

THE FEDERAL A RESE



## Accounting and the Economics of the Trade Deficit

International Economic Trends

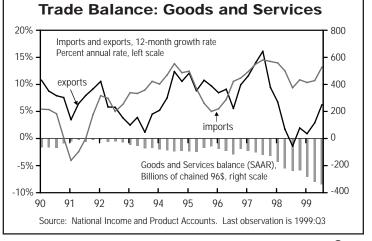
A negative trade balance has been a feature of the 1990's U.S. economic expansion. Although both real exports and imports have grown sharply, the trade deficit has increased as the growth of total demand in the economy (including exports) has outstripped the growth of productive capacity. In popular discussions, the trade deficit often is referred to as a "subtraction" from GDP. The third quarter of 1999 is typical. During the quarter, the output of the U.S. economy measured by GDP (in chained 1996 dollars) increased \$122 billion, at an annual rate, relative to the previous quarter. The trade deficit on goods and services increased \$19.2 billion, at an annual rate. Did the trade deficit therefore "subtract" \$19.2 billion from the increase in GDP? Would GDP necessarily have been that much larger if the trade deficit had not changed?

The popular and often stated notion that the trade deficit subtracts from GDP perhaps is due to some confusion between international economics and national income accounting. To measure the production of the economy in a timely fashion, government statisticians collect a broad set of data that includes the total sales of all goods, both domestic and imported. From these initial data, an estimate of domestic production is obtained by subtracting both total imports and the change in business inventories. In this accounting, the trade deficit is indeed a subtraction—but not from GDP, rather only from an initial estimate of total sales.

Economic analysis also suggests that the answer to the above question is "No." Some imported goods, such as certain agricultural products, cannot be produced in this country, while other imports provide lower-cost products for both consumers and firms. Production at some firms might decrease, not increase, if imported products were not available. Further, in the current economy, some firms might find it difficult to hire enough labor to expand output by the size of the trade deficit. Labor markets are tight. More than 64 percent of the working-age population is employed and the unemployment rate is just above 4 percent.

The basic economics of trade deficits are well known. With floating exchange rates, a trade deficit can persist only if foreigners willingly accumulate financial claims issued by the country's households and firms, that is, only if foreigners continue to invest in the United States. Otherwise, the foreign exchange value of the dollar would fall, and the trade gap would tend to close as the prices of imports increase and the prices of exports decrease. At the same time, of course, the yields available on domestic investments (adjusted for default, liquidity, and exchange-rate risk) must remain attractive to foreign investors. Economists view the trade deficit as part of an overall general equilibrium involving domestic demand, production and investment opportunities, relative to economic conditions in the rest of the world. Hence, in neither national income accounting nor economic analysis is the trade deficit appropriately regarded as a subtraction from GDP.

-Richard G. Anderson



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



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## Conventions used in this publication:

- 1. Charts and tables contain data that were current through January 2000. Unless otherwise indicated, data are quarterly.
- 2. The *percent change* refers to the percent change from the same period in the previous year. For example, the percent change in x between month *t*-12 and the current month *t* is: [(x<sub>t</sub> / x<sub>t-12</sub>) 1] x 100.
- 3. All data with significant seasonal patterns are seasonally adjusted.

We welcome your comments addressed to:

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#### **Real Gross Domestic Product**

Percent change

	96.4	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3
Canada	2.43	3.22	3.90	4.30	4.37	4.03	3.21	2.40	2.80	3.12	3.63	4.17
Euro Area	1.64	1.50	2.16	2.29	2.87	3.56	2.80	2.59	1.93	1.73	1.78	2.33
France	1.55	1.21	1.71	2.01	3.00	3.48	3.70	3.32	2.95	2.45	2.39	3.00
Germany	1.32	1.74	1.57	1.46	1.43	2.99	1.80	1.84	1.19	0.76	0.84	1.26
Italy	0.37	-0.50	1.63	1.87	2.94	2.65	1.29	1.19	0.25	0.88	0.86	•
Japan	5.16	3.76	1.20	1.78	-0.49	-2.87	-1.07	-3.18	-3.06	-0.41	0.74	1.00
United Kingdom	2.89	3.18	3.52	3.89	3.44	2.76	2.47	1.94	1.50	1.43	1.60	1.90
United States	4.21	4.72	4.29	4.74	4.28	4.72	3.96	3.91	4.61	3.87	3.80	4.27

#### **Nominal Gross Domestic Product**

Percent change

	96.4	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3
Canada	4.41	5.36	5.00	4.73	4.14	3.42	2.88	1.62	2.07	3.36	4.52	6.60
Euro Area	3.34	1.77	2.00	1.60	2.82	4.01	3.72	4.15	3.87	4.05	3.72	3.94
France	2.82	2.36	3.20	3.52	4.47	4.78	4.74	4.18	3.74	3.03	2.90	3.55
Germany	2.29	2.52	2.45	2.20	2.22	3.70	2.78	3.04	2.48	2.15	1.84	1.99
Italy	4.22	2.20	4.47	4.64	5.23	6.09	4.15	3.77	2.90	2.79	2.10	
Japan	2.94	3.07	1.41	2.23	0.50	-1.77	-1.04	-3.17	-2.90	-1.04	0.05	0.22
United Kingdom	6.06	6.34	6.31	6.48	6.98	5.49	5.96	5.70	4.54	4.45	4.75	4.35
United States	6.00	6.50	6.13	6.43	5.91	5.96	5.14	5.18	5.85	5.37	5.33	5.68

#### **Consumer Price Index**

Percent change												
	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	2.12	1.61	1.73	1.02	1.06	0.99	0.85	1.08	0.81	1.60	2.17	
Euro Area	1.84	1.40	1.58	1.48	1.11	1.39	1.06	0.78	0.89	0.98	1.44	
France	1.49	0.90	1.26	1.16	0.86	1.07	0.73	0.35	0.27	0.36	0.53	0.97
Germany	1.83	1.53	2.22	2.02	1.24	1.40	0.67	0.41	0.28	0.49	0.63	0.95
Italy	2.50	1.90	1.83	1.96	2.02	2.06	2.05	1.72	1.40	1.45	1.72	2.05
Japan	0.59	1.98	2.13	2.13	1.98	0.32	-0.19	0.52	-0.09	-0.28	0.01	•
United Kingdom	2.69	2.70	3.48	3.64	3.41	4.04	3.30	2.94	2.20	1.43	1.16	
United States	2.90	2.36	2.16	1.89	1.50	1.62	1.62	1.48	1.73	2.09	2.32	2.62

## **Employment Growth**

Percent change	
	97.1

0												
	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	0.94	1.73	2.48	2.46	2.96	2.72	2.25	3.23	3.34	2.62	2.51	2.43
Euro Area	0.36	0.48	0.66	0.78	1.26	1.50	1.65	1.79	1.64	1.48	1.35	
France	0.28	0.58	1.07	1.55	1.93	2.19	2.30	1.96	1.91	1.83	1.97	
Germany	-1.05	-1.02	-0.70	-0.40	-0.10	0.15	0.52	0.87	0.86	0.55	0.07	
Italy	-0.50	0.07	0.13	0.52	0.71	0.37	0.80	0.94	0.89	0.97		
Japan	1.62	1.36	0.69	0.71	0.05	-0.74	-0.94	-0.95	-1.23	-1.09	-0.66	
United Kingdom	2.26	2.59	2.26	2.68	2.84	2.10	2.44	1.70	1.15	1.18	0.91	
United States	2.38	2.42	2.14	2.06	1.80	1.49	1.23	1.35	1.69	1.49	1.52	1.47

#### **Unemployment Rate**

Percent												
	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	9.54	9.41	8.97	8.85	8.63	8.39	8.32	8.02	7.84	7.99	7.65	
Euro Area	11.60	11.60	11.60	11.40	11.20	11.00	10.80	10.60	10.30	10.10	10.00	
France	12.38	12.42	12.35	12.17	11.91	11.70	11.68	11.55	11.42	11.23	10.95	
Germany	9.66	9.86	10.04	10.08	9.79	9.52	9.25	9.15	9.05	9.09	9.15	
Italy	11.76	11.67	11.67	11.77	11.82	11.94	11.93	11.77	11.60	11.41	11.23	
Japan	3.32	3.36	3.40	3.50	3.68	4.11	4.24	4.38	4.62	4.78	4.72	
United Kingdom	7.41	7.26	6.88	6.59	6.44	6.34	6.29	6.28	6.30	6.09	5.93	
United States	5.25	4.98	4.84	4.67	4.67	4.42	4.51	4.42	4.30	4.26	4.21	4.09

02/07/00

## **Reserve Money Growth**

Percent change

	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	6.40	5.68	4.15	3.76	2.53	3.66	4.47	7.04	9.64	7.84	8.73	
Euro Area												
Japan	7.17	6.74	7.08	8.61	9.13	8.93	8.48	6.60	4.29	5.57		
United Kingdom	6.54	6.08	5.72	6.58	6.86	5.81	5.72	5.22	5.29	6.72	7.37	
United States	4.56	4.80	5.05	5.90	6.04	5.95	6.38	6.87	7.60	8.72	9.07	12.85

## Narrow Money Growth

Percent change												
	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	17.38	15.02	16.88	12.34	11.42	12.07	12.28	9.16	5.37	1.24	1.79	
Euro Area	8.30	9.10	9.02	7.00	9.82	9.95	8.78	10.20	11.77	11.73	13.59	
Japan	9.22	8.42	7.86	9.18	8.65	7.82	8.34	6.24	8.44	12.05	12.74	
United Kingdom	6.29	7.43	7.07	7.60	6.48	5.41	5.88	6.08	6.04	6.84	7.09	
United States	6.72	6.46	7.22	8.26	9.30	11.04	11.78	14.11	14.31	13.31	11.99	9.30

## Broad Money Growth

Percent change												
	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	0.81	-0.34	-0.69	-1.57	-1.21	-1.07	0.46	1.31	1.80	2.29	2.90	
Euro Area	3.64	4.40	4.28	4.41	5.00	4.93	4.54	4.62	5.50	5.71	6.77	
Japan	2.56	2.84	3.08	3.78	4.50	4.01	4.46	4.38	4.71	3.99	2.47	
United Kingdom	11.20	11.41	5.96	5.69	4.40	3.78	8.85	8.16	6.30	5.31	2.94	
United States	4.50	4.47	5.10	5.75	6.48	7.19	7.33	8.47	8.37	7.92	7.51	6.15

