# TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

#### January–March 2003

During the first quarter of 2003, the dollar declined 3.7 percent on a trade-weighted basis. The dollar depreciated 4.0 percent against the euro and 7.1 percent against the Canadian dollar, but depreciated only slightly against the yen. For much of the quarter, the dollar was pressured against a wide range of currencies as U.S. interest rates reached historic lows and as market focus on the impending war with Iraq intensified. The U.S. monetary authorities did not intervene in the foreign exchange market during the quarter.

#### DOLLAR DEPRECIATES STEADILY FROM JANUARY THROUGH EARLY MARCH

Through most of the period, the dollar continued a trend of steady depreciation that began late last year. The dollar depreciated as much as 5.2 percent and 1.6 percent against the euro and the yen, respectively, reaching its weakest level of the quarter against both currencies on March 10. Market participants remained focused chiefly on geopolitical risks, in particular the possibility of war in Iraq. Amid expectations of a conflict, many investors established short dollar positions against other major currencies, and the dollar reached multiyear lows against some of these currencies. This positioning occurred against a backdrop of historically low U.S. interest rates and concerns that the large external financing needs of the United States could leave the dollar vulnerable to depreciation should mounting risk aversion lead to a reduction in international capital flows. These concerns led to an investor preference for currencies of countries with current account surpluses and higher

This report, presented by Dino Kos, Executive Vice President, Federal Reserve Bank of New York, and Manager, 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 January through April 2003. Laura Lipscomb was primarily responsible for preparation of the report.



#### Chart 1 U.S. DOLLAR AGAINST THE EURO AND YEN

Chart 2 GLOBAL BENCHMARK EQUITY INDEXES



Source: Bloomberg L.P.

interest rate environments. Investors also allocated funds into perceived safe-haven assets, which supported the Swiss franc and gold. During the period, the dollar declined as much as 4.2 percent against the Swiss franc, reaching a low of 1.3247 Swiss francs per dollar on March 10. Gold prices reached a high of \$381.25 per ounce in February, the highest level in more than six years.

In this uncertain environment, major global equity market indexes generally declined while the prospect of war in Iraq contributed to rising oil prices. Increased asset allocation into U.S. Treasuries continued, prompting interest rates to decline, despite market commentary suggesting that the dollar could depreciate further and that Treasury issuance could rise substantially. The Treasury market was also supported by market expectations that monetary easing could extend further than previously anticipated and that the timeline of monetary tightening could be delayed.

Several U.S. economic data releases pointing to a less robust growth outlook than previously expected contributed to shifting views of expected monetary policy. The February employment report released on March 7 drew market attention, with nonfarm payrolls falling by 308,000, and on March 10 the two-year Treasury yield reached its historical low at 1.32 percent. However, market participants noted that interpretations of data were still clouded by uncertainties related to the outlook for war in Iraq. The Federal Open Market Committee (FOMC) did not alter monetary policy during its regularly scheduled meetings on January 29 and March 18. The FOMC surprised market participants on March 18 by deciding not to characterize the balance of risks in its statement, citing uncertainties surrounding the economic impact of the geopolitical situation.

The low interest-rate environment in the United States reportedly prompted some investors to take calculated risks to increase returns. This occurred despite reports of a high level of investor risk aversion amid an uncertain geopolitical environment. The search for yield prompted allocation into select investment-grade credit markets, such as agency and corporate debt, as well as foreign sovereign debt. The spread over Treasuries on the Lehman investment-grade corporate bond index narrowed 25 basis points over the period. Moreover, yield spreads for higher risk credit products also narrowed. The Merrill Lynch high-yield spread index narrowed 105 basis points and the JP Morgan EMBI+ index of emerging market sovereign bonds narrowed 83 basis points. In many cases, the search for yield abroad was thought to have contributed to the depreciation of the dollar against currencies of countries with higher interest rates.

#### Chart 3 INVESTMENT-GRADE AND HIGH-YIELD INDEX SPREADS OVER COMPARABLE TREASURIES



Source: Lehman Brothers, Merrill Lynch.





Source: Bloomberg L.P.

Relatively higher interest rates in the euro area reportedly motivated some purchases of the euro against the dollar. The yield spread of two-year German sovereign notes over two-year U.S. Treasuries remained above 74 basis points throughout the quarter. The euro appreciated despite the European Central Bank's decrease in the main refinancing rate by 25 basis points to 2.50 percent on March 6 and expectations for additional monetary easing by midyear. In addition, the Canadian dollar appreciated against the U.S. dollar, benefiting from Canada's economic out-performance versus other major industrialized economies and a rising interest-rate environment. The Bank of Canada raised its target overnight interest rate by 25 basis points to 3.0 percent on March 4. Expectations that the central banks of Australia and New Zealand would maintain relatively high interest rates compared with the United States also helped to support their currencies against the dollar.

