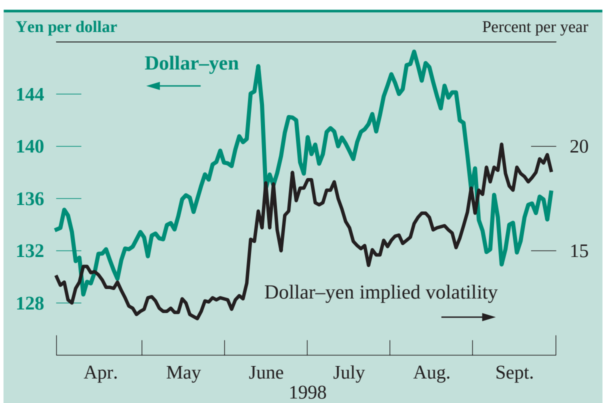
Treasury and Federal Reserve Foreign Exchange Operations

This quarterly report describes U.S. Treasury and System foreign exchange operations for the period from July through September 1998. It was presented by Peter R. Fisher, Executive Vice President, Federal Reserve Bank of New York, and Manager, System Open Market Account. Jason J. Bonança was primarily responsible for preparation of the report.

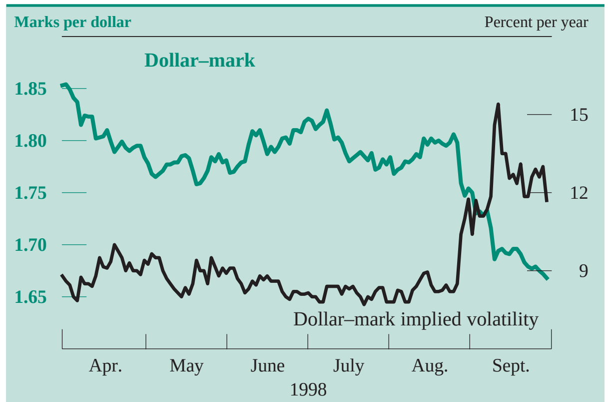
During the third quarter of 1998, the dollar depreciated 1.7 percent against the Japanese yen and 7.8 percent against the German mark (charts 1 and 2). Against the mark, the dollar continued to trade in relatively narrow ranges during the first half of the period. Subsequently, however, the dollar dropped sharply amid increasing turmoil in global financial markets and shifting expectations for economic growth and interest rate policy. Against the yen, the dollar steadily appreciated throughout the first half of the quarter, reaching new eight-year highs, as market participants reacted pessimistically to political uncertainty and financial-sector difficulties in Japan. Later in the period, the dollar's gains were more than reversed as market participants unwound short yen positions in an environment of increasing risk aversion. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.

1. Spot exchange rate of the dollar against the Japanese yen and volatility implied by one-month option prices, 1998:Q2–Q3



NOTE. Data in this chart and those that follow are daily.
SOURCES. J.P. Morgan; Bloomberg L.P.

2. Spot exchange rate of the dollar against the German mark and volatility implied by one-month option prices, 1998:Q2–Q3



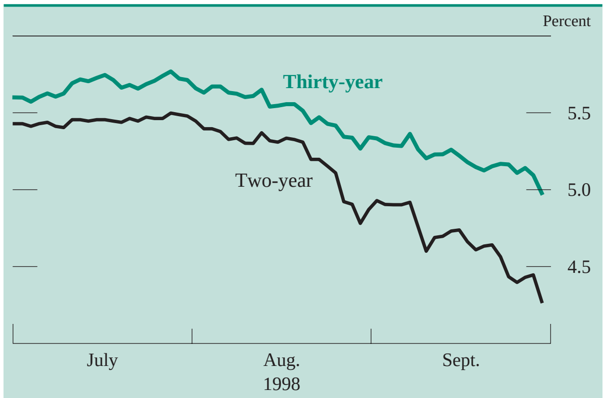
SOURCES. J.P. Morgan; Bloomberg L.P.

