Japan Reenforces the Foreign Exchange Market

On September 15, the Bank of Japan (BOJ) responded to a 15-year high in the yen’s value against the dollar by selling an estimated 1.76 to 1.86 trillion yen in the foreign exchange (FX) market. The chart captures the telltale trade volume of an FX intervention (buying and/or selling of assets by a monetary authority to influence exchange rates) and the immediate effect: a 3 percent overnight depreciation of the yen against the dollar. To achieve a prolonged impact, however, Japan will need to demonstrate a strong commitment to continued intervention.

Since the summer of 2007, the yen has gained more than 30 percent against the dollar. Analysts attribute the yen’s newfound strength to increased investment demand and, more specifically, a diminished global appetite for risk. During times of high volatility and uncertainty, investors trade higher returns for increased confidence in their investments. Japan’s current account surplus and deflationary price trend increase the yen’s perception as a “safe haven” currency (i.e., a currency with low risk of rapid depreciation). Abnormally low interest rates in the United States and Europe only further encourage demand for the yen, a currency with traditionally low interest rates and thus a low return on investment.¹

Japanese FX intervention is not without precedent. From 1999 to 2004 Japan unilaterally sold a combined, and unprecedented, 500 billion dollars of yen in the FX market. Recent research estimates that without these interventions, the yen’s value would have been 30 percent higher in March 2004, the date of Japan’s last intervention (Futaram, 2010). Both in the past and the present, Japanese monetary authorities turned to intervention when they viewed their economy as fragile (Ito, 2005). A lower-valued yen aids economic recovery by making Japanese goods cheaper internationally, thus stimulating exports.

If Japan is successful, it will rely heavily on the signaling channel, one of two main channels economists believe FX intervention works through. The other, the portfolio balance channel, presumes that (i) investors hold investments of varying degrees of substitutability and (ii) intervention affects asset prices by manipulating their supply. Futaram (2010) finds strong evidence of this channel operating in the immediate impact of past BOJ interventions, but the yen’s retracement of its gains since September is linked to growing expectations of further U.S. quantitative easing, also reflecting portfolio balance effects (Neely, 2010). Conversely, the signaling channel informs the market of the direction of future policy actions. The cautious movement observed in the yen following intervention indicates that investors are accounting for the possibility of future intervention. Without the full credibility of a coordinated multilateral intervention strategy, however, the yen has already risen to a new 15-year high. Only more intervention will convince markets of Japan’s commitment.

¹ Additionally, China is speculated to be diversifying its large foreign reserve holdings away from the U.S. dollar and toward the yen.

**Exchange Rate Movement Around September 15 BOJ Intervention**

- **Trend**
- **Exchanges Rate**

**Note:** Trend data are from the Bank for International Settlements and include all trades handled through brokerage companies in the Tokyo exchange market. The foreign exchange rate is from Haver Analytics. Data as of 2009. JPY: Japanese yen; USD, U.S. dollar.

Views expressed do not necessarily reflect official positions of the Federal Reserve System.
Notes

Euro-Area Data: Euro-area countries are Austria, Belgium, Cyprus, Finland, France, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain. Data series are both break-adjusted and include all euro-area countries for which data are available; with the exceptions: SERIES for interest rates are not break adjusted.

Euro-area interest rates prior to December 1999 are calculated on the basis of national interest yields weighted by GDP. Starting in 1999, short-term rates are euro interbank offered rates. Long-term rates are calculated on the basis of national government bond yields weighted by government bonds outstanding adjusted by the annual outstanding amounts of government bonds in each maturity band.

The cumulated exchange rate used in the chart on page 12 is a synthetic rate prior to January 1999. This chart is constructed by calculating a weighted average of the share rates of the euro-area countries, excluding Greece and Luxembourg, against the dollar. The weights are the GDP shares.

German Data: As a result of reconversion, data for all of Germany are now incorporated in the statistical series. The starting periods for unified Germany are listed below. Data should be converted when interpreting data across these break periods.

First quarter 1996: TAI/real exchange index.
Third quarter 1993: employment.
First quarter 1995: hourly earnings.

Capacity Utilization covers the manufacturing sector for Canada, France, Germany, Japan, the United Kingdom, the United States, and the euro area; manufacturing excluding food, beverages, and tobacco for Germany; and mining and manufacturing for Italy.

Consumer Price Index is for all items. The current index is based on goods and services consumed by all individuals for Canada; all multi-person household heads excluding those mainly occupied with agriculture, forestry, and fishing for Japan; all households except for the renter population and high-income housing in Japan and all households for the United States. Data for the euro-area, France, Germany, and Italy are based on the harmonized index of consumer prices.

