Treasury and Federal Reserve Foreign Exchange Operations

This quarterly report describes Treasury and System foreign exchange operations for the period from April through June 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. Daniel Katzive was primarily responsible for preparation of the report.[1]

During the second quarter of 1996, the dollar traded in a relatively narrow range against the Japanese yen, fluctuating between ¥104 and ¥110. Against the mark, the dollar appreciated early in April, then proceeded to trade between DM 1.51 and DM 1.55 for the duration of the quarter. Throughout the period the dollar was supported by expectations of an increase in U.S. interest rates by the end of 1996. Meanwhile, evolving market views of the likely course of German and Japanese monetary policy contributed to fluctuations within the trading range. Over the quarter, the dollar appreciated 3.2 percent against the German mark, 2.2 percent against the Japanese yen, and 1.6 percent on a trade-weighted basis against other Group of Ten (G–10) currencies.[2] The U.S. monetary

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.

2. The dollar's movements on a trade-weighted basis against ten major currencies are measured using an index developed by staff of the Board of Governors of the Federal Reserve System.

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

Millions of dollars

Item	Balance, Mar. 31, 1996	Quarterly changes in balances by source				Balance, June 30, 1996
		Net purchases and sales[1]	Impact of sales[2]	Investment income	Currency valuation adjustments[3]	
FEDERAL RESERVE						
Deutsche marks	13,266.0	0	0	103.4	−387.3	12,982.1
Japanese yen	6,636.6	0	0	4.0	−143.3	6,497.3
Interest receivables[6]	75.7	...	...	...	...	74.0
Other cash flow from investments[7]	7.1	...	...	...	...	.5
Total	**19,985.4**	...	...	...	...	**19,553.9**
U.S. TREASURY EXCHANGE STABILIZATION FUND						
Deutsche marks	6,715.5	0	0	51.7	−196.0	6,571.2
Japanese yen	9,730.5	0	0	6.1	−213.3	9,523.3
Mexican pesos[4]	10,500.0	−235.3	0	235.3	0[5]	10,500.0
Interest receivables[6]	272.7	...	...	...	...	277.3
Other cash flow from investments[7]	7.5	...	...	...	...	4.4
Total	**27,226.2**	...	...	...	...	**26,876.2**

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. 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.
5. 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. Note that the ESF does not mark to market its peso holdings, but the Federal Reserve System does.
6. Interest receivables for the ESF are revalued at month-end exchange rates. Interest receivables for the Federal Reserve System are carried at cost and are not marked to market until interest is paid.
7. Cash flow differences from payment and collection of funds between quarters.

authorities did not undertake any intervention operations in the foreign exchange market during the quarter.

In June, the dollar became increasingly entrenched in tight ranges, pinned between DM 1.51 and DM 1.54 and between ¥107.60 and ¥110. After the first week of June, the dollar's Friday closing levels against the mark and yen never varied more than 1 percent from the preceding week's close. In this environment, implied volatility on dollar–mark and dollar–yen one-month options declined to levels seldom seen. The probability distribution of future exchange rates implied by one-month currency option prices became notably tighter during the second quarter, reflecting expectations of lower exchange rate volatility and market participants' greater willingness to bear the risks of selling options.

Support for the Dollar from Expectations of a Hike in U.S. Rates

Throughout the quarter U.S. economic data releases led many market participants to anticipate a near-term Federal Reserve tightening. Most notably, nonfarm payroll reports for March and April provided evidence that the U.S. labor market remained strong. Initial reports (although later revised down) that first-quarter gross domestic product (GDP) had grown at a 2.8 percent year-on-year rate reinforced the perception of strength in the economy. Expectations of monetary tightening were reflected in forward rates, with three-month rates on December Eurodollar futures rising nearly 60 basis points from April 1 to mid-June.

The perception of underlying economic strength in the United States prompted dollar buying during episodes of dollar weakness, providing support for the dollar at the bottom of its trading range. In the last week of the second quarter, expectations of an imminent Federal Reserve tightening were sharply scaled back after several press and market research reports suggested that a change in policy in the near term was unlikely. The dollar had little reaction to these late developments, with foreign exchange market participants focusing instead on developments in Germany and Japan.