Heightened Risk Aversion Resulting from Turmoil in Emerging Markets

During the first half of the quarter, market participants expected that near-term U.S. interest rate policy would remain unchanged. The economic slowdown in Asia was expected to counterbalance ongoing, if moderating, strength in U.S. domestic demand. However, continued financial and economic weakness in Japan and developments in emerging markets—particularly the deteriorating financial situation in Russia—helped to support U.S. Treasury prices during the first weeks in the quarter. Until the middle of August, the thirty-year Treasury bond yield traded consistently below 5.80 percent, near the bottom of its 1998 range (chart 3).

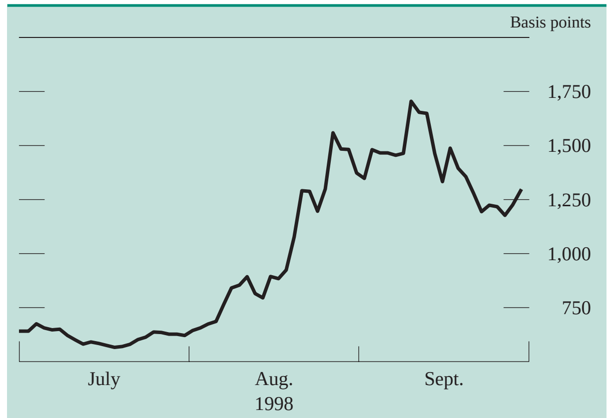
Investor aversion to risk intensified sharply after Russia's declaration of a debt moratorium and an effective devaluation of the ruble on August 17. Losses in Russian markets and a dramatic widening of risk premiums led to successive waves of selling in emerging-market assets. Dollar-denominated, emerging-market yield spreads over Treasuries rose to their highest levels since early 1995, and sales of emerging-market currencies ensued as investors shed positions in local markets. These outflows led

3. U.S. Treasury yields, 1998:Q3



SOURCE. Bloomberg L.P.

4. J.P. Morgan Emerging Markets Bond Index, 1998:Q3



NOTE. Data are the stripped sovereign spread over Treasuries.
SOURCE. J.P. Morgan.

to increasing pressures on other markets, particularly those with fixed exchange rate regimes. Mounting strains on the Hong Kong dollar led to speculation regarding another series of currency devaluations in Asia. Meanwhile, increasing capital outflows from Brazil, as well as devaluations in Colombia and Ecuador, raised concerns about stability in Latin America. Sensitivity to the risk of sovereign events was exacerbated by Malaysia's announcement of capital controls and a new fixed exchange rate regime on September 1, as well as Hong Kong's decision to intervene in its equity market. In this environment, demand for U.S. Treasuries soared, with the thirty-year bond yield declining, to as low as 4.96, on September 30. Meanwhile, U.S. equities began to post sharp declines, responding to mounting turmoil in emerging markets and weaker-than-expected corporate earnings. European shares also weakened; the German DAX declined 24.2 percent over the period.

The sharp downward adjustment in asset prices in emerging markets accelerated as leveraged investors were forced to liquidate positions to meet margin calls. Risk aversion grew, as market participants anticipated that rapidly accruing losses might lead to a contraction of credit within the investment community. Further, the speed of the declines led to substantially illiquid trading conditions, which exacerbated volatility in already unsteady markets. Anxiety over the health of the financial sector intensified as market participants began to speculate that Long-Term Capital Management, a major hedge fund, had incurred large losses.

During the final weeks of the period, tension in global financial markets eased somewhat in response to growing expectations for official policy responses (chart 4). The September 14 statement by the Group of Seven (G-7) Finance Ministers and Central Bank Governors, in addition to President Clinton's speech to the Council on Foreign Relations, prompted increased market talk about plans for international financial stabilization and possible coordinated interest rate cuts. On September 29, the Federal Open Market Committee (FOMC) cut its federal funds rate target 25 basis points, to 5.25 percent.