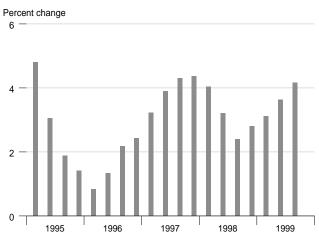
## Short-Term Interest Rates

Percent												
	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	3.14	3.31	3.58	4.11	4.81	4.96	5.25	5.13	5.00	4.70	4.82	
Euro Area	4.06	3.97	4.02	4.16	3.96	3.86	3.78	3.44	3.09	2.64	2.70	3.43
Japan	0.55	0.58	0.61	0.66	0.95	0.62	0.67	0.62	0.49	0.11	0.09	0.29
United Kingdom	6.24	6.49	7.10	7.47	7.47	7.49	7.58	6.79	5.50	5.20	5.19	5.89
United States	5.44	5.69	5.60	5.73	5.55	5.59	5.53	5.20	4.90	4.98	5.38	6.06

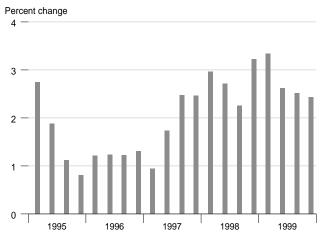
## Long-Term Interest Rates

Feiceni												
	97.1	97.2	97.3	97.4	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4
Canada	6.88	6.87	6.26	5.85	5.61	5.49	5.50	5.21	5.24	5.49	5.78	6.21
Euro Area	6.20	6.22	5.86	5.66	5.12	4.99	4.56	4.15	3.99	4.26	5.05	
France	5.63	5.85	5.57	5.64	5.14	5.04	4.64	4.45	4.31	4.55	5.20	5.71
Germany	5.70	5.80	5.63	5.50	5.00	4.90	4.40	4.03	3.87	4.10	4.87	5.16
Italy	7.42	7.36	6.51	6.02	5.34	5.14	4.76	4.32	4.09	4.36	5.14	5.42
Japan	2.38	2.38	2.10	1.68	1.65	1.36	1.13	1.02	1.84	1.39	1.79	1.78
United Kingdom	7.40	7.31	6.97	6.49	6.02	5.78	5.47	4.80	4.47	4.89	5.45	5.50
United States	6.89	7.00	6.58	6.20	5.94	5.92	5.58	5.32	5.60	6.04	6.34	6.55

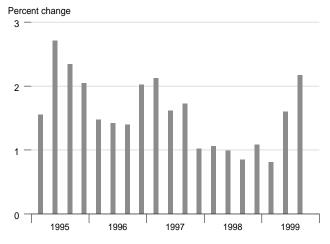
#### **Real GDP Growth**



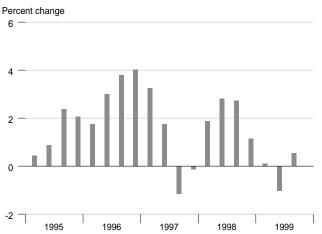
#### **Employment Growth**



## **Consumer Price Index**



#### **Hourly Earnings**



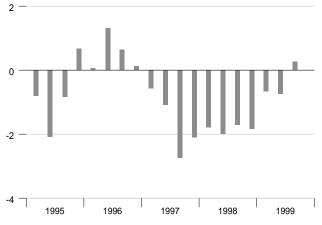
#### **Unemployment Rate**

Percent

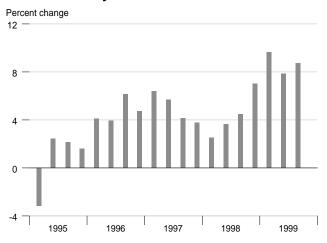


## **Current Account Balance**

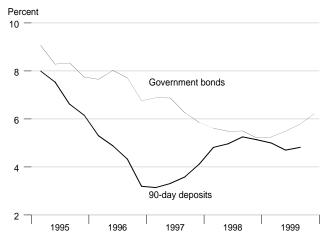
Percent of GDP



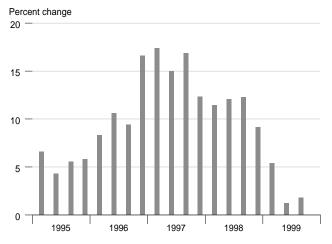
#### **Reserve Money Growth**



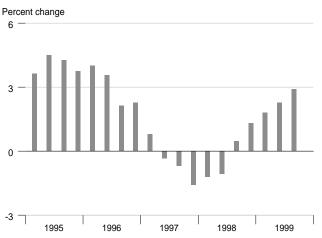
#### **Interest Rates**



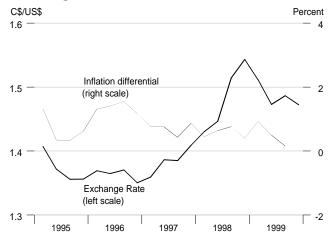
#### M1 Growth



#### M2 Growth

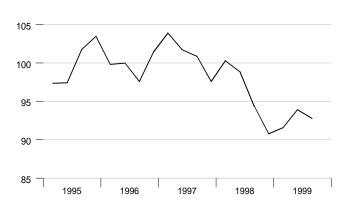


## **Exchange Rate and Inflation Differential**

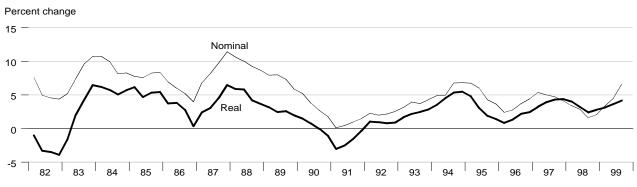


#### **Real Effective Exchange Rate**

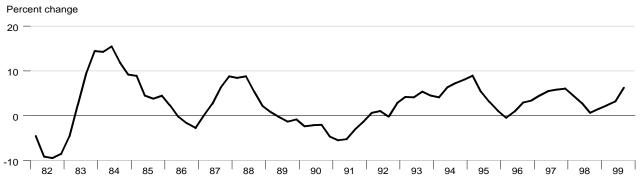




#### **GDP Growth**

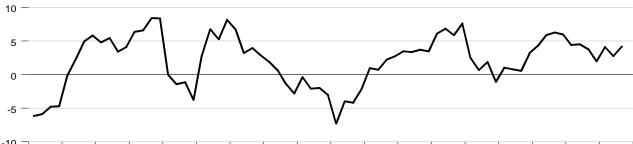


#### **Industrial Production**



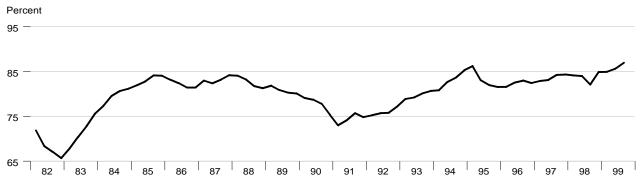
#### **Retail Sales**

Percent change

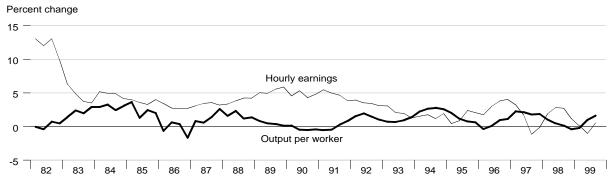




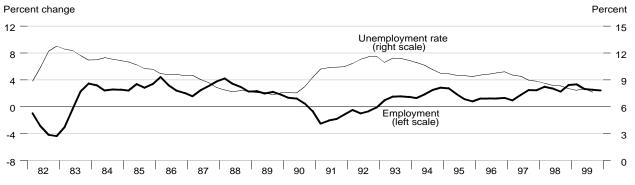
## **Capacity Utilization**



#### Hourly Earnings and Output per Worker



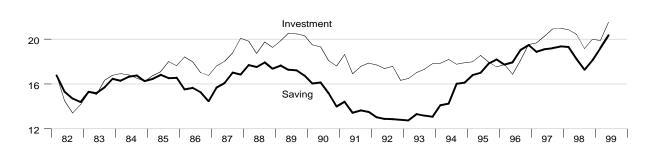
#### Labor Force Indicators



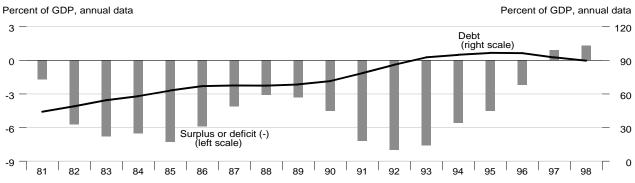
## **Real Saving and Real Investment**

Percent of Real GDP

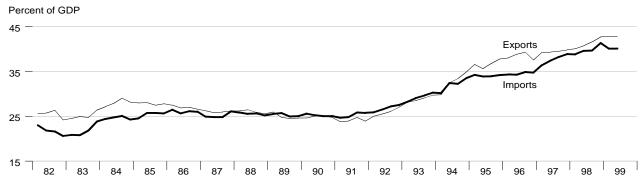
24 -



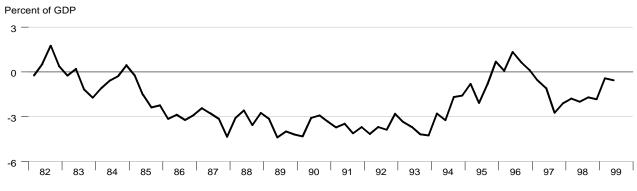
## Government Debt and Budget Surplus or Deficit (-)



#### International Trade - Goods and Services

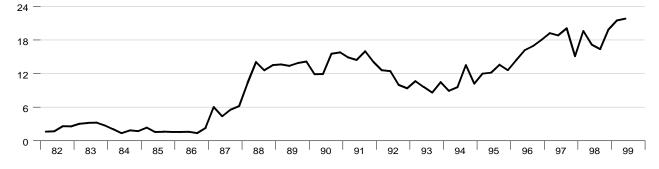


#### **Current Account Balance**



#### Foreign Exchange Reserves

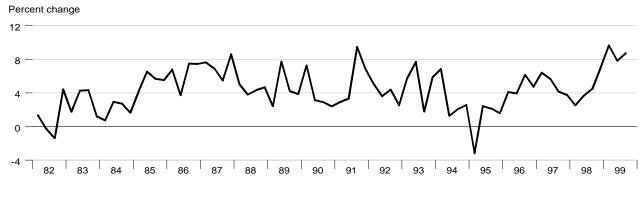
Billions of US\$



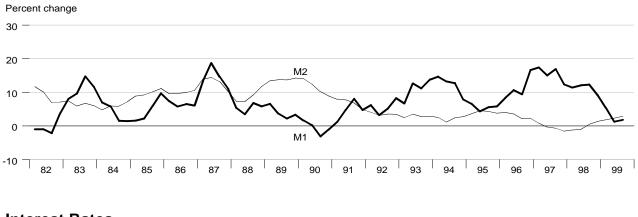




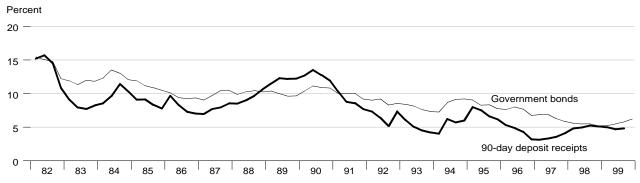
#### **Reserve Money Growth**



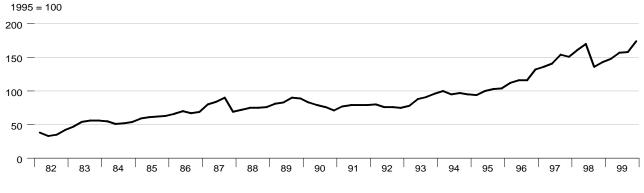
## **Monetary Aggregates**



#### **Interest Rates**

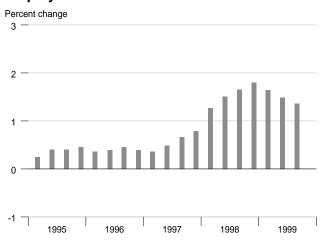


#### Stock Exchange Index - Toronto Stock Exchange

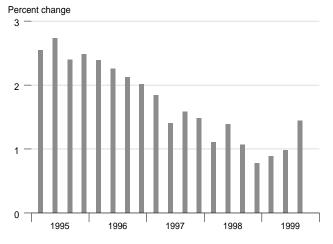


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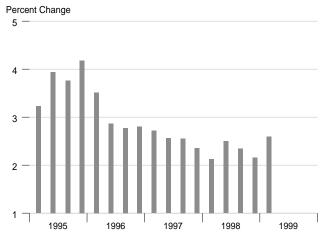
#### **Employment Growth**



