Treasury and Federal Reserve Foreign Exchange Operations

This quarterly report describes Treasury and System foreign exchange operations for the period from July through September 1996. It was presented by Peter R. Fisher, Executive Vice President, Federal Reserve Bank of New York, and Manager for Foreign Operations, System Open Market Account. Christine Hall was primarily responsible for preparation of the report.[1]

During the quarter the dollar appreciated 1.6 percent against the Japanese yen, 0.1 percent against the German mark, and 0.1 percent on a trade-weighted basis against other Group of Ten currencies. Over the quarter, the dollar was supported by expectations that the Federal Reserve would tighten monetary policy—in contrast to expectations for steady policy in Germany and Japan. In addition, sentiment for the prospect of broad participation in the European Monetary Union shifted from doubt early in the quarter to growing confidence late in the quarter, lending support to the dollar against the mark. The U.S. monetary authorities did not undertake any intervention operations in the foreign exchange market during the quarter. However, the U.S. Treasury's Exchange Stabilization Fund (ESF) received a $7 billion repayment from the United Mexican States related to draw-

1. The charts for the report are available on request from Publications Services, Mail Stop 127, Board of Governors of the Federal Reserve System, Washington, DC 20551.

1. Foreign exchange holdings of U.S. monetary authorities, based on current exchange rates, 1996:Q3

Millions of dollars

Item	Balance, June 30, 1996	Quarterly changes in balances by source				Balance, Sept. 30, 1996
		Net purchases and sales[1]	Impact of sales[2]	Investment income	Currency valuation adjustments[3]	
Federal Reserve						
Deutsche marks	12,982.1	.0	.0	110.0	−53.2	13,038.9
Japanese yen	6,497.3	.0	.0	5.2	−125.7	6,376.8
Interest receivables[4]	74.0	. . .	. . .	. . .	. . .	72.0
Other cash flow from investments[5]	.5	. . .	. . .	. . .	. . .	−3.5
Total	**19,553.9**	. . .	. . .	. . .	. . .	**19,484.2**
U.S. Treasury Exchange Stabilization Fund						
Deutsche marks	6,571.2	.0	.0	55.4	−26.9	6,599.8
Japanese yen	9,523.3	.0	.0	6.0	−180.8	9,348.5
Mexican pesos[6]	10,500.0	−7,373.3	.0	373.3	.0[7]	3,500.0
Interest receivables[4]	277.3	. . .	. . .	. . .	. . .	39.1
Other cash flow from investments[5]	4.4	. . .	. . .	. . .	. . .	1.2
Total	**26,876.2**	. . .	. . .	. . .	. . .	**19,488.6**

Note. Figures may not sum to totals because of rounding.
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.
6. See table 4 for a breakdown of Mexican swap activities. Note that the investment income on Mexican swaps is sold back to the Bank of Mexico.
7. Valuation adjustments on peso balances do not affect profit and loss because the effect is offset by the unwinding of the forward contract at the repayment date. Although the ESF does not mark to market its peso holdings, Mexico is obligated to maintain in dollar terms the value of ESF peso holdings resulting from Mexican drawings under the Medium-Term Stabilization Agreement.

ings by Mexico under the medium-term swap facility with the ESF. An additional $3.5 billion remained outstanding.

GENERAL STABILITY OF EXCHANGE RATES

For the period as a whole, foreign exchange markets were relatively stable. The average daily trading range of the dollar was substantially less than the ranges observed last year. On average the dollar traded in a daily range of 0.6 percent against both the mark and the yen. This compares with daily dollar ranges of 1.1 percent against the mark and 1.4 percent against the yen in the third quarter of 1995. Additionally, implied volatility on dollar–mark and dollar–yen one-month options generally maintained the low levels of the second quarter of this year.

However, the period was marked by a few brief episodes of sharp dollar movements. The dollar's largest one-day move occurred early in the quarter. On July 16, the dollar traded in a 3.1 percent range against the mark, implied volatility on one-month dollar–mark options spiked higher, and prices of risk reversals indicated a rise in the perceived risk of a further significant dollar decline.[2] As with other sharp dollar moves over the period, the dollar's trading ranges over subsequent days fell toward the period's average, implied volatility on dollar–mark options reverted toward record-low levels, and risk reversal prices moved closer to neutral.

RESPONSE OF THE DOLLAR TO U.S. INTEREST RATE EXPECTATIONS AND ASSET MARKET PERFORMANCE

Expectations for a Federal Reserve tightening shifted throughout the period. Signs of strong U.S. economic growth and tightening labor markets, yet benign inflation data, made the near-term interest rate outlook uncertain.