Decline of the Dollar against the Mark

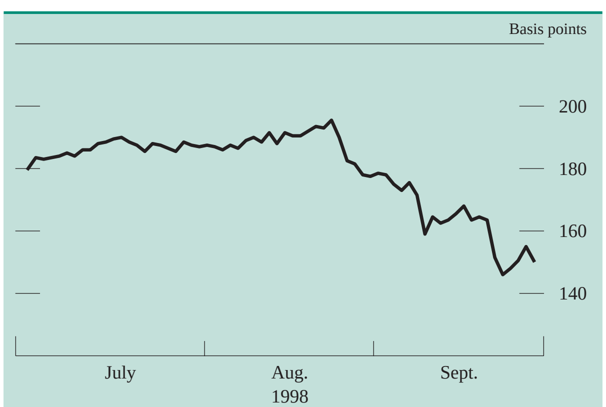
Early in the period, the dollar traded in its year-to-date range of DM 1.75–1.85, guided by stable expectations for gradual but steady growth in both the United States and Germany. Market expectations regarding monetary policy in the two countries reflected anticipation of steady policy in the United States and the possibility of a rate increase in Germany before the beginning of the European Economic and Monetary Union (EMU) in January 1999. After the events of mid-August, however, market participants became increasingly persuaded that the turmoil in emerging markets and ongoing weakness in Asia would have a more significant effect on the U.S. economic outlook than had previously been expected. The concomitant tumble in U.S. equity prices served as an initial catalyst for dollar sales against marks; between August 26 and 31, the dollar declined from DM 1.8068 to DM 1.7547 against the mark as the Dow Jones Industrial Average fell 11.6 percent.

The dollar's decline coincided with the emergence of expectations that the Federal Reserve would ease monetary policy in an effort to address the possible consequences for U.S. growth prospects posed by the strain on financial markets. In an address on September 4, Chairman Greenspan said, ". . . it is just not credible that the United States can remain an oasis of prosperity unaffected by a world that is experiencing greatly increased stress.'' Many market participants interpreted the Chairman's speech as a signal that the FOMC had abandoned its bias toward a tightening and was leaning toward an ease as its next move. Over the following week the implied rate on the October federal funds contract declined 17 basis points and subsequently reached a period low on September 25, of 5.15 percent.

During the period, the increasing scope of global financial stress helped to reduce expectations that the Bundesbank would raise rates as part of the process of European convergence; the implied yield on the December 1998 Euromark contract declined 37 basis points, to 3.55 percent. However, market participants appeared increasingly convinced that the Bundesbank was relatively less likely to ease policy than the Federal Reserve. Continued signs of European growth, the Bundesbank's call for the gradual convergence of European interest rates, and perceptions that the European economy was relatively insulated from weakness in Latin America all contributed to this belief. The implied yield spread between the December Eurodollar and Euromark contracts narrowed from a high of 195 basis points to a low of 146 basis points, illustrating the degree to which interest rate expectations had shifted against the dollar; during the same period, the dollar declined more than 12 pfennigs against the mark, falling from DM 1.7993 to DM 1.6718 (chart 5).

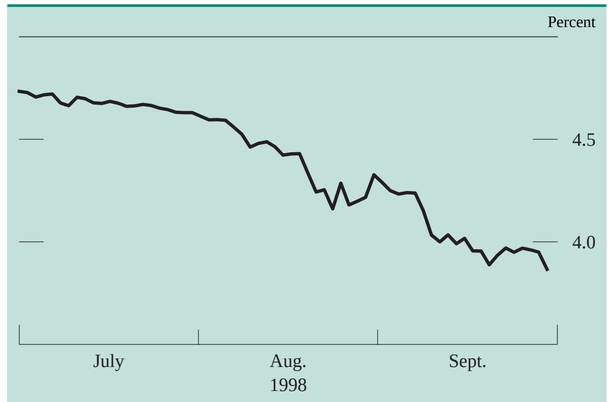
Throughout the period, the dollar–mark exchange rate also reflected steady demand for selected European financial assets stemming from expectations for low regional inflation and confidence in the EMU.

5. Implied yield spread between December Eurodollar and Euromark futures, 1998:Q3



NOTE. Data are the Eurodollar implied yield minus the Euromark implied yield.
SOURCE. Bloomberg L.P.