The dollar-yen exchange rate traded in a range of ¥116.84 to ¥121.69 per dollar with the dollar closing the period only slightly weaker. Although the dollar also depreciated against the yen early in the period, its losses against the yen were limited by a variety of factors. Market participants noted that uncertainty about the global economic outlook exacerbated concerns over the Japanese economy. They also noted that the perception of relatively slow progress on structural reforms in Japan contributed to concerns about the recovery of the Japanese economy. During the period, Japanese interest rates continued to decline, with the benchmark ten-year yield breaching historic lows and ending the period



#### YEN AGAINST THE EURO AND U.S. DOLLAR

Chart 5

Source: Bloomberg L.P.

slightly above 0.7 percent. Moreover, in late January, market participants began to suspect intervention by Japanese monetary authorities to weaken the yen, and at the end of the month Japanese monetary authorities confirmed sales of yen against both the dollar and the euro that month. Subsequently, official sales of yen in February and March were also confirmed at the end of those months.

#### IN MID-MARCH, DOLLAR PARTIALLY REVERSES EARLIER DECLINES

As market participants increasingly expected a conflict with Iraq to happen in the near term, uncertainty and risk aversion increased, leading investors to shift toward more neutral positioning. In the trading days immediately ahead of the March 17 diplomatic deadline declared by President Bush, price action that had resulted from earlier positioning reversed sharply. In general, the dollar appreciated, global equities gained, sovereign yields rose, and oil prices declined. Between March 12 and March 17, the dollar appreciated 3.4 percent against the euro and 3.3 percent against the Swiss franc as market participants closed out trades to minimize exposures. For the week ending March 18, net short dollar positions against the euro held by noncommercial accounts on the International Money Market of the Chicago Mercantile Exchange declined by more than half.

#### Chart 6 FRONT-MONTH WEST TEXAS INTERMEDIATE CRUDE OIL FUTURES CONTRACT PRICE



Source: Bloomberg L.P.

#### *Chart 7* NET EURO LONG POSITIONS AGAINST THE U.S. DOLLAR HELD BY NONCOMMERCIAL ACCOUNTS ON THE CHICAGO MERCANTILE EXCHANGE



Source: Commodity Futures Trading Commission.

After the onset of war in Iraq on March 19, market participants became more willing to establish positions based on their expectations for the war, and some investors sought to reestablish trades made earlier in the period. In this environment, the dollar declined slightly against many other major currencies, major global equity indexes were pressured lower, and Treasury yields fell slightly. However, the dollar—from its weakest level on March 10 to the end of the quarter—strengthened 1.2 percent against the euro and 1.0 percent against the yen.

#### CURRENCY MARKET VOLATILITY REMAINS LOW

Option-implied volatility for G-3 currency markets remained at relatively low levels despite uncertainty surrounding the war with Iraq. Volatility implied by one-month euro-dollar currency options ended nearly unchanged, rising only slightly as the dollar appreciated against the euro in mid-March. Volatility implied by one-month dollar-yen currency options remained relatively low, declining slightly during the period. Market participants also reported that liquidity in major currency pairs remained adequate amid active two-way flows in foreign exchange market trading.



#### VOLATILITY IMPLIED BY ONE-MONTH CURRENCY OPTIONS

Source: UBS Warburg.

Chart 8

#### TREASURY AND FEDERAL 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 \$17.4 billion for the Federal Reserve's System Open Market Account and \$17.4 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 March 31, direct holdings of foreign government securities totaled \$17.0 billion, split evenly between the Federal Reserve and the Treasury. Foreign government securities held under repurchase agreements totaled \$3.4 billion at the end of the quarter and also were split evenly between the two authorities.

#### Table 1

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

Thousands of Dollars

		Q	uarterly Change	es in Balance b	ce by Source	
-	Carrying Value December 31, 2002 <sup>a</sup>	Net Purchases and Sales <sup>b</sup>	Investment Earnings <sup>c</sup>	Realized Profit/Loss on Sale <sup>d</sup>	Unrealized Profit/ Loss on Foreign Currency Revaluation <sup>e</sup>	Carrying Value March 31, 2003 <sup>a</sup>
Federal Reserve System						
Open Market Account (	(SOMA)					
Euro	8,961,429	0	68,495	0	355,298	9,385,222
Yen	7,952,682	0	81	0	45,802	7,998,565
Total	16,914,111	0	68,576	0	401,100	17,383,787
U.S. Treasury Exchange						
Stabilization Fund (ESF	)					
Euro	8,951,001	0	68,057	0	354,882	9,373,940
Yen	7,952,716	0	81	0	45,802	7,998,599
Total	16,903,717	0	68,138	0	400,684	17,372,539

<sup>a</sup> Carrying value of the reserve asset position includes interest accrued on foreign currency, which is based on "day of" accrual method.

<sup>b</sup>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.

<sup>c</sup> Investment earnings include accrued interest and amortization.

 $^{\rm d}{\rm Gains}$  and losses on sales are calculated using average cost.

<sup>e</sup> Reserve asset balances are revalued daily at the noon buying rates.

#### Table 2

### FEDERAL RESERVE RECIPROCAL CURRENCY ARRANGEMENTS Thousands of Dollars

		Outstanding as of	
Institution	Amount of Facility	March 31, 2003	
Bank of Canada	2,000,000	0	
Bank of Mexico	3,000,000	0	
Total	5,000,000	0	
Total	5,000,000		

## U.S. TREASURY EXCHANGE STABILIZATION FUND RECIPROCAL CURRENCY ARRANGEMENTS

Thousands of Dollars

		Outstanding as of
nstitution	Amount of Facility	March 31, 2003
Bank of Mexico	3,000,000	0
Total	3,000,000	0