earnings include accrued interest and amortization.

[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 Dollars, as of September 30, 2007

	U.S. Treasury Exchange Stabilization Fund (ESF)[b]	Federal Reserve System Open Market Account (SOMA)[b]
Euro-denominated assets:	**13,856.8**	**13,879.9**
Cash held on deposit at official institutions	6,898.3	6,921.4
Marketable securities held under repurchase agreements[a]	2,455.4	2,455.4
Marketable securities held outright	4,503.1	4,503.1
German government securities	2,184.2	2,184.2
French government securities	2,318.9	2,318.9
Yen-denominated assets:	**8,264.6**	**8,264.5**
Cash held on deposit at official institutions	2,727.8	2,727.7
Marketable securities held outright	5,536.9	5,536.9

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

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

[b] As of September 30, euro and yen portfolios had Macaulay durations of 9.4 months and 10.9 months, respectively, for both the ESF and SOMA portfolios.

Table 3

RECIPROCAL CURRENCY ARRANGEMENTS

Millions of Dollars

Institution	Amount of Facility	Outstanding as of September 30, 2007
	Federal Reserve System Open Market Account (SOMA)	
Bank of Canada	2,000	0
Bank of Mexico	3,000	0
Total	5,000	0
	U.S. Treasury Exchange Stabilization Fund (ESF)	
Bank of Mexico	3,000	0
Total	3,000	0