6. German government ten-year benchmark bond yield, 1998:Q3

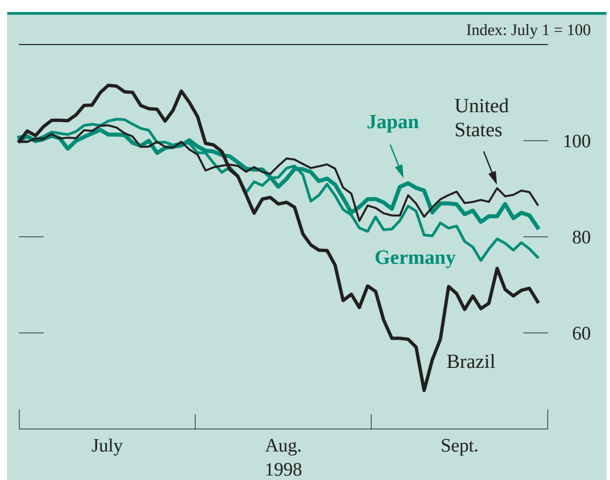


SOURCE. Bloomberg L.P.

These flows helped to push the benchmark German bond yield to a record low on September 30, of 3.87 percent (chart 6). In addition, anxiety among some market participants regarding prospects for impeachment proceedings against President Clinton appeared to weigh on the dollar.

During the final weeks of the period, the pace of the dollar's depreciation subsided amid mounting anticipation of G-7 aid to Latin America and increasing evidence that expectations for a Federal Reserve rate cut had become largely discounted by market participants. These factors partially fueled a rally in U.S. share prices: The Dow Jones Industrial Average rose 4.0 percent from a low of 7539.07 to finish the period at 7842.62, helping to reinforce improved sentiment toward the dollar (chart 7).

7. Global benchmark equity indexes, 1998:Q3



SOURCE. Bloomberg L.P.

Retreat of the Dollar from Eight-Year Highs against the Yen

Despite reaching fresh eight-year highs against the yen on August 11, the dollar declined more than 2 yen against the Japanese currency during the quarter. Over the same period, one-month volatility implied by option prices rose from 18 to 18.85 percent. Initially, market participants sold yen on doubts that a new financial reform package introduced on July 2 would be sufficient in scope or timeliness to deal with Japan's banking crisis. The lack of any further fiscal stimulus measures also weighed on the yen. Moreover, the defeat of Japan's ruling party in parliamentary elections on July 12 and the subsequent uncertainty regarding the direction of Japanese economic and foreign exchange policy deflated hopes for an early resolution of Japan's problems. Lastly, Japanese economic data that were weaker than expected contributed to negative sentiment throughout the period; second-quarter gross domestic product declined 1.6 percent year-over-year.

In the aftermath of the Russian devaluation, however, investors increasingly took profits on long dollar positions against the yen in a bid to offset losses in emerging markets or simply to reduce risk in an increasingly volatile financial environment. Many believed that the climb in volatility had led to a slower pace of capital outflows from Japan than had been expected previously, a development that lent further support to the yen. This trend was reinforced by perceptions of Japanese investor repatriation flows before the September 30 end of the fiscal half-year in Japan. Finally, growing anticipation that the Federal Reserve would ease policy also contributed to the dollar's decline. The dollar reached a low of ¥130.65 on September 11, after having fallen 11.1 percent from its intraperiod high of ¥147.33.

In the final weeks of the period, the dollar partially retraced its losses, rising to finish the quarter at ¥136.50. Market pessimism regarding Japan's economic and financial prospects remained in place after the September 4 meeting in San Francisco between Treasury Secretary Rubin and Japanese Finance Minister Miyazawa. The Bank of Japan's September 9 announcement of a monetary ease and renewed uncertainty regarding the prospects for banking reform in Japan also contributed to yen softness.

Treasury and Federal Reserve Foreign Exchange Reserves

The U.S. monetary authorities did not undertake any intervention operations during this quarter. At the end of the quarter, the current values of the German mark and Japanese yen reserve holdings totaled $18.4 billion for the Federal Reserve System and $14.6 billion for the Exchange Stabilization Fund. The U.S. monetary authorities invest all of their foreign currency balances in a variety of instruments that yield market-related rates of return and that have a high degree of liquidity and credit quality. A significant portion of these balances is invested in German and Japanese government securities held directly or under repurchase agreement. As of September 30, outright holdings of government securities by U.S. monetary authorities totaled $7.3 billion.