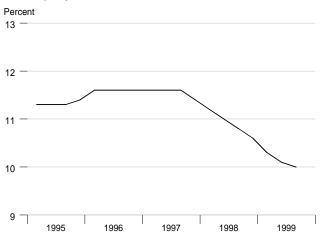
## **Consumer Price Index**



## **Hourly Earnings**

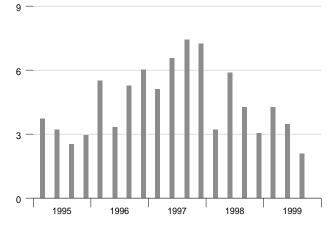


## **Unemployment Rate**

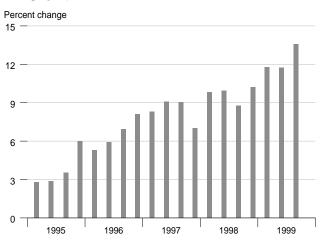


## **Current Account Balance**

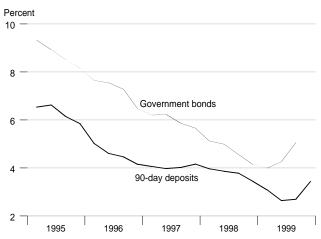
Percent of GDP



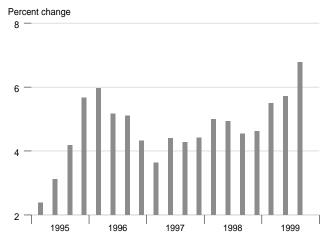
#### M1 Growth



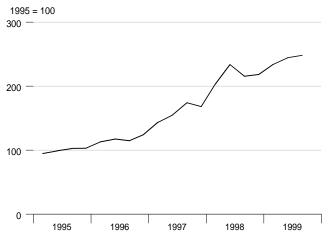
#### **Interest Rates**



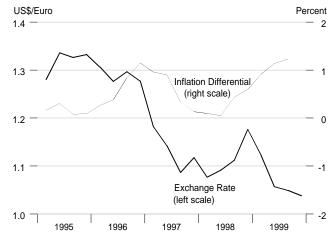
M3 Growth



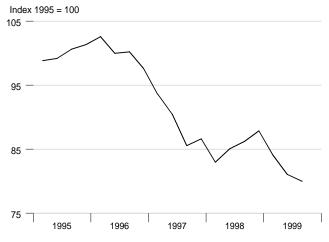
Stock Exchange Index - Dow Jones EURO STOXX SM



## **Exchange Rate and Inflation Differential**



#### **Real Effective Exchange Rate**

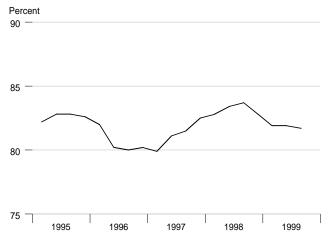


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## **Capacity Utilization**

1995

1996

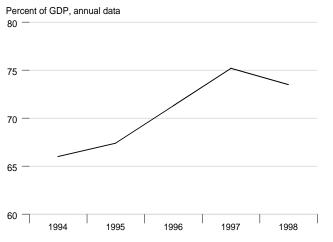


1997

1998

1999

#### **Government Debt**



#### **International Trade - Goods**

1996

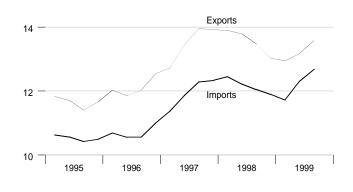
1997

1998

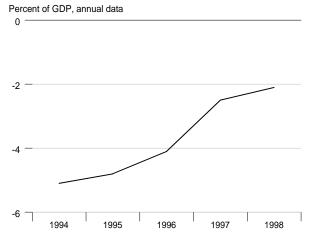
1999

Percent of GDP 16 —

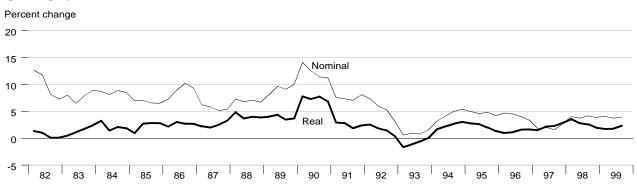
1995



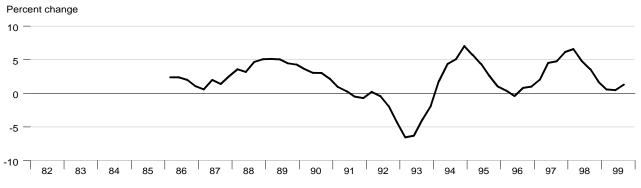
## **Budget Surplus or Deficit (-)**



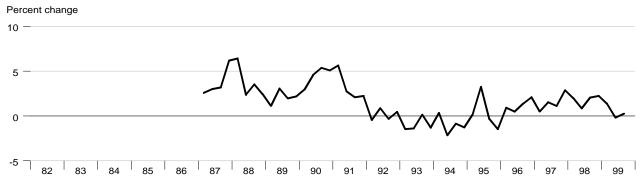
#### **GDP Growth**



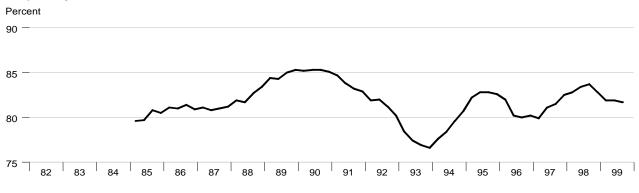
#### **Industrial Production**



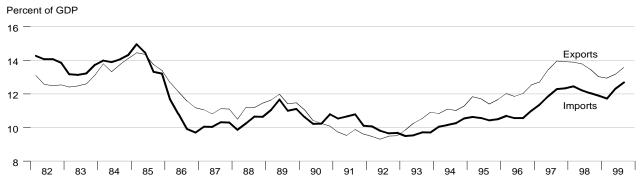
#### **Retail Sales**



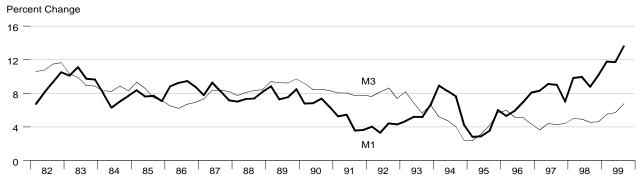
#### **Capacity Utilization**



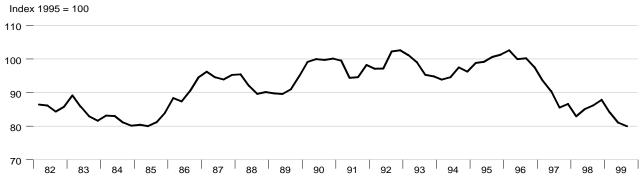
#### International Trade - Goods



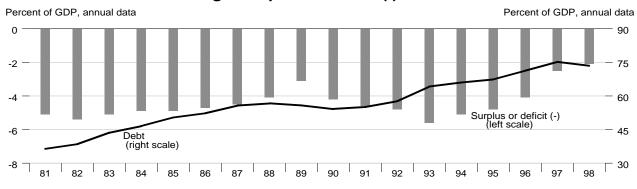
#### **Monetary Aggregates**



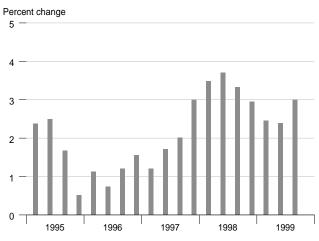
## **Real Effective Exchange Rate**



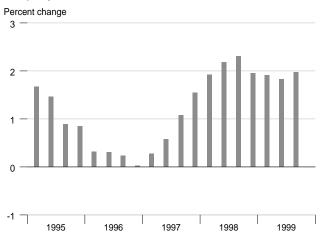
#### Government Debt and Budget Surplus or Deficit (-)



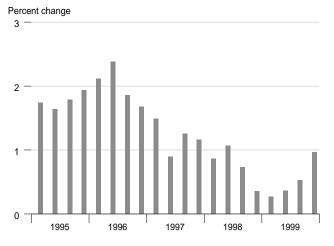
#### **Real GDP Growth**



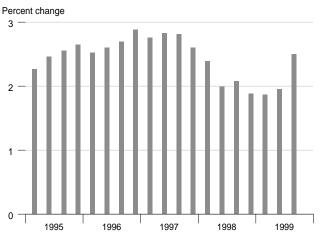
#### **Employment Growth**



## **Consumer Price Index**



#### **Hourly Earnings**

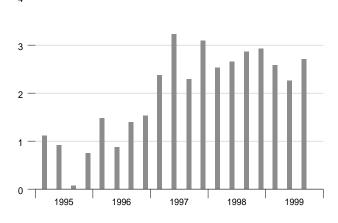


## **Unemployment Rate**

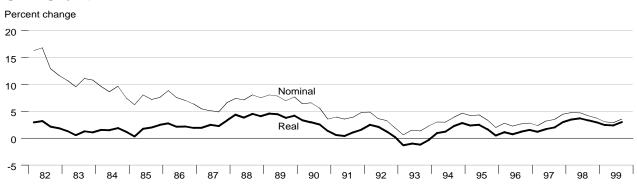
Percent 13 12 12 11 10 1995 1996 1997 1998 1999

