# Notes

**Euro-Area Data:** Euro-area countries are Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovenia, Slovakia, and Spain. The euro area was enlarged to include Greece on January 1, 2001; Slovenia on January 1, 2007; Cyprus and Malta on January 1, 2008; and Slovakia on January 1, 2009. Data series are break adjusted with inclusion of all euro-area countries with the following exceptions: Series for earnings, interest rates, retail sales, and stock exchange index cover Greece, Slovenia, Cyprus, Malta, and Slovakia but are not break adjusted. Gross domestic product (GDP) and industrial production include Greece, Slovenia, Cyprus, and Malta (but not Slovakia) for the entire sample. Historical euro-area series for government debt and budget balance include Greece. Series for the real effective exchange rate also include Greece starting in January 2001.

Euro-area interest rates prior to December 1998 are calculated on the basis of national government 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 the nominal outstanding amounts of government bonds in each maturity band.

The euro/dollar exchange rate used in the chart on page 12 is a synthetic rate prior to January 1999. This is constructed by calculating a weighted average of the exchange rates of the euro-area countries, excluding Greece and Luxembourg, against the dollar. The weights are based on 1997 GDP shares.

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

Third quarter 1990: current account balance, international trade, and unemployment.
First quarter 1991: consumer price index, GDP, industrial production, output per worker.
Third quarter 1992: capacity utilization.
First quarter 1993: stock exchange index.
Third quarter 1993: employment.
First quarter 1995: hourly earnings.

**Capacity Utilization** covers the manufacturing sector for Canada, France, Japan, the United Kingdom, the United States, and the euro area; manufacturing excluding food, beverage, 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 households excluding those mainly engaged in agriculture, forestry, and fisheries for Japan; all households except pensioners dependent on state pension and high income households for the United Kingdom; and all urban 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 merchandise and service exports and income receipts on domestic assets abroad minus the sum of merchandise and service imports and income payments from foreign assets in the domestic economy plus net unilateral 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 construction for France, hourly earnings in industry for Italy; monthly earnings in manufacturing for Japan; and weekly earnings in manufacturing for the United Kingdom.

The **Exchange Rate** for all countries except the United States is expressed as units of local currency per U.S. dollar. For the United States the trade-weighted exchange rate, **TWEX**, 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 kronor. 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 normalized unit labor costs in manufacturing. The weighting scheme used to construct the rates, for all except the euro area, is based on disaggregated data for trade among 21 industrial countries in manufactured goods for 2000. 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. Normalized unit labor costs 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 civilian employment for Canada, Germany, Italy, Japan, and the United States; industrial employment for France; and total employment for the euro area and the United Kingdom.

**Foreign Exchange Reserve** data are 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 currencies 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 expenditures. **Gross Government Debt** incorporates all financial liabilities of the general government sector. The general government sector consolidates the accounts of the central, state, local, and social security sectors.

**Cumulative Inflation Differential** is the cumulative change in the foreign consumer price index (CPI) over the change in the U.S. CPI, in percentage terms. The base period for the cumulative rate of change is taken to be the first period of the chart. For example, if the base period is 2002:Q1, then the cumulative inflation differential for Japan for 2006:Q3 is as follows:

$$\text{inflation differential} = 100 \cdot \left( \frac{P^{J}_{2006Q3} / P^{J}_{2002Q1}}{P^{US}_{2006Q3} / P^{US}_{2002Q1}} - 1 \right)$$

where $P^{J}_{2006Q3}$ is the Japanese CPI in the third quarter of 2006. For the U.S. chart on page 41, foreign CPI is calculated as the weighted average of the CPIs of countries whose currencies are used in the major currency trade-weighted exchange rate index. Starting in 1999, the euro-area harmonized consumer price index is used for the euro area. Prior to 1999, the price levels for the individual euro area countries (excluding Greece and Luxembourg) are used. The cumulative inflation differential is shown because the theory of purchasing power parity states that exchange rate changes should be systematically positively related to this variable.

**Industrial Production** measures the change in the volume of output in the mining, manufacturing, oil, electricity, gas, and water industries.

The **Short-Term Interest Rate** table on page 4 uses the relevant 3-month interest rate shown in the country pages.

The **Long-Term Interest Rate** table 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 for the United States; 10-year benchmark bonds for France; 7- to 15-year public sector bonds for Germany; 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 **Reserve Money** table on page 4 refers to the adjusted monetary base for Japan and the United States; reserve money for Canada; and M0 for the United Kingdom. **Reserve Money** is currency in circulation, deposits of the deposit money banks, and demand deposits of other residents (with the exception of the central government) with the monetary authority.

**Adjusted Monetary Base**

Japan: currency in circulation and current deposits at the Bank of Japan.

United States: the sum of currency in circulation outside Federal Reserve banks and the U.S. Treasury, deposits of depository financial institutions at Federal Reserve banks, and an adjustment for the effects of changes in statutory reserve requirements on the quantity of base money held by depositories.

**Notes and Coins in Circulation**

United Kingdom: After reforming the rules governing bank reserves, the Bank of England discontinued its M0 series in May 2006 because the data would not be comparable to previous data. *IET* now presents a related series, "Notes and Coins in Circulation," in place of M0. The Bank of England directs interested parties to "Publication of narrow money data: the implication of money market reform" in its Autumn 2005 *Quarterly Bulletin* (http://www.bankofengland.co.uk/publications/quarterlybulletin/qb050304.pdf).

**M1**
Japan: cash, currency in circulation, and deposit money.
Euro area: currency in circulation and overnight deposits.