Japanese and German government securities held under repurchase agreement are arranged either through transactions executed directly in the market or through agreements with official institutions. Government securities held under repurchase agreement by the U.S. monetary authorities totaled $11.7 billion at the end of the quarter. Foreign currency reserves are also invested in deposits at the Bank for International Settlements and in facilities at other official institutions. □

1. Foreign exchange holdings of U.S. monetary authorities based on current exchange rates, 1998:Q3

Millions of dollars

Item	Balance, June 30, 1998	Quarterly changes in balances by source					Balance, Sept. 30, 1998
		Net purchases and sales[1]	Impact of sales[2]	Investment income	Currency valuation adjustments[3]	Interest accrual (net) and other	
FEDERAL RESERVE							
Deutsche marks	11,652.0	0	0	102.2	934.4	0	12,688.6
Japanese yen	5,589.8	0	0	4.2	69.8	0	5,663.8
Interest receivables[4]	80.5	. . .	. . .	. . .	. . .	14.6	95.1
Other cash flow from investments[5]	10.5	. . .	. . .	. . .	. . .	–10.5	. . .
Total	**17,332.8**	. . .	. . .	**106.4**	**1,004.2**	**4.1**	**18,447.5**
U.S. TREASURY EXCHANGE STABILIZATION FUND							
Deutsche marks	5,898.2	0	0	52.3	472.9	0	6,423.4
Japanese yen	8,000.1	0	0	5.7	100.2	0	8,106.0
Interest receivables[4]	42.0	. . .	. . .	. . .	. . .	6.6	48.6
Other cash flow from investments[5]	17.9	. . .	. . .	. . .	. . .	–17.9	. . .
Total	**13,958.2**	. . .	. . .	**58.0**	**573.1**	**–11.3**	**14,578.0**

1. Purchases and sales include foreign currency sales and purchases related to official activity, swap drawings and repayments, and warehousing.
2. Calculated using marked-to-market exchange rates; represents the difference between the sale exchange rate and the most recent revaluation exchange rate. Realized profits and losses on sales of foreign currencies computed as the difference between the historic cost-of-acquisition exchange rate and the sale exchange rate are shown in table 2.
3. Foreign currency balances are marked to market monthly at month-end exchange rates.
4. Interest receivables for the ESF are revalued at month-end exchange rates. Interest receivables for the Federal Reserve System are carried at average cost of acquisition and are not marked to market until interest is paid.
5. Cash flow differences from payment and collection of funds between quarters.

2. Net profits or losses (–) on U.S. Treasury and Federal Reserve foreign exchange operations, based on historical cost-of-acquisition exchange rates, 1998:Q3

Millions of dollars

Period and item	Federal Reserve	U.S. Treasury Exchange Stabilization Fund
Valuation profits and losses on outstanding assets and liabilities, June 30, 1998		
Deutsche marks	39.9	–388.6
Japanese yen	–18.2	–20.2
Total	**21.7**	**–408.8**
Realized profits and losses from foreign currency sales, June 30, 1998–Sept. 30, 1998		
Deutsche marks	.0	.0
Japanese yen	.0	.0
Total	**.0**	**.0**
Valuation profits and losses on outstanding assets and liabilities, Sept. 30, 1998		
Deutsche marks	974.3	84.3
Japanese yen	51.7	80.0
Total	**1,026.0**	**164.3**

3. Currency arrangements, September 30, 1998

Millions of dollars

Institution	Amount of facility	Outstanding, Sept. 30, 1998
	Federal Reserve Reciprocal Currency Arrangements	
Austrian National Bank	250	0
National Bank of Belgium	1,000	
Bank of Canada	2,000	
National Bank of Denmark	250	
Bank of England	3,000	
Bank of France	2,000	
Deutsche Bundesbank	6,000	
Bank of Italy	3,000	
Bank of Japan	5,000	
Bank of Mexico	3,000	
Netherlands Bank	500	
Bank of Norway	250	
Bank of Sweden	300	
Swiss National Bank	4,000	
Bank for International Settlements		
Dollars against Swiss francs	600	
Dollars against other authorized European currencies	1,250	
Total	**32,400**	**0**
	U.S. Treasury Exchange Stabilization Fund Currency Arrangements	
Deutsche Bundesbank	1,000	0
Bank of Mexico	3,000	0