



What Drives Large Current Account Deficits?

In recent years, the U.S. current account balance has declined sharply, falling from -1.7 percent of gross domestic product (GDP) in 1997 to -4.4 percent in 2000. Similarly, the current account balance declined from a surplus of 0.2 percent of GDP in 1981 to -3.3 percent in 1986. These two episodes, as well as episodes involving other developed countries, suggest that investment spending plays a key role in determining the path of a country's current account balance.

During the 1980s, the United States experienced rising deficits in both its current account and government budget balances. This "twin deficit" relationship led many analysts to conclude that government budget deficits were driving current account deficits. As shown in the table, many developed countries experiencing current account deficits of 3 percent of GDP or higher in the 1970s and early 1980s fit the twin deficit pattern, as indicated by a positive correlation between these balances (both as percentages of GDP). Since the mid-1980s, however, the two balances generally have been negatively correlated.

How can government deficits be linked with current account deficits? The current account balance equals the difference between domestic saving and investment. A country's total investment spending must be financed by a combination of domestic and foreign saving. Domestic saving consists of saving by households, businesses and the government. If government deficits reduce domestic saving, then the only way for a country to maintain investment spending is by borrowing from abroad (foreign saving). This is what occurred in the U.S. in the 1980s.

The last column in the table illustrates the incompleteness of the twin deficit explanation. In nearly every episode, the current account balance as a percent of GDP was negatively correlated with investment spending as a

percent of GDP. Rising current account deficits were associated with rising domestic investment.

The most recent U.S. example of a falling current account balance shows the importance of investment. Between 1993 and 1997, the current account balance generally stayed in the range of -1.0 to -1.5 percent of gross domestic product, as a rising saving rate, caused primarily by declining federal budget deficits, kept pace with rising domestic investment. In 1998, this pattern changed: investment continued to rise, but a drop in the household saving rate resulted in a slight fall in domestic saving, producing a rise in the current account deficit.

Changes in domestic saving behavior provide, at most, a partial explanation of changes in current account balances. More importantly, large current account deficits in the developed economies are associated with increases in investment, not merely a shift in the funding of the investment from domestic to foreign savers.

—Cletus C. Coughlin and Patricia S. Pollard

Correlation with the Current Account			
Country	Period	Government Budget	Investment
Austria	1975-82	-0.54	-0.87
Belgium	1976-85	0.37	-0.05
Canada	1973-80	0.49	-0.20
	1984-95	0.19	0.15
Finland	1972-77	-0.07	-0.83
	1984-94	-0.28	-0.37
Ireland	1967-90	0.79	-0.81
Italy	1972-77	-0.34	-0.94
Norway	1972-80	0.62	-0.88
	1985-90	0.27	-0.87
Portugal	1972-85	0.44	-0.35
Spain	1972-78	0.36	-0.62
	1986-95	-0.51	-0.77
Sweden	1978-84	0.40	-0.54
	1987-94	-0.32	-0.49
United Kingdom	1971-77	0.55	-0.69
	1985-94	-0.55	-0.68
United States	1980-89	0.31	-0.12
	1993-00	-0.91	-0.91

Note: The periods chosen begin prior to the start of the rising current account deficit and end (except the recent U.S. case) following the shrinkage of this deficit. Sources: OECD, IMF and U.S. Bureau of Economic Analysis



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Conventions used in this publication:

1. Charts and tables contain data that were current through April 2001. 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: $[(x_t / x_{t-12}) - 1] \times 100$.
3. All data with significant seasonal patterns are seasonally adjusted.

Notes: The Euro area retail sales volume chart on page 14 has been replaced with a chart covering hourly earnings and output per worker. The chart showing recent changes in the volume of retail sales in the Euro area continues to be published on page 13.
The retail sales volume data for Italy have been revised. These data are no longer available prior to 1990.

We welcome your comments addressed to:

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Real Gross Domestic Product

Percent change

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	3.27	2.55	3.19	3.74	4.30	5.19	4.92	5.08	5.40	4.97	4.04	.
Euro Area	2.80	2.69	2.05	1.95	2.17	2.61	3.36	3.51	3.73	3.26	2.97	.
France	3.57	3.45	3.00	2.92	2.84	3.22	3.72	3.58	3.39	2.97	2.82	.
Germany	1.73	1.61	0.96	0.63	0.99	1.60	2.47	2.62	3.96	3.33	2.65	.
Italy	1.65	1.88	0.73	1.08	1.30	1.39	2.68	3.30	2.89	2.73	2.74	.
Japan	0.69	-0.85	-1.41	-0.38	1.02	2.07	0.44	2.38	1.06	0.52	2.83	.
United Kingdom	2.98	2.40	2.02	1.70	1.72	2.53	3.20	3.21	3.40	2.98	2.57	.
United States	4.10	3.91	4.61	3.87	3.75	4.31	4.96	5.29	6.10	5.21	3.41	2.70

