## TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

### April-June 2002

During the second quarter of 2002, the dollar depreciated 12.1 percent against the euro and 10.0 percent against the yen. On a trade-weighted basis, the dollar ended the period 8.5 percent weaker against other major foreign currencies. Dollar selling was driven primarily by relatively low returns on U.S. assets, expectations for a slower and less robust U.S. economic recovery than previously anticipated, and concerns over the large U.S. current account deficit. Downward momentum in U.S. equity share prices and increased corporate governance concerns also reportedly weighed on the dollar. The U.S. monetary authorities did not intervene in the foreign exchange market during the quarter.

### DOLLAR TRADES WITH DOWNWARD BIAS

From the start of the second quarter, the dollar traded with a downward bias against major currencies. Economic data suggesting a more sluggish recovery in U.S. growth, a large and growing U.S. current account deficit, and low short-term U.S. interest rates relative to those of most other major economies were among the factors cited by market participants as weighing on the dollar. Additionally, in an environment of decreasing risk appetite, the dollar further depreciated as sharp declines in U.S. equity valuations reportedly heightened concerns over the ability to attract capital to finance the U.S. current account deficit. Consequently, as the dollar depreciated broadly, currencies of countries with positive current account balances or higher interest rates relative to the United States generally appreciated.

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 April through June 2002. Kameke Sweeney was primarily responsible for preparation of the report.



### *Chart 1* TRADE-WEIGHTED G-3 CURRENCIES

Sources: Board of Governors of the Federal Reserve System; Bank of England.

### Chart 2 U.S. TREASURY YIELDS



During the second quarter, downward revisions of expectations for future U.S. growth and continuing geopolitical event risks prompted a reversal of the first-quarter increases in U.S. Treasury yields. The two-year note outperformed over the second quarter, with its yield declining 90 basis points to 2.82 percent and the two-to-ten-year coupon curve steepening 30 basis points to a spread of 198 basis points. Economic data releases, including the larger-than-expected first-quarter trade and current account deficits and the May reading of advance retail sales, which continued to show limited evidence of a positive turn in final demand, led some market participants to revise downward second-quarter growth expectations by as much as 1.0 percentage point to 1.5 percentage points.

Amid questions over the strength of the U.S. economic recovery and the absence of inflationary pressures, market participants readjusted aggressive monetary policy tightening expectations that had been priced in for the second half of the year. Implied rates on federal funds futures contracts declined, with the rate implied by the August 2002 contract falling 68 basis points to 1.75 percent, the prevailing level of the federal funds target rate. The yield implied by the September 2002 eurodollar futures contract declined 131 basis points to 1.96 percent, consistent with market expectations that monetary policy tightening would likely not begin until the fourth quarter or later.

### *Chart 3* FEDERAL FUNDS TARGET RATE AND YIELDS IMPLIED BY U.S. INTEREST RATE FUTURES CONTRACTS





U.S. equity market losses also contributed to the decline in U.S. Treasury and implied yields. Equity market participants responded to the changing economic outlook as well as to continued announcements related to corporate governance, credit downgrades, and profitability. The Nasdaq declined 20.7 percent in the second quarter, while the Dow Jones Industrial Average and the S&P 500 fell 11.2 percent and 13.7 percent, respectively. Abroad, the Dow Jones Euro Stoxx and the Nikkei indexes closed the period 16.5 percent and 3.7 percent lower, respectively.

### EURO AND YEN APPRECIATE BROADLY

Apart from a generalized decline in the dollar, several factors contributed to the appreciation of the euro and the yen during the period. The euro was supported by increasing interest rate differentials between the euro area and the United States, with the spread of two-year euro and U.S. dollar swaps widening 59 basis points to 91 basis points. Moreover, though the ten-year U.S. dollar swap rate remained above the comparable euro-area swap rate, longer-dated interest rate differentials also increasingly moved in favor of the euro over the period. The dollar reached a twenty-eight-month low against the euro, and the euro ended the second quarter 13.7 percent higher at \$0.9914.



### Chart 5 EURO AGAINST U.S. DOLLAR

Source: Bloomberg L.P.

*Chart 6* THE SPREAD BETWEEN U.S. DOLLAR AND EURO TWO- AND TEN-YEAR SWAP RATES



Euro-area sovereign debt yields declined during the period as concerns over inflationary factors in the region eased amid the euro's appreciation. Equity market losses, uncertainty over the strength of the global economic recovery, and revisions to monetary policy expectations also contributed to declines in yields. The yield implied by the September 2002 euribor futures contract declined 48 basis points to 3.52 percent, with the majority of market participants reportedly expecting the European Central Bank to commence monetary policy tightening in the fourth quarter.