Current Account Balance is the sum of merchant and service exports and income receipts on domestic assets abroad minus the sum of merchant and service imports and income payments from foreign assets in the domestic economy plus unrequited transfers.

Real Earnings are based on hourly earnings in manufacturing for Canada, Germany, the United States, and the euro area; hourly earnings in manufacturing excluding food, beverages, and tobacco for Germany; and hourly earnings in mining and manufacturing for Italy.

Short-Term Interest Rate on page 4 refers to the 3-month average interest rate shown in the country pages.

Long-Term Interest Rate on page 4 uses the government bond rate. The government bond rate is a composite of yields on federal government bonds with maturities of more than 10 years in Canada, 10-year benchmark bonds in France, and 15- to 20-year government bonds through 1990 and 10-year government bonds starting in 1991 for Italy, and 10-year government bonds for Canada, the euro area, Japan, and the United Kingdom.

The Exchange Rate for all countries except the United States is expressed in units of local currency per U.S. dollar. For the United States the trade-weighted exchange rate is used. This is a weighted average of the exchange value of the U.S. dollar relative to the major international currencies—the euro, Canadian dollar, Japanese yen, British pound, Swiss franc, Australian dollar, and Swedish krona. Prior to 1999, the currencies of the euro-area countries (with the exception of Greece) are used instead of the euro.

Real Effective Exchange Rate uses actualized unit labor costs in manufacturing. The weighting scheme used to construct the rate, for all except the euro area, is based on disaggregated data for trade among 21 industrial countries in manufactured goods for 2005. For the euro area the weights relate to the trade of the euro area with the other countries. The weights reflect the relative importance of a country’s trading partners in its direct bilateral trade relations and competition in third markets. Labor cost data in manufacturing are calculated by dividing an index of actual hourly compensation per worker by a five-year moving average index of output per man-hour.

Employment data refer to civilians employed for Canada, Germany, Italy, and the United States; industrial employment for France; and total employment in the euro area and the United States. All employment data refer to the second half of the year and are seasonally adjusted.

Foreign Exchange Reserves are data of end of period. The dollar value of reserves may fluctuate as a result of changes in reserve holdings and/or changes in the value of the dollar held vis-à-vis the U.S. dollar.

Government Budget Balance is the difference between general government current receipts and total outlays. Total outlays consist of current expenditures and net capital outlays. Government Gross Fixed Capital formation finances all financial liabilities of the general government sector. The general government sector consists of central government, local government, and social security sectors.

CUMULATIVE INFLATION is the cumulative change in the foreign exchange rate index of CPI’s over the change in the U.S. CPI’s, in percentage terms. The base period is used for the cumulative rate of change is the first day of the month. For example, if the base period in 2002:Q1, then the cumulative inflation indicator for 2006:Q4 is as follows:

where inflationRate is the CPI in the base period of the year 2000:

Consumer Price Index

Real Domestic Gross Product

Nominal Gross Domestic Product

Unemployment Rate

Notes Sources
International Economic Trends

International Trade - Goods and Services
Percent of GDP

Current Account Balance
Percent of GDP

Foreign Exchange Reserves
Billions of US$ 60

Real Effective Exchange Rate
Index 2005 = 100

Canada

Real GDP
Percent change from year ago

Employment
Percent change from year ago

Consumer Price Index
Percent change from year ago

Unemployment Rate
Percent

Real Hourly Earnings
Percent change from year ago

Current Account Balance
Percent of GDP
International Economic Trends

United Kingdom

Real GDP
Percent change from year ago

Employment
Percent change from year ago

Consumer Price Index
Percent change from year ago

Unemployment Rate
Percent

Real Weekly Earnings
Percent change from year ago

Current Account Balance
Percent of GDP

Euro Area

International Trade - Goods
Percent of GDP

Real Effective Exchange Rate
Index 2005 = 100

Monetary Aggregates
Percent change from year ago

Interest Rates
Percent

Research Division
Federal Reserve Bank of St. Louis

34

Research Division
Federal Reserve Bank of St. Louis

15
International Economic Trends

Italy

Real Hourly Earnings and Output per Worker
Percent change from year ago

Labor Force Indicators
Percent change from year ago

Inflation
Percent change from year ago

Gross Government Debt and Budget Balance
Percent of GDP, annual data

Germany

International Trade - Goods and Services
Percent of GDP

Current Account Balance
Percent of GDP

Foreign Exchange Reserves
Billions of US$ 10

Stock Exchange Index: CDAX
2005 = 100