## **Current Account Balance**

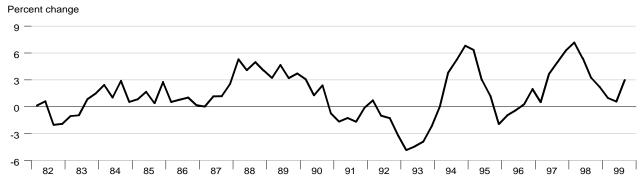
Percent of GDP



#### **GDP Growth**

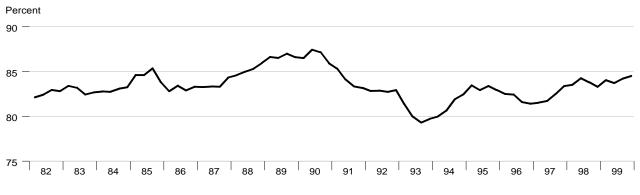


#### **Industrial Production**

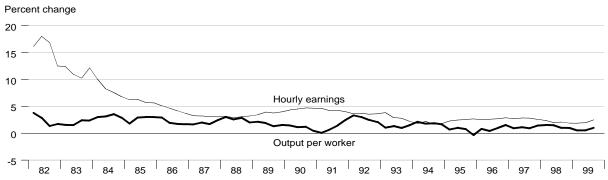


#### **Retail Sales**

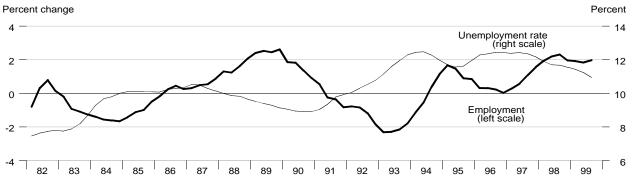
## **Capacity Utilization**



#### Hourly Earnings and Output per Worker

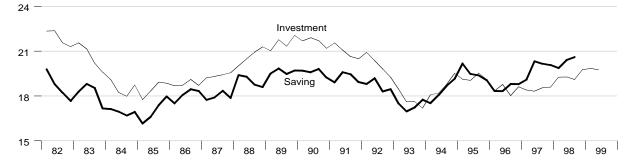


#### Labor Force Indicators

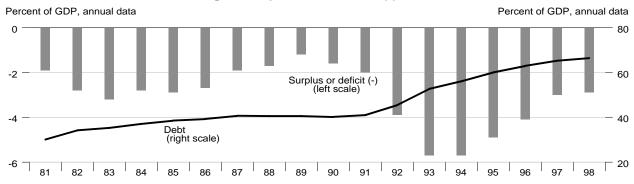


#### **Real Saving and Real Investment**

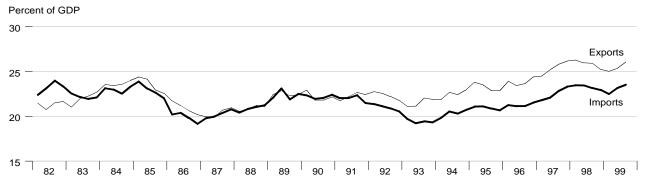
Percent of Real GDP



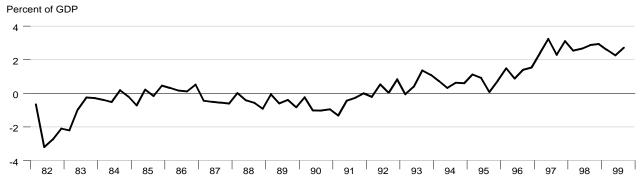
#### Government Debt and Budget Surplus or Deficit (-)



#### International Trade - Goods and Services



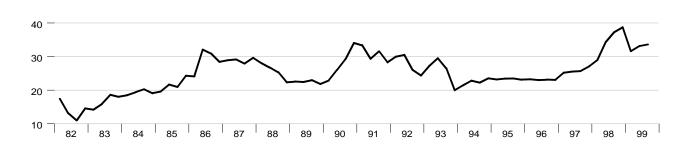
#### **Current Account Balance**



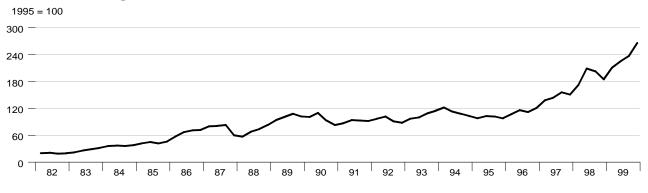
#### Foreign Exchange Reserves

Billions of US\$

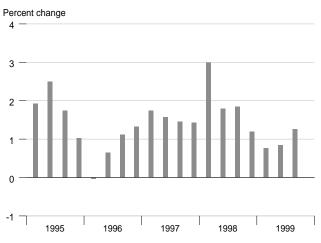
50 -



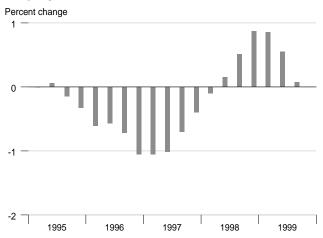
#### Stock Exchange Index - SBF 250



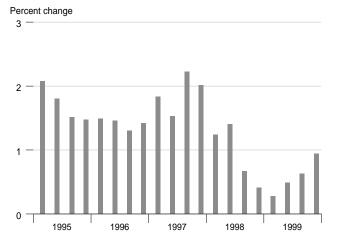
#### **Real GDP Growth**



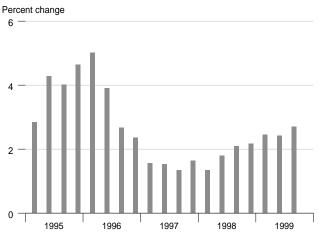
#### **Employment Growth**



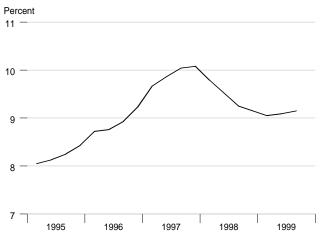
#### **Consumer Price Index**



#### **Hourly Earnings**



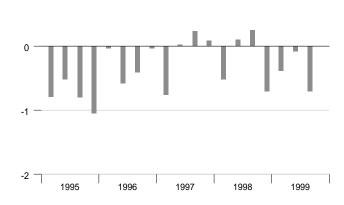
## **Unemployment Rate**



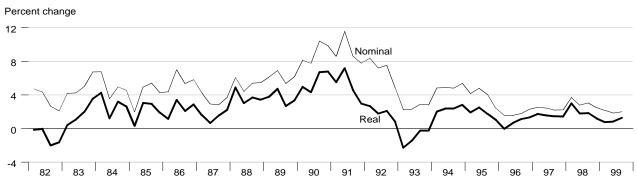
## **Current Account Balance**

Percent of GDP

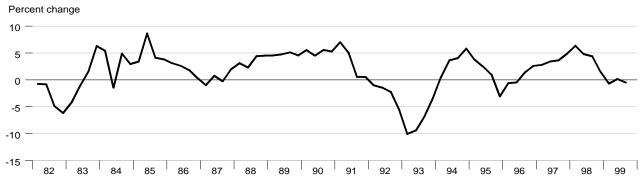
1 -



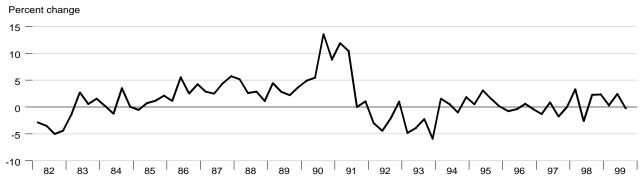
#### **GDP Growth**



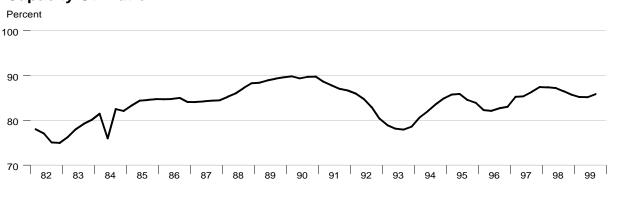
#### **Industrial Production**



## **Retail Sales**



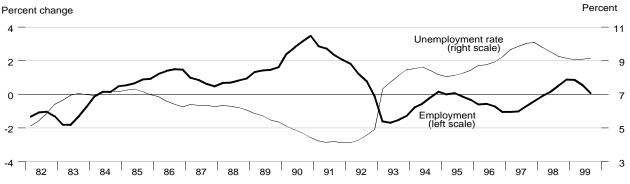
## **Capacity Utilization**



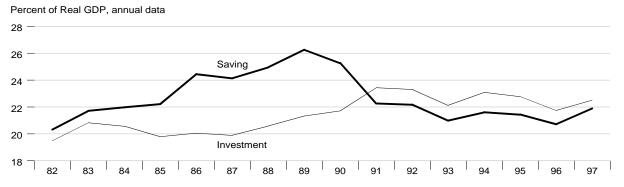
#### Hourly Earnings and Output per Worker



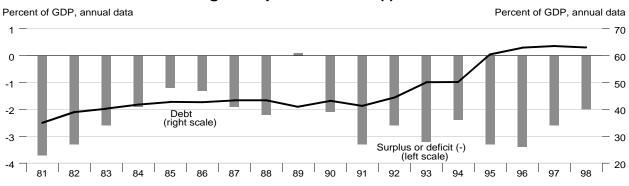
#### Labor Force Indicators



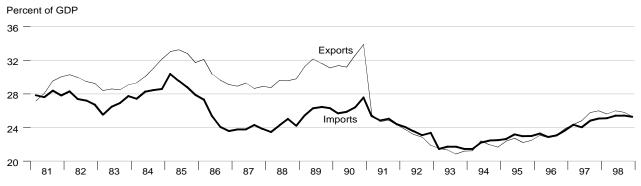
#### **Real Saving and Real Investment**



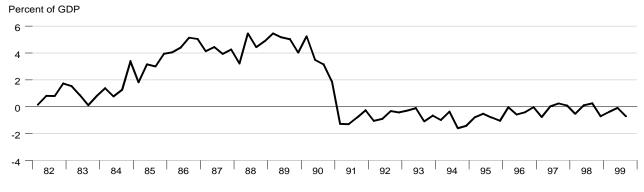
## Government Debt and Budget Surplus or Deficit (-)