Shifting expectations about U.S. monetary policy caused sporadic disturbances in U.S. asset markets. Declines in U.S. stock and bond prices, which had weighed on the dollar in previous periods, did not significantly weaken the dollar during this quarter.

The Dollar Benefits against the Mark in April and May from Expectations of German Monetary Easing

Early in the period, expectations of a further easing of money market rates by the German Bundesbank were supported by official policy actions. On April 18, the Bundesbank announced that it would cut its discount and Lombard rates, effectively lowering the range within which German money market rates fluctuate. Although the key repurchase rate remained fixed at 3.3 percent, the change in official rates spurred expectations that cuts in the repurchase rate would follow in subsequent weeks.

These perceptions were bolstered by weak economic data and by downward revisions of projections for 1996 growth made by several German economic institutes. Consumer price index data released in late April for western Germany confirmed that inflationary pressures remained subdued; together with Bundesbank officials' hints that scope for easing existed, this development appeared to reinforce the prospects of an ease.

In this environment the dollar broke above the trading range in which it had been contained for much of March. After decisively breaking DM 1.50 on April 11, the U.S. currency continued to appreciate, closing on May 28 at a high for the quarter of DM 1.5470.

Retreat of the Dollar in June from Its Highs against the Mark

The Bundesbank did not, in fact, reduce money market rates during the second quarter, and the repurchase rate remained fixed at 3.3 percent. Anticipation of additional Bundesbank easing during the cycle had begun to fade by late May as indicators of improved business sentiment were released. Stronger-than-expected industrial orders and continued growth of M3—well above the 7 percent ceiling of the Bundesbank's target range in April and May—further dampened expectations. By mid-June, prices in German credit markets began to reflect an expectation of Bundesbank rate hikes by the autumn of 1996, and forward rate agreement (FRA) rates for three-month Euromark deposits three months out moved sharply higher than cash rates, after having traded in a range roughly equal to or lower than that of cash rates for most of the quarter.

Dissipating expectations of German monetary easing weighed on the dollar–mark exchange rate. The dollar's continued failure to break through DM 1.55

prompted market participants to scale back long dollar positions, and the U.S. currency retreated from its highs in May to close at a low for June of DM 1.5122 on June 18. Apparently capped at DM 1.55 but well supported above DM 1.51, the dollar proceeded to trade in a narrow corridor, and implied volatility on one-month dollar–mark options approached record lows. At the same time, although the dispersion of the probability distribution of the future dollar–mark exchange rate implied by currency options declined, it became increasingly skewed toward a weaker dollar.

Expectations of a Hike in Japanese Interest Rates Weigh on the Dollar–Yen Exchange Rate

Early in the second quarter, the dollar fell against the yen as sentiment grew that the Bank of Japan's accommodative monetary policy stance could end as early as the later part of the quarter. This perception was supported by data released in April that suggested recovery in the retail, manufacturing, and housing sectors of the economy. Official comments also fueled interest rate anxieties. Market participants were particularly wary of April comments from Governor Matsushita, of the Bank of Japan, suggesting that rising rates were "natural" in a recovering economy and noting the link between Japan's easy money policies of the 1980s and the ensuing "bubble economy."

At the peak of these concerns and with December Euroyen futures contracts reflecting three-month rates nearly 90 basis points above cash rates, at the end of April the dollar traded to the bottom of its range for the quarter. The dollar briefly traded below ¥104, and dollar–yen one-month implied options volatility spiked to a high of 11.25 percent for the quarter. The dollar was supported at these levels by a market perception that the Japanese monetary authorities would not tolerate a weaker dollar because this might jeopardize Japan's economic recovery.

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

Millions of dollars

Period and item	Federal Reserve	U.S. Treasury Exchange Stabilization Fund
Valuation profits and losses on outstanding assets and liabilities, Mar. 31, 1996		
Deutsche marks	2,505.9	859.5
Japanese yen	1,487.9	2,188.9
Total	**3,993.8**	**3,048.3**
Realized profits and losses from foreign currency sales, Mar. 31, 1996–June 30, 1996		
Deutsche marks	.0	.0
Japanese yen	.0	.0
Total	**.0**	**.0**
Valuation profits and losses on outstanding assets and liabilities, June 30, 1996[1]		
Deutsche marks	2,118.7	663.5
Japanese yen	1,337.5	1,968.3
Total	**3,456.1**	**2,631.7**

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.