**M1B**
Canada: currency outside banks, chartered bank checkable deposits, less inter-bank checkable deposits.

**MZM**
United States: currency in circulation, travelers' checks, total publicly-held checkable deposits minus cash items in the process of collection and Federal Reserve float, savings deposits, shares in retail money market mutual funds (funds with initial investments of less than $50,000), net of retirement accounts, and institutional money market mutual funds.

**M2**
Canada: currency outside banks, chartered bank demand and notice deposits, chartered bank personal term deposits, adjustments to M2 (continuity adjustments and inter-bank demand and notice deposits).
United Kingdom: currency in circulation and sterling retail deposits with the U.K. banks and building societies.
United States: MZM less institutional money market mutual funds plus small denomination (less than $100,000) time deposits.

**M2 + CDs**
Japan: M1 plus private deposits, public deposits less demand deposits, and certificates of deposit.

**M3**
Euro area: M1 plus deposits with a maturity up to 2 years, deposits redeemable at notice up to 3 months, repurchase agreements, money market funds, and debt securities up to 2 years.

**M4**
United Kingdom: M2 plus wholesale deposits with the U.K. banks and building societies.

**Output Per Worker** is the ratio of real GDP to employment.

**Producer Price Index** covers manufacturing for Canada and the United Kingdom; and total industry for Japan and the United States. Data for the euro area, France, Germany, and Italy are based on the harmonized index of total industry excluding construction.

**Retail Sales** are based on a volume index. The percent change in retail sales for the United States is based on the Standard Industrial Classification system through 1992 and the North American Industrial Classification System from 1993 on.

**Stock Exchange Index** refers to all share prices except for the United Kingdom, which excludes financial firms.

**Unemployment Rate** is the standardized unemployment rate. It is the percentage of the civilian labor force that is unemployed. The unemployed are all persons of working age who are without work, readily available for work, and actively seeking work. The standardized rate may differ from the national unemployment rate calculations.

# Sources

**Abbreviations**
Board of Governors of the Federal Reserve System (BOG)
Bureau of Economic Analysis, U.S. Department of Commerce (BEA)
Bureau of Labor Statistics, U.S. Department of Labor (BLS)
International Monetary Fund, *International Financial Statistics* (IMF)
Organization for Economic Cooperation and Development,
*Economic Outlook* (OECD1)
*Main Economic Indicators* (OECD2)
*National Accounts Quarterly* (OECD3)

**Canada**
Bank of Canada: M1B and M2.
BOG: exchange rate.
IMF: foreign exchange reserves, merchandise and service trade, real effective exchange rate, and reserve money.
OECD1: gross government debt and budget balance.
OECD2: capacity utilization, consumer price index, current account balance, GDP, hourly earnings, industrial production, interest rates, producer price index, retail sales, stock exchange index, and unemployment rate.
Statistics Canada: employment.

**Euro Area**
European Central Bank: currrent account balance and employment .
Eurostat: capacity utilization, consumer price index, GDP, interest rates, merchandise trade, producer price index, and retail sales.
Haver Analytics: synthetic euro exchange rate.
IMF: real effective exchange rate.
OECD1: gross government debt and budget balance.
OECD2: hourly earnings, industrial production, M1, M3, stock exchange index, and unemployment.

**France**
BOG: exchange rate.
Eurostat: capacity utilization, consumer price index, and producer price index.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
Institut National de la Statistique et des Etudes Economiques: employment.
OECD1: gross government debt and budget balance.
OECD2: current account balance, GDP, hourly earnings, industrial production, retail sales, interest rates, stock exchange index, and unemployment.

**Germany**
BOG: exchange rate.
Bundesanstalt Fur Arbeit: employment.
Eurostat: capacity utilization, consumer price index, and producer price index.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD1: gross government debt and budget balance.
OECD2: current account balance, GDP, hourly earnings, industrial production, M1, M3, retail sales, interest rates, stock exchange index, and unemployment.
Statistical Office of Germany: new hourly earnings.

**Italy**
BOG: exchange rate.
Eurostat: capacity utilization, consumer price index, and producer price index.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
Instituto Nazionale di Statistica: employment.
OECD1: gross government debt and budget balance.
OECD2: current account balance, GDP, hourly earnings, industrial production, long-term interest rates, retail sales, stock exchange index, and unemployment.

**Japan**
Bank of Japan: adjusted monetary base and long-term interest rate.
BOG: exchange rate.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD1: gross government debt and budget balance.
OECD2: capacity utilization, consumer price index, current account balance, employment, GDP, hourly earnings, industrial production, M1, M2, producer price index, retail sales, short-term interest rate, stock exchange index, and unemployment.

**United Kingdom**
Bank of England: M2.
BOG: exchange rate.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD1: gross government debt and budget balance.
OECD2: capacity utilization, consumer price index, current account balance, GDP, industrial production, interest rates, M4, producer price index, retail sales, stock exchange index, unemployment, and weekly earnings.
U.K. Office for National Statistics: employment and Notes and Coins in Circulation.

**United States**
BOG: capacity utilization, exchange rate, industrial production index, M2, and interest rates.
BEA: GDP, current account balance, merchandise and service trade, and retail sales.
BLS: employment, consumer price index, and producer price index.
Federal Reserve Bank of St. Louis: adjusted monetary base and MZM.
IMF: foreign exchange reserves and real effective exchange rate.
OECD1: gross government debt and budget balance.
OECD2: hourly earnings, stock exchange index, and unemployment.