### International Trade - Goods and Services

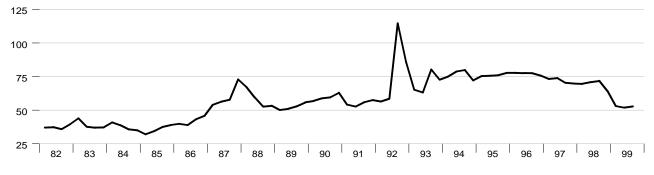


#### **Current Account Balance**

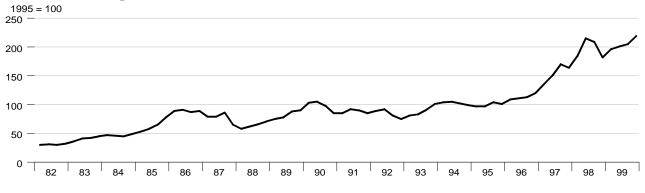


## Foreign Exchange Reserves

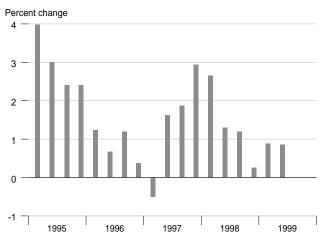
Billion of US\$



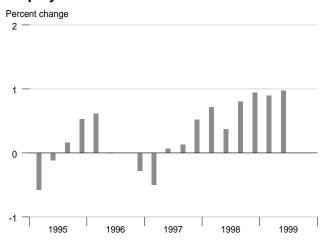
#### Stock Exchange Index - CDAX



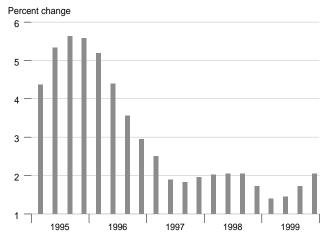
#### **Real GDP Growth**



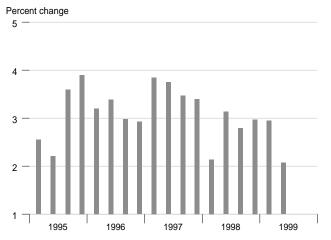
#### **Employment Growth**



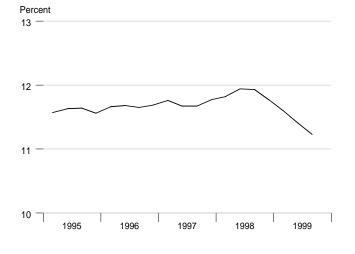
#### **Consumer Price Index**



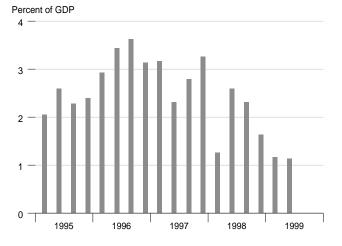
#### **Hourly Earnings**



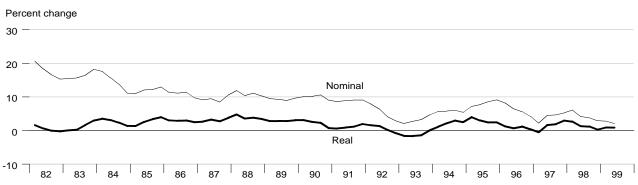
## **Unemployment Rate**



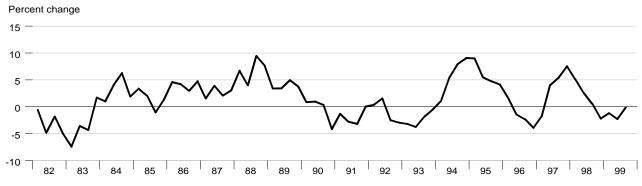
## **Current Account Balance**



#### **GDP Growth**

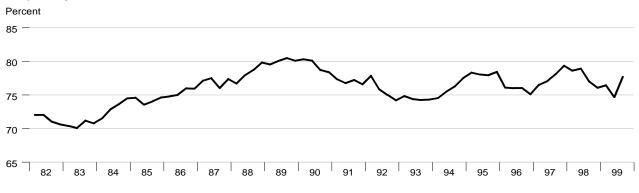


#### **Industrial Production**

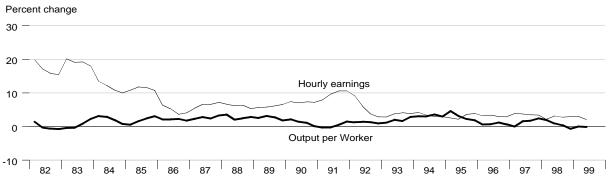


#### **Retail Sales**

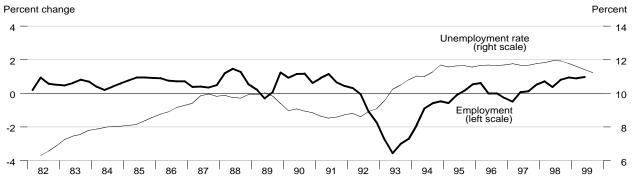
#### **Capacity Utilization**



#### Hourly Earnings and Output per Worker



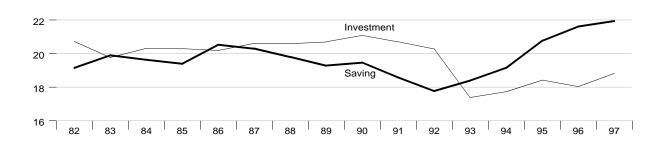
#### Labor Force Indicators



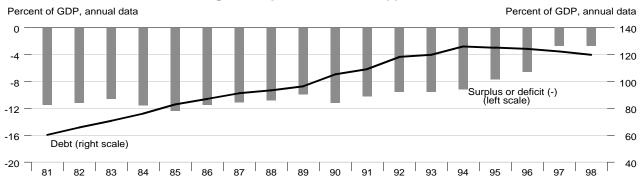
## **Real Saving and Real Investment**

Percent of Real GDP, annual data

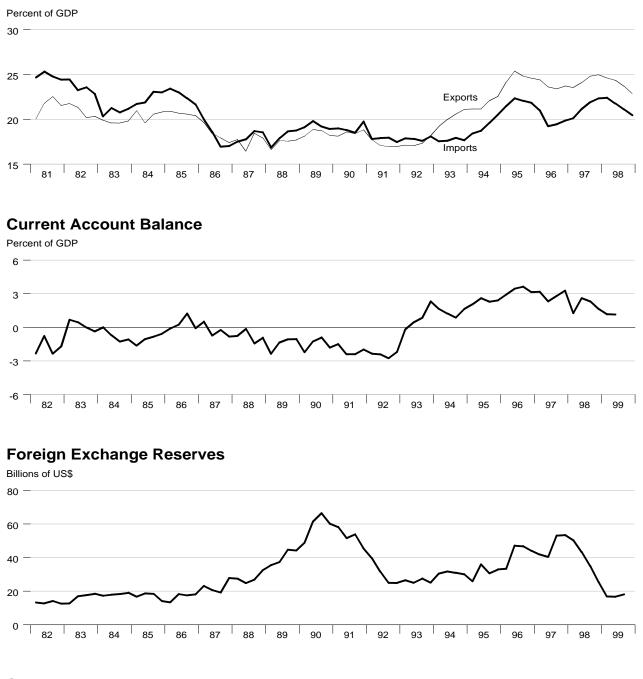
24 -

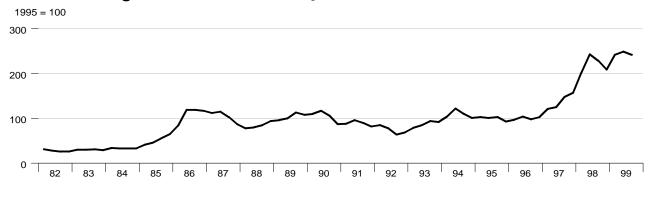


#### Government Debt and Budget Surplus or Deficit (-)



### International Trade - Goods and Services



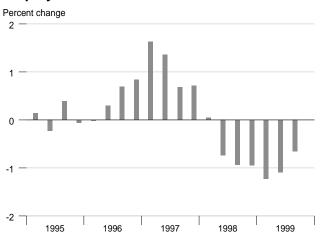


#### Stock Exchange Index - Milan Stock Exchange

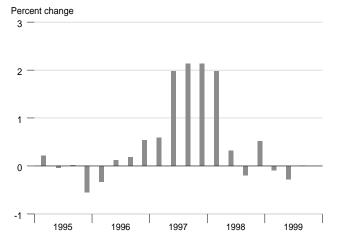
Federal Reserve Bank of St. Louis

## 

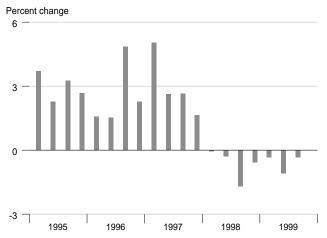
#### **Employment Growth**



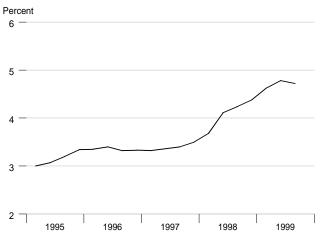
## **Consumer Price Index**



## **Monthly Earnings**

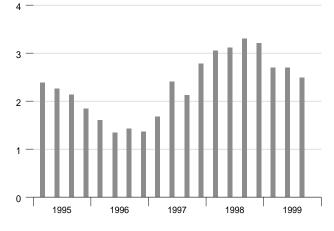


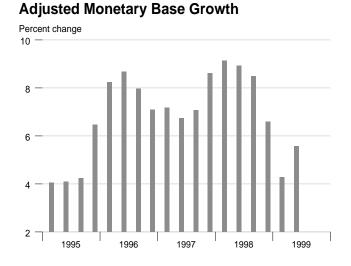
## **Unemployment Rate**



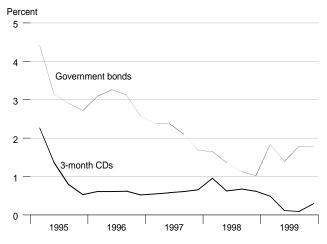
## **Current Account Balance**

Percent of GDP

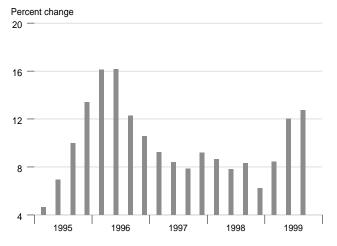




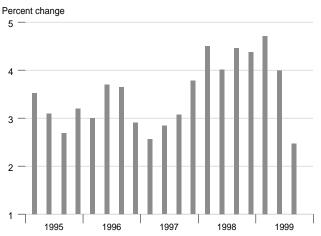
#### **Interest Rates**



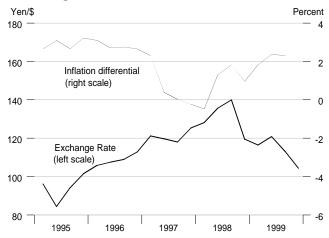
#### M1 Growth



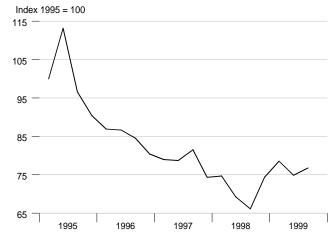
#### M2 Growth



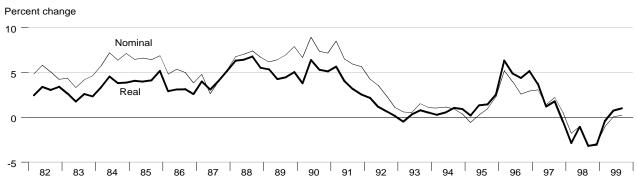
## **Exchange Rate and Inflation Differential**