The yen appreciated against the dollar, even as Japanese government officials indicated that economic fundamentals did not warrant such yen strength. Over the quarter, the dollar's broader sell-off appeared to be the predominant factor. However, the yen also gained as foreign investors reportedly purchased Japanese assets to reduce underweight positions relative to their benchmarks, amid evidence of a mild pickup in Japanese economic activity. At the same time, the expected outflow from Japanese investors following the March 31 fiscal year-end did not materialize to the degree expected. Moreover, Japanese exporters reportedly increased their hedging activity, further contributing to the yen's broad appreciation during the first half of the quarter.



### Chart 7 YEN AGAINST U.S. DOLLAR

On May 22, the dollar fell below the ¥124 level for the first time in eight months. The Japanese monetary authorities intervened in foreign exchange markets, selling yen on seven days between May 22 and June 28. The dollar-yen exchange rate ended the quarter 10.0 percent lower at ¥119.47.

As concerns over a potential financial crisis eased with the passing of the March 31 Japanese fiscal year-end, the yield on the ten-year benchmark Japanese government bond (JGB) declined 67 basis points to 1.32 percent, near a six-month low. The ten-year JGB outperformed and the two-to-ten-year coupon curve flattened 8 basis points. Long-dated JGBs were also supported by declining equity prices and by expectations that the yen's appreciation could lead to continuing deflationary pressures. Despite initial signs of export-led improvement in economic conditions, market participants continued to expect the Bank of Japan (BoJ) to foster loose monetary conditions in light of weak domestic demand and persistent deflation. After allowing banks' current account balances to rise above the ¥10 to ¥15 trillion target range in March and April, the BoJ subsequently drained liquidity and reduced the balances to the upper end of the target range.

# CURRENCY MARKET VOLATILITY INCREASES MODESTLY AS THE DOLLAR DEPRECIATES

The depreciation of the dollar against other major currencies supported a modest rise in optionimplied volatilities. One-month option-implied volatility in the euro-dollar and dollar-yen currency pairs increased 5.2 and 1.4 percentage points, respectively, but continued to trade near historical lows. Euro-dollar and dollar-yen risk reversals continued to favor dollar puts across all tenors, though the premium for dollar puts against the yen declined following the official Japanese intervention activity.



### Source: Bloomberg L.P.

Chart 8

### 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 Japanese yen reserve holdings totaled \$16.2 billion for the Federal Reserve's System Open Market Account and \$16.2 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 held outright or under repurchase agreements. 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 June 30, direct holdings of foreign government securities totaled \$14.9 billion, split evenly between the Federal Reserve System and the Treasury. Foreign government securities held under repurchase agreements totaled \$2.9 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

Millions of Dollars

		Quarterly Changes in Balance by Source				
-	Carrying Value March 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 June 30, 2002 <sup>a</sup>
Federal Reserve System						
Open Market Account (	(SOMA)					
Euro	7,262.1	0.0	66.8	0.0	952.1	8,281.0
Japanese yen	7,116.5	0.0	0.1	0.0	763.0	7,879.6
Total	14,378.6	0.0	66.9	0.0	1,715.1	16,160.6
U.S. Treasury Exchange						
Stabilization Fund (ESF	)					
Euro	7,254.7	0.0	66.4	0.0	951.1	8,272.2
Japanese yen	7,116.5	0.0	0.1	0.0	763.0	7,879.6
Total	14,371.2	0.0	66.5	0.0	1,714.1	16,151.8

Note: Balances are stated at amortized cost.

<sup>a</sup> Carrying value of the reserve asset position includes interest accrued on foreign currency.

<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 are reported on an accrual basis and include accrued interest and amortization.

<sup>d</sup>Gains and losses on sales are calculated using average cost.

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

### Table 2

### NET PROFITS (LOSSES) ON U.S. TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

Millions of Dollars

	Federal Reserve	U.S. Treasury
	System Open Market Account	Exchange Stabilization Fund
Total Profit or (Loss) from Foreign Exchange Operations as of March 31, 2002 <sup>a</sup> Total	(241.7)	(241.6)
April 1, 2002, to June 30, 2002		
Unrealized profits (losses) from foreign currency holdings		
Euro	952.1	951.1
Japanese yen	763.0	763.0
Subtotal	1,715.1	1,714.1
Realized profits (losses) from foreign currency sales		
Euro	0.0	0.0
Japanese yen	0.0	0.0
Subtotal	0.0	0.0
Profit (Loss) from Foreign Exchange Operations		
Total	1,473.4	1,472.5

 $^{a}\mbox{Amounts}$  relating to prior months have been adjusted to conform to the current presentation.

### Table 3

## FEDERAL RESERVE RECIPROCAL CURRENCY ARRANGEMENTS Millions of Dollars

	Outstanding as of	
Amount of Facility	June 30, 2002	
2,000	0	
3,000	0	
5,000		
	2,000 3,000	

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

Millions of Dollars

		Outstanding as of
Institution	Amount of Facility	June 30, 2002
Bank of Mexico	3,000	0
Total	3,000	0