TREASURY AND FEDERAL RESERVE FOREIGN EXCHANGE OPERATIONS

January–March 2007

During the first quarter of 2007, the dollar's trade-weighted exchange value decreased 1.1 percent as measured by the Federal Reserve Board's major currencies index. The dollar depreciated 1.0 percent against the yen and 1.2 percent against the euro. The U.S. monetary authorities did not intervene in the foreign exchange markets during the quarter.





Chart 1

Source: Bloomberg L.P.

This report, presented by William Dudley, Executive Vice President, Federal Reserve Bank of New York, and Manager of the 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 March 2007. Ilan Solot was primarily responsible for preparation of the report.

U.S. GROWTH EXPECTATIONS AND CHANGING RISK APPETITE DRIVE THE DOLLAR-YEN CURRENCY PAIR

Movements in the dollar-yen exchange rate at the start of the quarter primarily reflected changes in the relative expected growth differential between the United States and Japan. The dollar appreciated 1.4 percent against the yen in January, as continued improvement in the outlook for U.S. economic growth led investors to price in less policy rate easing by the Federal Open Market Committee for 2007. In particular, employment, housing, durable goods, and manufacturing data all contributed to this improved sentiment toward the U.S. economic growth outlook. Consistent with this, two-year Treasury yields rose 11 basis points in January, while the calendar spread between implied rates on the June 2007 and June 2008 eurodollar futures contracts narrowed 10 basis points, to -27 basis points.





Source: Bloomberg L.P.

In contrast, yields on Japanese sovereign debt and interest rate futures declined in January following lower-than-expected inflation data and the decision by the Bank of Japan not to raise interest rates. As a result of these developments, relative interest rate differentials increased in favor of the dollar. For example, the spread between rates implied by the June 2007 eurodollar and euroyen futures contracts widened 24 basis points in January.

Chart 3 YIELD SPREAD BETWEEN JUNE 2007 EURODOLLAR AND EUROYEN FUTURES CONTRACTS, AND U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

Through late February, market participants also suggested that continued strong Japanese retail investor demand for foreign assets was an important factor contributing to the depreciation of the yen against the dollar and other higher yielding currencies. However, market participants were divided regarding the extent to which these flows may have represented temporary yield-seeking behavior by Japanese retail investors or more structural, portfolio-diversification-related flows. Over this period, the yen depreciated roughly 2.0 percent against the New Zealand and Australian dollars, 1.6 percent against the British pound, and as much as 4.0 percent against high-yielding emerging market currencies such as the Brazilian real and the Turkish lira.

From late February until mid-March, however, global asset markets experienced a sharp repricing episode, during which the yen appreciated against the dollar and even more so against most high-yielding currencies. Over this period, the yen appreciated 3.2 percent against the dollar and substantially more against higher yielding currencies. Option-implied volatility for the dollar-yen exchange rate moved up sharply over this period, returning to levels not seen since mid-2006, as investors reportedly sought protection against further appreciation of the yen. Despite the price action over this period, market participants reported ample liquidity and orderly trading conditions throughout the period.

Chart 4 CHANGES IN SELECTED CURRENCIES AGAINST THE YEN



Source: Bloomberg L.P.

Chart 5 ONE-MONTH DOLLAR-YEN IMPLIED VOLATILITY



Source: Bloomberg L.P.

This broad-based reduction in risk appetite across global financial markets was largely attributed to renewed uncertainty regarding the U.S. economic growth outlook. In particular, market participants cited concerns that weakness in the U.S. housing market, and developments in the subprime mortgage sector in particular, could reduce consumer spending and impact the broader U.S. economy. Investors also cited growing concerns regarding the strength of business investment, which many had expected to provide support for U.S. economic growth. In addition, market participants noted that several other factors also contributed to reduced risk appetite, including a sharp decline in the Chinese equity market and perceptions of rising geopolitical tensions.

From February 26 to March 16, global asset price movements became highly correlated. For example, over this period, the S&P 500 declined 4.3 percent, two-year Treasury yields declined 17 basis points, and the yen appreciated 3.2 percent against the dollar, while share prices in other countries and industrial-country benchmark government bond yields also fell sharply. As a result, the correlation of daily changes in the S&P 500 and the dollar-yen currency pair rose from roughly -0.26 from the start of 2007 until February 26, to as high as 0.89 over the February 26 to March 16 period.

Chart 6 S&P 500 INDEX, U.S. TREASURY TWO-YEAR YIELDS, AND U.S. DOLLAR–YEN EXCHANGE RATE



Source: Bloomberg L.P.

From mid-March until the end of the quarter, volatility across global financial markets moderated, and the dollar-yen currency pair stabilized, albeit at a lower level than the one that prevailed at the start of the quarter. Market participants suggested that risk appetite gradually improved as global equity markets regained some of their losses and concerns abated over the potential impact of the weakness in the housing market on U.S. consumer spending.