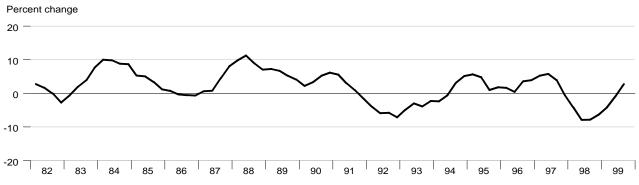
## **Real Effective Exchange Rate**



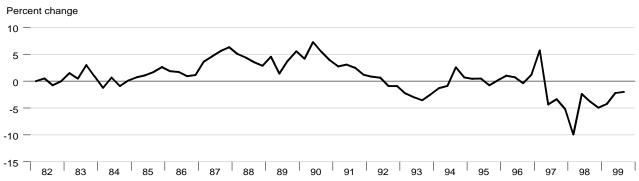
#### **GDP Growth**



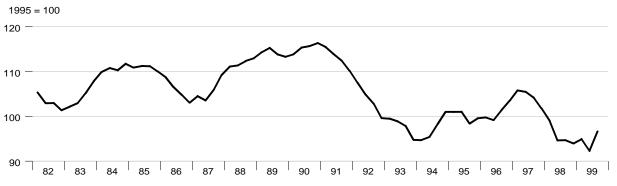
#### **Industrial Production**



## **Retail Sales**



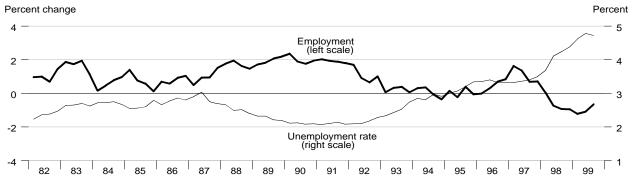
## **Capacity Utilization**



#### Monthly Earnings and Output per Worker



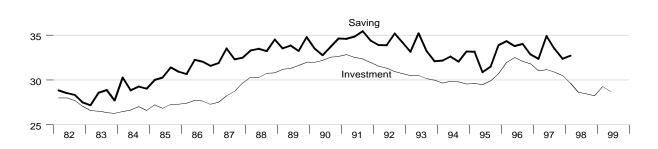
#### Labor Force Indicators



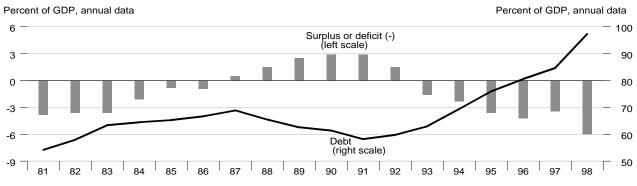
## **Real Saving and Real Investment**

Percent of Real GDP

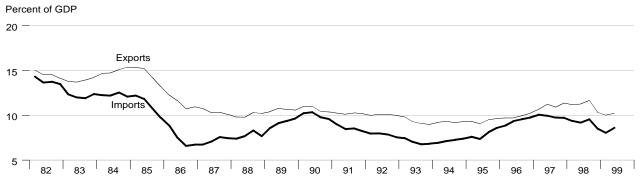
40 -



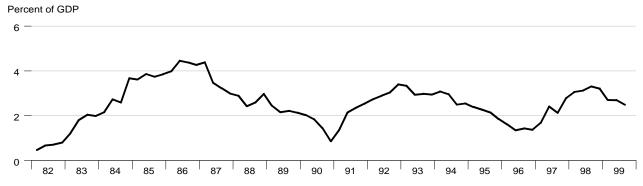
## Government Debt and Budget Surplus or Deficit (-)



## International Trade - Goods and Services

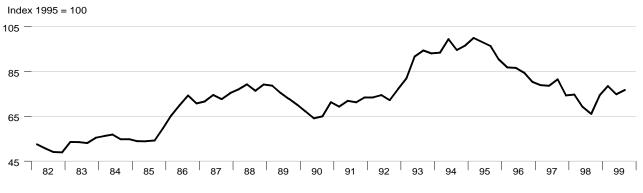


## **Current Account Balance**

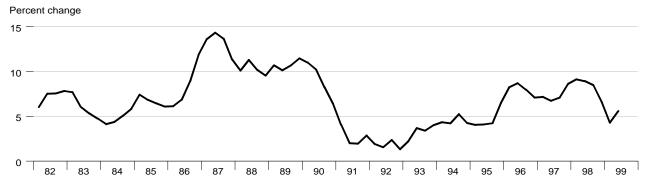


## Foreign Exchange Reserves

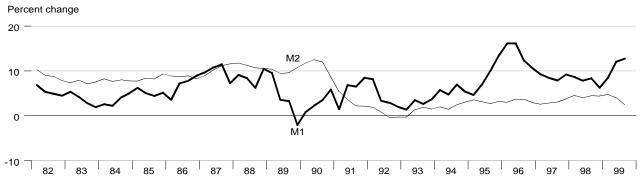
## **Real Effective Exchange Rate**



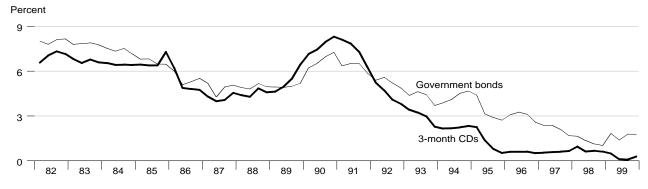
### **Adjusted Monetary Base Growth**



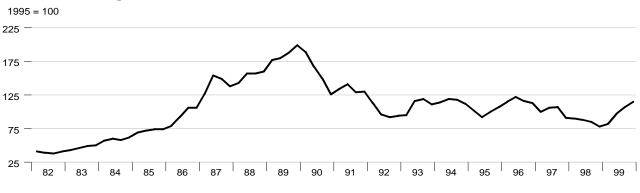
#### **Monetary Aggregates**



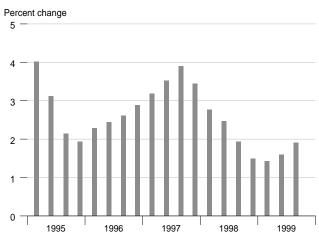
#### **Interest Rates**



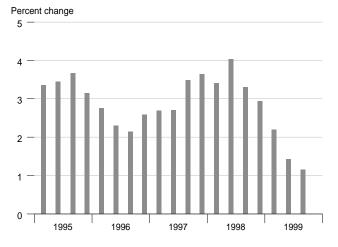
#### Stock Exchange Index - Tokyo Stock Exchange