Early in the quarter, the dollar reached a twenty-nine-month high against the yen of ¥111.19 while holding above DM 1.52 against the mark after the strong U.S. nonfarm payroll report for June, which led many market participants to anticipate an imminent Federal Reserve tightening. Subsequently, U.S. stock prices declined sharply and a liquidation of long dollar positions ensued. On July 16, the dollar depreciated from opening prices of DM 1.5145 and ¥110.22 to a low of DM 1.4695 and ¥108.27 before partially recovering to close the day at DM 1.4844 and ¥109.32.

Expectations of a near-term Federal Reserve tightening were scaled back after Chairman Greenspan's Humphrey–Hawkins testimony in July. Market participants appeared to focus on his comments about the potential for an economic slowdown in the second half of the year. Subsequent reports of benign inflation further diminished expectations for a tightening, and the August meeting of the Federal Open Market Committee ended with no announced change in policy.

In September, expectations began to build anew for a Federal Reserve tightening at the September 24 FOMC meeting. The August nonfarm payroll data continued to show robust employment growth. The dollar steadily recovered all of its losses against the mark and yen, supported by expectations of higher U.S. short-term interest rates as well as by ongoing strength in the U.S. stock market in September.

The FOMC's decision at the September 24 meeting to keep policy unchanged surprised many market participants. Although the dollar declined sharply on

2. A risk reversal is an option position consisting of a written put and a purchased call that mature on the same date and are equally out-of-the-money. The price of a risk reversal indicates whether the dollar call or the dollar put is more valuable. If the dollar call is at a premium, the market is willing to pay more to insure against the risk that the dollar will rise sharply. If the dollar put is at a premium, the market is willing to pay more to insure against the risk that the dollar will fall sharply.

2. Net profits or losses (–) on U.S. Treasury and Federal Reserve foreign exchange operations, based on historical cost-of-acquisition exchange rates, 1996: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, 1996		
Deutsche marks	2,118.7	663.5
Japanese yen	1,337.5	1,968.3
Total	**3,456.1**	**2,631.7**
Realized profits and losses from foreign currency sales, June 30, 1996–Sept. 30, 1996		
Deutsche marks	.0	.0
Japanese yen	.0	.0
Total	**.0**	**.0**
Valuation profits and losses on outstanding assets and liabilities, Sept. 30, 1996[1]		
Deutsche marks	2,065.5	636.6
Japanese yen	1,211.2	1,783.0
Total	**3,276.8**	**2,419.6**

NOTE. Figures may not sum to totals because of rounding.

1. Valuation profits or losses are not affected by peso holdings, which are canceled by forward contracts.

the day of the announcement, it more than recovered its losses the following day. Despite the FOMC's decision to leave policy unchanged, some market expectation for a tightening by year-end remained.

SUPPORT OF THE DOLLAR AGAINST THE MARK FROM EXPECTATIONS FOR STEADY OR LOWER GERMAN RATES

May data for German industrial production and orders, which were released early in the quarter, indicated a third consecutive month-to-month rise in each series. These data contributed to market perceptions that German economic recovery would preclude further Bundesbank interest rate cuts and that market rates would rise by year-end. The perception that German rates had bottomed contributed to the decline in the dollar against the mark in mid-July when declines in U.S. equity prices also weighed on the dollar. Subsequently, however, market expectations of Bundesbank policy gradually shifted as the mark appreciated against the dollar, growth in the Bundesbank's M3 monetary aggregate decelerated, and German business sentiment deteriorated. Also, Bundesbank officials made periodic comments that held open the possibility of further reductions in the Bundesbank's key repurchase rate. Long-term interest rate differentials between the United States and Germany widened further in favor of the dollar and contributed to the stabilization of the dollar after its sharp decline in mid-July.

3. Currency arrangements, September 30, 1996

Millions of dollars

Institution	Amount of facility	Outstanding, Sept. 30, 1996
	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[1]	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[1]		
Regular swaps	3,000	0
United Mexican States[1]		
Medium-term swaps	. . .	3,500
Total[1]	. . .	**3,500**

1. Facilities available to Mexico comprise short-term swaps between the Bank of Mexico and both the Federal Reserve and the ESF, as well as medium-term swaps and government guarantees between the government of Mexico and the ESF. The total amount available from both medium-term swaps and government guarantees is $20 billion, less any outstanding drawings on the short-term facilities.

On July 25, at its last meeting before the summer recess, the Bundesbank disappointed market expectations, leaving its repo rate unchanged at 3.3 percent, and the German mark rose sharply. The dollar fell from an opening price of DM 1.4905 to a low of DM 1.4723 on the announcement.

However, in a largely unanticipated move, at its August 22 meeting the Bundesbank cut its repo rate 30 basis points to 3 percent. The dollar appreciated after the Bundesbank's decision as interest rate differentials between the United States and Germany widened further in favor of the dollar. After the reduction market participants generally came to expect that monetary policy in Germany would remain stable through the early part of 1997. Reflecting that sentiment, implied yields on three-month Euromark futures contracts through March 1997 declined to levels only slightly above cash rates.