Recovery of the Dollar against the Yen

By early June, anticipation of an imminent Japanese rate hike began to ebb. Analysts concluded that ongoing problems in Japan's financial sector and the absence of compelling evidence that Japan's economic recovery could sustain itself without fiscal stimulus precluded such a step. That perception became more prevalent on May 15 after Governor Matsushita said that Japan's recovery was not "self-sustaining." The Bank of Japan's *Tanken* survey, released on June 7, was somewhat stronger than expected but still too weak to alter these expectations. Forward rates declined in this environment, and the dollar recovered against the yen, appreciating from its early-May lows to trade above ¥109 in early June.

The June 18 announcement that Japan's annualized first-quarter GDP growth rate was 12.7 percent briefly revived speculation that a Bank of Japan tightening might be imminent, and the dollar traded off its highs to below ¥108 in tandem with a sell-off in Japanese credit markets. The dollar and Japanese bonds recovered, however, as market participants ultimately concluded that the strong GDP figure would not in itself prompt a rate hike.

In the final week of the quarter, remaining anticipation of a Bank of Japan tightening by summer's end subsided with the release of weaker-than-expected industrial production figures and reports that in May, unemployment had surged to a record high of 3.5 percent. December Euro–yen contracts ended the quarter reflecting three-month rates only 53 basis points above cash rates, and the dollar rose to close the quarter at a twenty-nine-month high of ¥109.65.

As in preceding quarters, Japan reported declining trade surpluses and sharp contractions of its trade surplus with the United States. These data releases provided support for the dollar throughout the period, although immediate reaction to individual data releases was muted. Data for March, April, and May indicated that, in each month the bilateral surplus had declined more than 30 percent from the previous year's level.

Weakening of the Mexican Peso amid Concerns about a Possible U.S. Rate Hike

Through April and May, the Mexican peso traded against the dollar in a steady range between NP 7.40 and NP 7.55 despite a backup in U.S. bond yields. In June, growing concerns about a possible U.S. monetary tightening sparked a correction, pushing the peso out of its recent range to trade above NP 7.60 against the dollar.

Toward the end of the period, markets reacted positively to the Mexican authorities' announcement that in August they intended to repay a substantial portion of the $10.5 billion outstanding under the U.S. Treasury's Exchange Stabilization Fund (ESF) medium-term swap facility. This announcement came amid continued positive news on the Mexican economy. Waning expectations of an imminent Federal Reserve tightening in the final week of the quarter also benefited the peso, and the currency partially recovered, closing the quarter at NP 7.58.

3. Currency arrangements

Millions of dollars

Institution	Amount of facility	Outstanding, June 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	. . .	10,500
Total[1]	. . .	**10,500**

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.

Treasury and Federal Reserve Foreign Exchange Reserves

The U.S. monetary authorities did not undertake any intervention operations this quarter. At the end of the quarter, the foreign currency reserve holdings of the Federal Reserve System and the ESF were valued at $19.5 billion and $16.1 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 directly or under repurchase agreement. As of June 30, outright holdings of government securities by U.S. monetary authorities totaled $4.6 billion and included investments in Japanese treasury bills and German government bonds.

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 $12.3 billion at the end of the second quarter. Foreign currency reserves are also invested in deposits at the Bank for International Settlements and in facilities at other official institutions.

In addition, the ESF held $10.5 billion equivalent in nonmarketable Mexican government securities in connection with the ESF's medium-term swap arrangement. □

4. Drawings/rollovers and repayments (–) by Mexican monetary authorities

Millions of dollars

Item	Outstanding, Mar. 31, 1996	Apr.	May	June	Outstanding, June 30, 1996
Currency arrangements with the U.S. Treasury Exchange Stabilization Fund					
Bank of Mexico					
Regular	0	0	0	0	0
Medium-term	10,500	0	0	0	10,500

Note. Data are on a value-date basis.