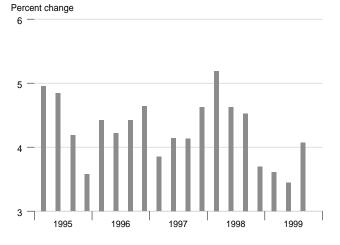
#### **Real GDP Growth**



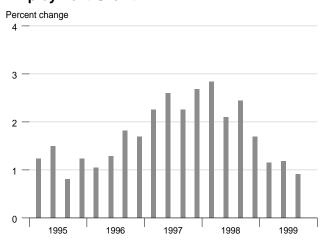
#### **Consumer Price Index**



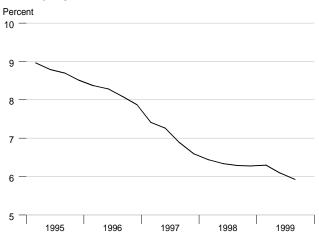
#### Weekly Earnings



### **Employment Growth**

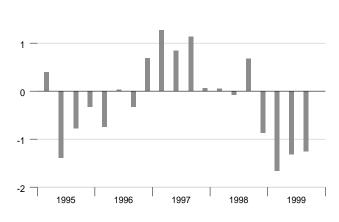


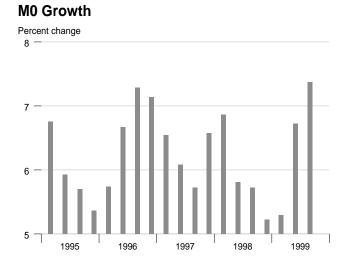
#### **Unemployment Rate**



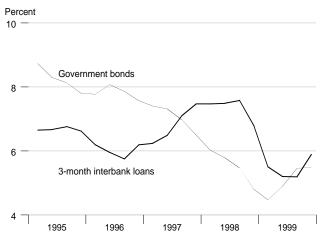
## **Current Account Balance**



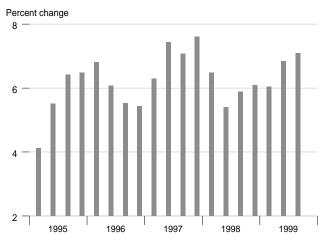




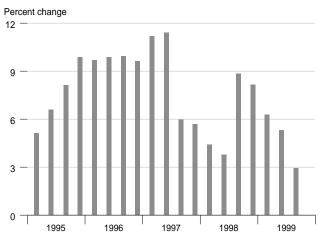
#### **Interest Rates**



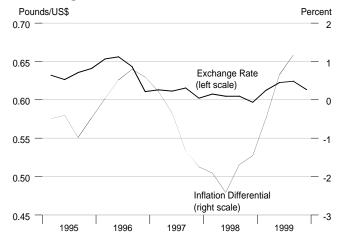
M2 Growth



#### M4 Growth

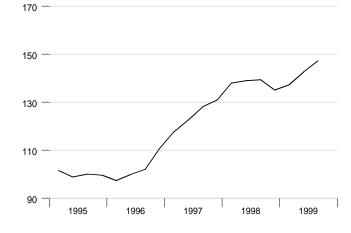


## **Exchange Rate and Inflation Differential**

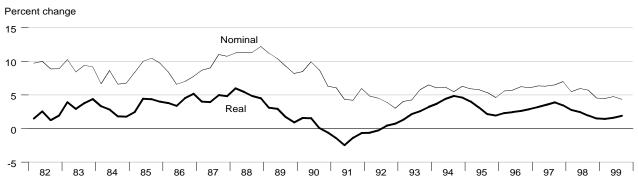


## **Real Effective Exchange Rate**

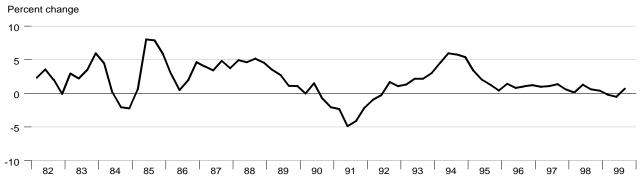
Index 1995 = 100



#### **GDP Growth**

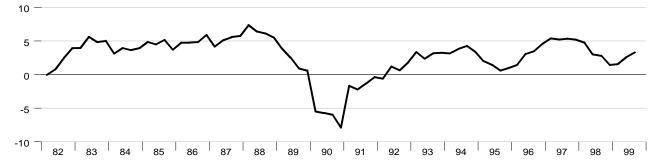


#### **Industrial Production**

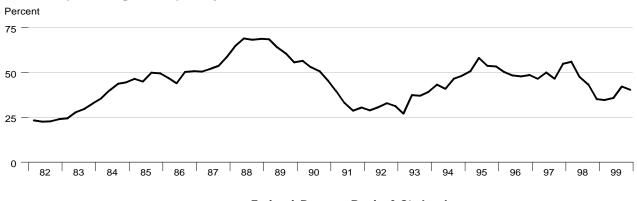


## **Retail Sales**

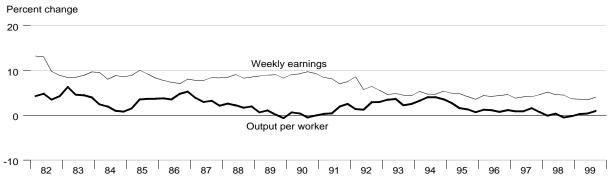
Percent change



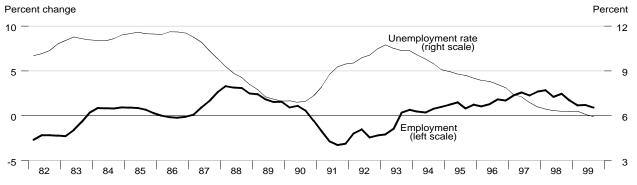
## **Firms Operating at Capacity**



#### Weekly Earnings and Output per Worker



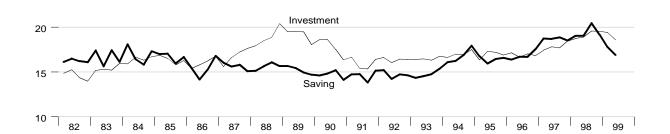
#### Labor Force Indicators



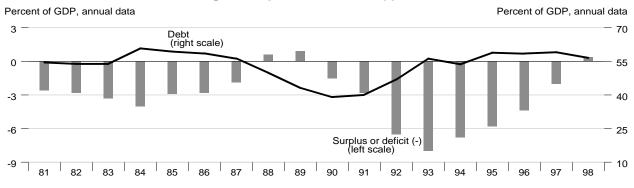
#### **Real Saving and Real Investment**

Percent of Real GDP

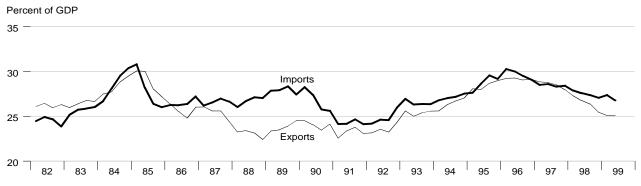
25 -



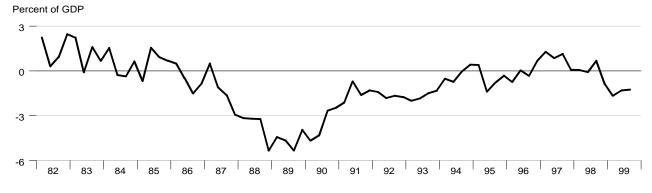
#### Government Debt and Budget Surplus or Deficit (-)



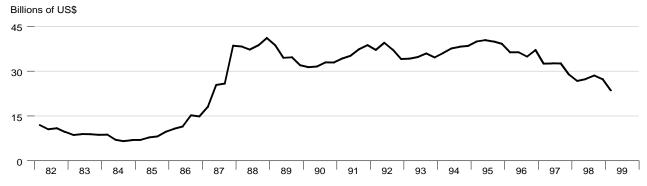
#### International Trade - Goods and Services



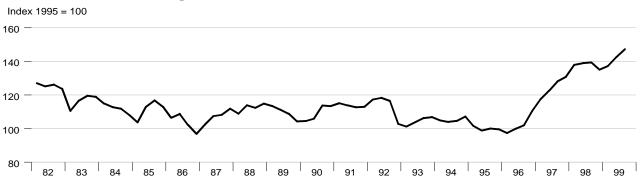
#### **Current Account Balance**



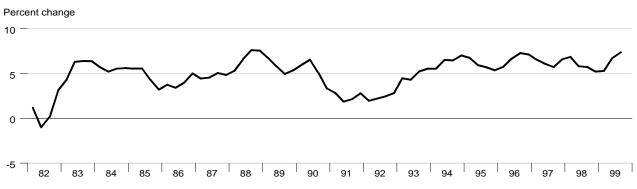
#### Foreign Exchange Reserves



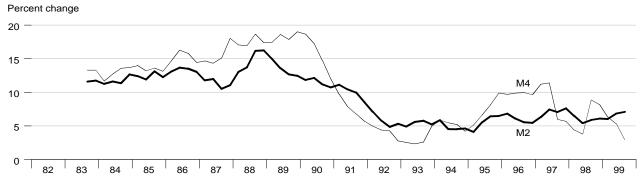
#### **Real Effective Exchange Rate**



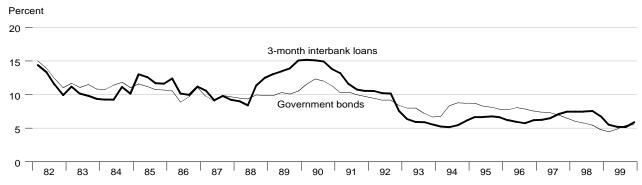
#### M0 Growth



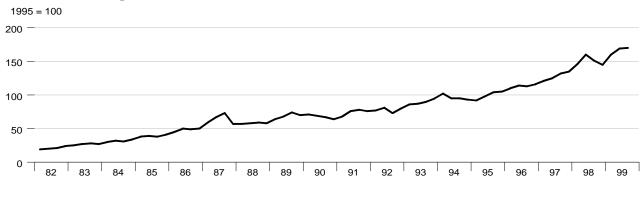
## **Monetary Aggregates**



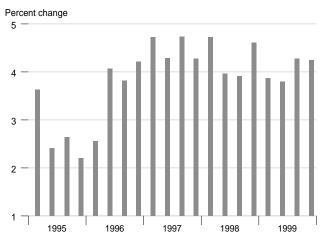
#### **Interest Rates**



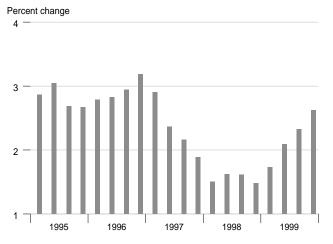
#### Stock Exchange Index - Financial Times Stock Exchange



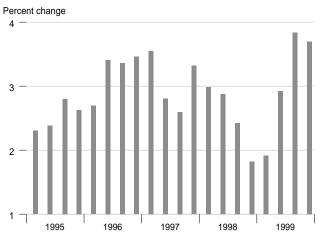
#### **Real GDP Growth**



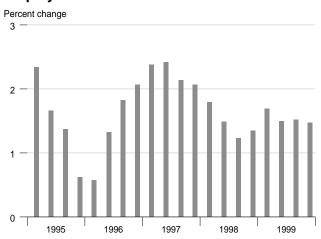
#### **Consumer Price Index**



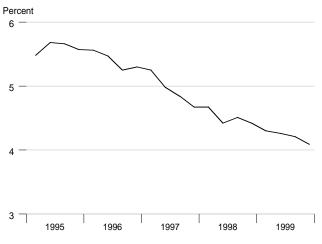
#### **Hourly Earnings**



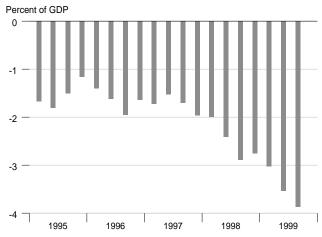
#### **Employment Growth**

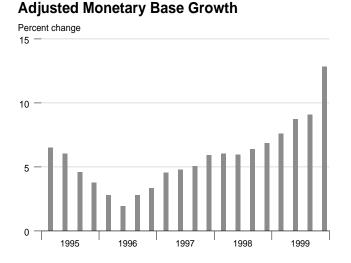


## **Unemployment Rate**

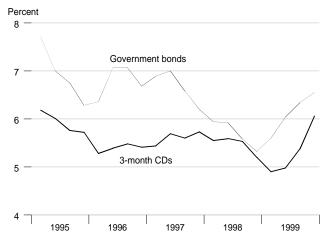


#### **Current Account Balance**

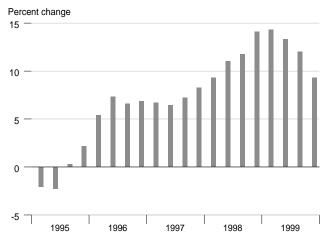




#### **Interest Rates**

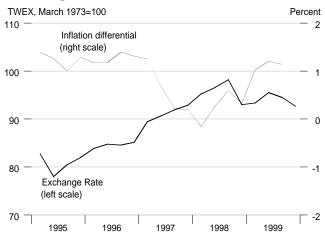


**MZM Growth** 

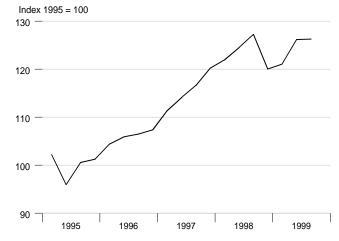


#### M2 Growth

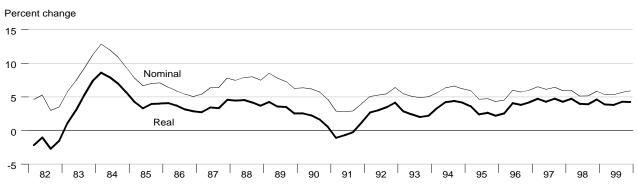
## **Exchange Rate and Inflation Differential**