DIVERGENCE BETWEEN U.S. AND EUROPEAN GROWTH PROSPECTS SUPPORTS THE EURO

With the exception of a sharp 2.1 percent appreciation during the first two weeks of the year, the dollar depreciated steadily against the euro over the quarter. The dollar ended the quarter at 1.3354 per euro, reaching its lowest level since March 2005.





Source: Bloomberg L.P.

The dollar's depreciation against the euro, which began around mid-January, partly reflected the increasing divergence in growth expectations between the United States and the euro area. In the United States, decreased optimism about the growth outlook was reinforced by disappointing economic data on retail sales, manufacturing, and durable goods, along with the aforementioned concerns about the housing market.

At the same time, many investors interpreted euro-area economic data as suggesting that the strong growth momentum would be sustained, despite expectations for a U.S. economic slowdown. In particular, market participants noted euro-area economic data that indicated an improvement in the labor market as well as in business confidence. In addition, concerns abated that the increase in the value-added tax in Germany that went into effect at the beginning of the year could hinder economic growth in the region, in part because surveys of business confidence remained elevated and industrial activity showed persistent momentum.

Chart 8 YIELD SPREAD BETWEEN JUNE 2007 EURIBOR AND EURODOLLAR FUTURES CONTRACTS, AND EURO–U.S. DOLLAR EXCHANGE RATE



Source: Bloomberg L.P.

The euro-dollar currency pair changed little during the period of declining risk appetite that occurred from late February to mid-March. The euro appreciated roughly 1 percent against the dollar during this period and option-implied volatility for the euro-dollar currency pair rose modestly. On net, over the quarter, the euro-dollar implied volatility remained close to historically low levels.



Chart 9 ONE-MONTH EURO-DOLLAR IMPLIED VOLATILITY

Source: Bloomberg L.P.

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 yen reserve holdings totaled \$20.9 billion for the Federal Reserve System Open Market Account and \$20.8 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 practical, 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 \$19.2 billion, split evenly between the Federal Reserve and the Treasury. Foreign government securities held under repurchase agreements totaled \$4.5 billion at the end of the quarter and were also split evenly between the two authorities.

Table 1

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

Millions of Dollars

	Change in Balance by Source					
	Carrying Value December 31, 2006 ^a	Net Purchases and Sales ^b	Investment Earnings ^c	Realized Gains/Losses on Sale ^d	Unrealized Gains/ 5 Losses on Foreign Currency Revaluation ^e	Carrying Value March 31, 2007 ^a
Federal Reserve System						
Open Market Account (SOMA))					
Euro	12,530.0	0	109.9	0	169.5	12,809.4
Yen	7,952.0	0	8.2	0	98.8	8,059.0
Total	20,482.0		118.1		268.3	20,868.4
U.S. Treasury Exchange						
Stabilization Fund (ESF)						
Euro	12,509.5	0	109.6	0	169.2	12,788.3
Yen	7,952.1		8.2		98.8	8,059.1
Total	20,461.6		117.8	0	268.0	20,847.4

^a Carrying value of the reserve asset position includes interest accrued on foreign currency, which is based on the "day of" accrual method.
^bNet 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.

^cInvestment earnings include accrued interest and amortization.

^dGains and losses on sales are calculated using average cost.

^eReserve asset balances are revalued daily at the noon buying rates.

Table 2

BREAKDOWN OF FOREIGN RESERVE ASSETS HELD

Carrying Value in Millions of Dollars, as of March 31, 2007

	U.S. Treasury Exchange Stabilization Fund (ESF) ^b	Federal Reserve System Open Market Account (SOMA) ^b
Euro-denominated assets:	12,788.3	12,809.4
Cash held on deposit at official institutions	6,362.3	6,383.7
Marketable securities held under repurchase agreements ^a	2,264.2	2,264.2
Marketable securities held outright	4,161.8	4,161.5
German government securities	2,018.5	2,018.3
French government securities	2,143.2	2,143.2
Yen-denominated assets:	8,059.1	8,059.0
Cash held on deposit at official institutions	2,639.5	2,639.4
Marketable securities held outright	5,419.6	5,419.6

Note: Figures may not sum to totals because of rounding.

^a Sovereign debt obligations of Belgium, France, Germany, Italy, the Netherlands, and Spain are currently eligible collateral for reverse repo transactions.

^bAs of March 31, euro and yen portfolios had Macaulay durations of 9.5 months and 11.7 months, respectively, for both the ESF and SOMA portfolios.

Table 3 RECIPROCAL CURRENCY ARRANGEMENTS Millions of Dollars

Institution	Amount of Facility	Outstanding as of March 31, 2007			
	Federal Reserve System Of	Federal Reserve System Open Market Account (SOMA)			
Bank of Canada Bank of Mexico Total	2,000 3,000 5,000				
	U.S. Treasury Exchange Stabilization Fund (ESF)				
Bank of Mexico Total	3,000 3,000	0			