The Bundesbank's cut in the repo rate fostered an impression among many market participants that the Bundesbank was motivated, at least in part, to ease pressures on other European Union members to meet the economic convergence criteria of the Maastricht Treaty. In addition, the anticipated pressures on European currencies during the release of government budgets across Europe did not materialize. This led to sales of German marks against higher-yielding European currencies. In September, the dollar steadily climbed back above DM 1.52.

SUPPORT FOR THE DOLLAR AGAINST THE YEN FROM RECEDING EXPECTATIONS FOR A TIGHTENING BY THE BANK OF JAPAN

Early in the quarter, most market participants believed that a hike in Japanese interest rates would soon follow any tightening by the Federal Reserve. This assumption came into question, however, as official commentary and the Bank of Japan's quarterly outlook, released in late July, suggested that the economy had not achieved a "self-sustaining" recovery. A sharp decline in Japanese stock prices in late August further contributed to the belief that the Bank of Japan would not raise rates in the near term.

Additional evidence accumulated to suggest that Japan's economic recovery remained fragile. On August 28, a weak August *Tankan* report showed an unexpected deterioration in business confidence. In mid-September, the second-quarter report on gross domestic product showed an annualized quarter-on-quarter decline of 2.9 percent. On the last day of the quarter, the dollar reached a two-and-a-half year high of ¥111.68 against the yen, boosted by expectations that Japanese investors would increase their investments in higher-yielding foreign assets in the second half of the Japanese fiscal year.

The market's reaction to trade data released during the third quarter was mixed. Early in the period, declines in Japan's trade surplus, the U.S. trade deficit, and the U.S.-Japanese bilateral deficit, albeit all of which occurred at a slower pace than the rate of decline in previous quarters, supported the dollar. At the end of the quarter, U.S. trade data for July indicating a widening overall U.S. deficit as well as a larger bilateral deficit with Japan, prompted a sharp but temporary decline in the dollar.

Continuation of the Downward Trend of Interest Rates in Canada

Low inflation, a firming Canadian dollar, and steady U.S. monetary policy allowed interest rates to continue their downward trend in Canada. Over the period, the Bank of Canada reduced its overnight call money range 75 basis points. The midpoint of the target range ended the quarter at 4 percent, about 125 basis points below the federal funds rate. By the end of the period, positive yield spreads between Canadian government bonds and comparable U.S. Treasuries existed only beyond the five-year maturity sector. The spread between the benchmark ten-year Canadian government bond and the ten-year U.S. Treasury note narrowed from 99 to 43 basis points over the period.

4. Drawings/rollovers and repayments (–) by Mexican monetary authorities, 1996:Q3

Millions of dollars

Currency arrangements with the U.S. Treasury Exchange Stabilization Fund	Outstanding, June 30, 1996	July	Aug.	Sept.	Outstanding, Sept. 30, 1996
Bank of Mexico					
Regular	0	0	0	0	0
Medium-term	10,500	0	–7,000	0	3,500

Note. Data are on a value-date basis.

Investor Optimism in Mexico

The peso strengthened over the quarter despite periodic concerns about a near-term interest rate hike in the United States. Market participants became optimistic about the strength of Mexico's economic recovery, after a 7.2 percent rise in its second-quarter GDP. Domestic interest rates fell, while Mexican Brady debt spreads over U.S. Treasuries fell from 669 to 510 basis points.

Mexico successfully raised funds in the international capital markets in four issues in the third quarter. In July, Mexico issued $6 billion in five-year, floating-rate notes at a spread of 200 basis points over London interbank offered rates, and in September, it placed a $1 billion twenty-year Eurobond issue at narrower-than-expected spreads over U.S. Treasuries. On August 5, Mexico repaid in advance $7 billion of the $10.5 billion outstanding under the U.S. Treasury's ESF medium-term swap facility. Of this amount, $5 billion was used to repay the two swaps that had been drawn in April and May of 1995, and $2 billion was used to pay down 80 percent of the July 1995 drawing. The repayments reduced the amount outstanding from these swaps to $3.5 billion.

Treasury and Federal Reserve Foreign Exchange Reserves

At the end of the quarter, the foreign currency reserve holdings of the Federal Reserve System and the ESF were valued at $19.4 billion and $15.9 billion, respectively and consisted of German marks and Japanese yen.

The U.S. monetary authorities invest all 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. A significant portion of these balances is invested in German and Japanese government securities that are held either directly or under repurchase agreement. As of September 30, outright holdings of government securities by U.S. monetary authorities totaled $6.4 billion and included investments in Japanese treasury bills and German government securities. 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 agreements by the U.S. monetary authorities totaled $11.0 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. □