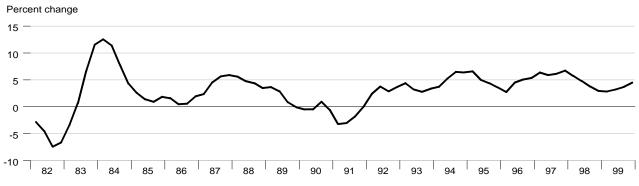
## **Real Effective Exchange Rate**



#### **GDP Growth**

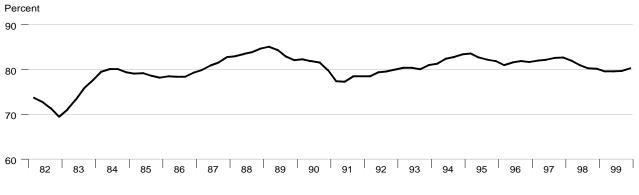


#### **Industrial Production**

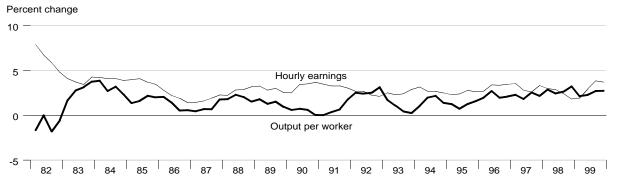


#### **Retail Sales**

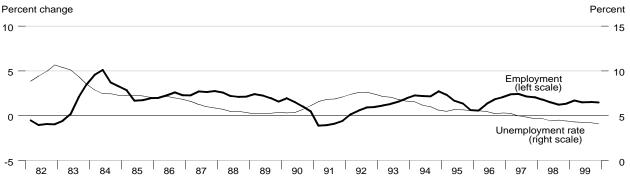
#### **Capacity Utilization**



#### Hourly Earnings and Output per Worker



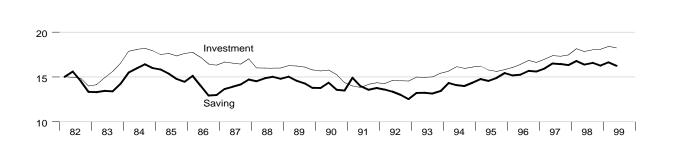
#### Labor Force Indicators



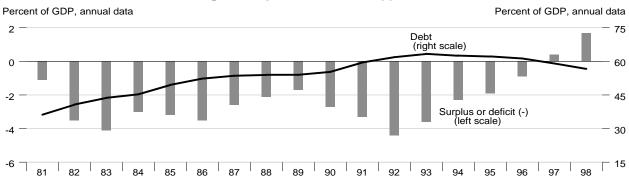
## **Real Saving and Real Investment**

Percent of Real GDP

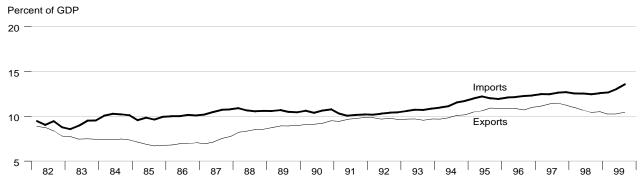
25 —



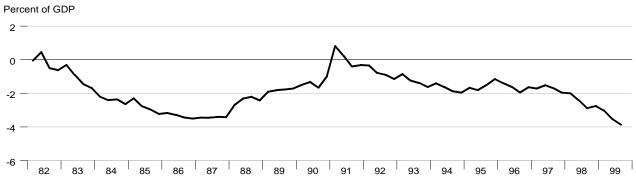
## Government Debt and Budget Surplus or Deficit (-)



#### International Trade - Goods and Services

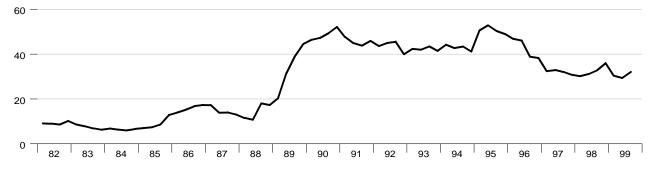


#### **Current Account Balance**

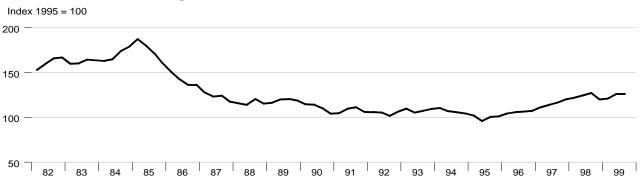


#### **Foreign Exchange Reserves**

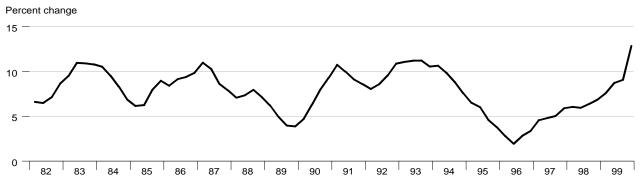
Billions of US\$



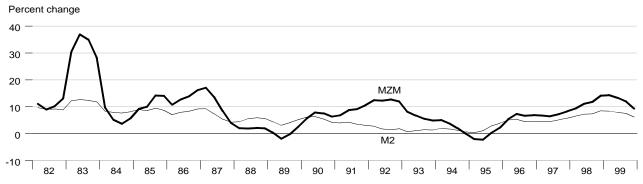
## **Real Effective Exchange Rate**



## **Adjusted Monetary Base Growth**



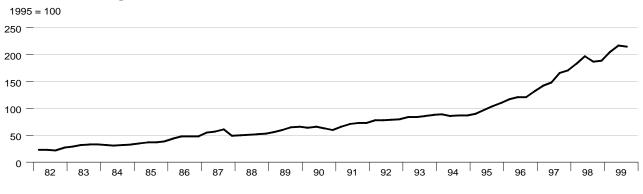
## **Monetary Aggregates**



#### **Interest Rates**

Percent 20 -15 10 Government bonds 5 3-month CDs 0 - \_\_\_\_\_82 83 84 90 91 89 92 93 94 95 96 97 98 99 85 86 87 I. 88 

#### Stock Exchange Index - New York Stock Exchange



## Notes

Euro-area Data - The unit of account for most series is the euro.

Prior to December 1998, euro-area interest rates 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.

Inflation data for the euro area is based on the harmonized index of consumer prices. Data for individual countries in this publication continues to be based on national consumer price indexes.

The dollar/euro 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 10 euro-area countries 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 most of 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. Data for capacity utilization and hourly earnings remain for western Germany only.

Third quarter 1990: current account balance and international trade. First quarter 1991: CPI, GDP, industrial production, investment and saving.

First quarter 1992: employment and output per worker. First quarter 1993: stock exchange index and unemployment rate. First quarter 1994: retail sales.

**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 and Italy; all households for France; households with a monthly income of less than 25,000 DM for Germany; 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.

**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.

**Earnings** are based on hourly earnings in manufacturing for Canada, France, Germany, the United States, and the euro area; hourly earnings in industry excluding construction for Italy; monthly earnings in manufacturing for Japan; and weekly earnings in manufacturing for the United Kingdom.

The **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 1989-91. 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, the United States, and the euro area; industrial employment for France; employed persons excluding conscripts for Italy; and total employment for Japan and the United Kingdom.

Fluctuations in the dollar value of Foreign **Exchange Reserves** occur as a result of changes in reserve holdings and/or changes in the dollar value of the currencies held.

**Government Surplus** is the difference between general government current receipts and total outlays. Total outlays consist of current expenditures and net capital expenditures. **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.

The **Inflation Differential** is the difference between the U.S. inflation rate and the foreign inflation rate, as measured by the consumer price index. For the U.S. chart on page 41, the inflation differential is the difference between the U.S. inflation rate and a weighted average of the inflation rates in the 17 countries used in the major currency trade-weighted exchange index. For the euro-area chart on page 12, the inflation differential is the difference between the U.S. inflation rate and a weighted average of the inflation rates in the 11 euro-area countries. The weights are based on 1997 GDP shares.

**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 Canada and the United States; long-term public and semi-public sector bonds for France; 7-15 year public sector bonds for Germany; 15-20 year government bonds through 1990, and 10-year government bonds starting in 1991 for Italy; 10-year government bonds for Japan, the United Kingdom, and the euro area.

**Investment** is gross fixed capital formation and changes in stocks (inventories) of the government and business sectors.

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, reserve requirements and an adjustment for the effects of changes in reserve requirement ratios.

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.

#### M0

United Kingdom – notes and coins in circulation outside the Bank of England and bankers' operational deposits at the Bank of England.

#### **M1**

Canada – currency in circulation and chartered bank net demand deposits. Japan – cash, currency in circulation and deposit money. Euro area – currency in circulation and overnight deposits.

#### MZM

United States – currency in circulation, travelers' checks and 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 – M1 plus all checkable notice deposits and personal term deposits.

United Kingdom – currency in circulation and sterling retail deposits with the UK 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 two years.

#### M4

United Kingdom – M2 plus wholesale deposits with the UK banks and building societies.

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

Retail Sales are based on a volume index.

Saving is gross national saving which includes net national saving (receipts less disbursements of households, business and the government) and consumption of fixed capital. Nominal saving is deflated using the investment deflator.

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

The trade-weighted exchange rate, **TWEX**, is the Board of Governors of the Federal Reserve System's major currency trade-weighted dollar exchange rate. This is a weighted average of the exchange value of the U.S. dollar relative to the major international currencies of 17 industrial countries.

The **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

Except as noted below, all data are from the Organization for Economic Cooperation and Development (OECD). For more details on these data see: OECD, Main Economic Indicators, Sources and Definitions 1997, July 1997. This publication is available on the Internet at: http://www.oecd.org/std/meta.htm.

Bank of Canada M1 and M2 (Canada)

Bank of England M2 (U.K.)

Banca D'Italia Long-term interest rate (Italy)

Bank of Japan Adjusted monetary base (Japan), long-term interest rate (Japan), employment (Japan)

Board of Governors of the Federal Reserve System Exchange rates, short and long-term interest rates (U.S.), M2 (U.S.), industrial production index (U.S.), capacity utilization (U.S.)

Bundesanstalt Fur Arbeit Employment (Germany)

*Bureau of Economic Analysis (BEA), U.S. Department of Commerce* Gross domestic product (U.S.), current account balance (U.S.), merchandise and service trade (U.S.)

Bureau of Labor Statistics (BLS), U.S. Department of Labor Employment (U.S.), consumer price index (U.S.) *Eurostat* Current account balance (euro area), gross domestic product (euro area), retail sales (euro area)

Federal Reserve Bank of St. Louis Inflation differential (U.S. and euro area), adjusted monetary base (U.S.), MZM (U.S.)

*Financial and Economic Research International* Budget surplus or deficit (euro area), employment (euro area), government debt (euro area), merchandise trade (euro area)

*Haver Analytics* Synthetic euro exchange rate

Instituto Centrale di Statistica Employment (Italy)

International Monetary Fund (IMF)

Foreign exchange reserves, reserve money (Canada), merchandise and service trade (except U.S. and euro area), and real effective exchange rate. For more details on these data see: *IMF*, *International Financial Statistics*.

*Ministere du Travail et des Affaires Sociales* Employment (France)

Statistics Canada Employment (Canada)

U.K. Office for National Statistics Employment (U.K.) and M0 (U.K.)