Nominal Gross Domestic Product

Percent change

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	3.12	1.68	2.22	3.56	5.35	7.79	8.15	9.03	9.21	8.56	7.41	.
Euro Area	3.80	4.36	3.96	4.53	4.32	4.39	4.49	4.60	4.81	4.58	4.21	.
France	4.42	4.09	3.35	3.23	3.02	3.36	3.88	4.20	3.68	3.53	3.48	.
Germany	3.03	2.94	2.14	2.02	1.97	2.39	2.88	2.35	3.39	2.95	2.26	.
Italy	4.44	4.64	3.22	3.63	2.88	2.73	3.78	4.78	5.26	5.53	5.32	.
Japan	0.36	-1.27	-1.87	-1.28	-0.19	0.39	-1.36	0.84	-0.74	-1.05	0.79	.
United Kingdom	6.29	5.87	4.81	3.86	4.19	4.70	5.70	5.47	5.30	4.91	3.86	.
United States	5.34	5.22	5.85	5.44	5.38	5.80	6.52	7.12	8.21	7.48	5.80	5.03

Consumer Price Index

Percent change

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	0.99	0.85	1.07	0.82	1.60	2.16	2.34	2.67	2.45	2.73	3.07	.
Euro Area	1.38	1.18	0.86	0.90	1.08	1.16	1.53	2.15	2.02	2.49	2.67	.
France	1.08	0.72	0.36	0.27	0.37	0.53	0.99	1.51	1.49	1.89	1.88	.
Germany	1.41	0.66	0.41	0.28	0.50	0.63	0.93	1.80	1.63	2.05	2.31	.
Italy	2.07	2.04	1.70	1.18	1.46	1.71	2.08	2.57	2.51	2.63	2.66	2.90
Japan	0.34	-0.19	0.50	-0.10	-0.25	0.01	-1.00	-0.66	-0.70	-0.68	-0.54	.
United Kingdom	4.02	3.33	2.91	2.22	1.42	1.18	1.43	2.32	3.14	3.20	3.06	.
United States	1.62	1.55	1.48	1.66	2.03	2.33	2.62	3.27	3.31	3.47	3.44	3.41

Employment Growth

Percent change

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	2.70	2.49	2.69	2.88	2.84	2.70	2.73	3.02	2.76	2.34	2.30	1.64
Euro Area	1.75	1.89	2.03	1.84	1.49	1.71	1.76	1.92	2.17	2.01	2.09	.
France	1.77	2.06	2.08	2.16	2.26	2.43	2.82	3.15	3.33	3.42	3.56	.
Germany	0.81	1.09	1.42	1.43	0.73	1.07	1.08	1.42	1.96	1.45	1.41	.
Italy	0.71	1.25	1.45	1.23	0.91	0.95	0.76	1.01	1.33	1.65	.	.
Japan	-0.74	-0.94	-0.95	-1.23	-1.09	-0.66	-0.22	-0.46	-0.38	-0.37	0.22	.
United Kingdom	2.13	2.56	1.75	1.04	1.18	1.09	1.34	1.18	1.07	0.62	0.41	.
United States	1.48	1.25	1.37	1.65	1.48	1.55	1.49	1.59	1.49	1.06	0.99	0.61

Unemployment Rate

Percent

	98.1	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4
Canada	8.60	8.32	8.17	8.06	7.90	7.86	7.52	6.97	6.80	6.68	6.92	6.87
Euro Area	11.20	11.00	10.80	10.60	10.30	10.10	10.00	9.70	9.50	9.20	9.00	8.80
France	11.94	11.82	11.80	11.78	11.67	11.52	11.17	10.65	10.16	9.62	9.38	8.92
Germany	9.80	9.46	9.06	8.83	8.69	8.64	8.58	8.46	8.24	8.12	8.00	7.85
Italy	11.78	11.91	11.92	11.77	11.60	11.42	11.25	11.12	10.98	10.62	10.33	9.99
Japan	3.69	4.07	4.24	4.43	4.62	4.72	4.72	4.67	4.80	4.68	4.65	4.80
United Kingdom	6.41	6.33	6.33	6.28	6.27	6.10	5.97	5.96	5.84	5.56	5.44	5.33
United States	4.65	4.43	4.52	4.43	4.28	4.27	4.22	4.10	4.05	4.00	4.02	3.98

Reserve Money Growth

Percent change

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	3.95	4.81	6.53	9.59	8.05	8.95	25.06	7.11	4.86	1.55	-7.86	.
Euro Area	.	.	.	.	.	.	.	.	.	.	.	.
Japan	9.26	9.07	4.07	6.08	6.37	7.31	14.97	10.80	6.34	3.94	-1.11	1.10
United Kingdom	5.89	5.84	5.07	5.26	6.79	7.62	9.54	9.89	7.90	7.52	6.66	.
United States	5.93	6.36	6.90	7.65	8.75	9.09	12.87	10.57	7.35	5.56	0.64	1.97

Narrow Money Growth

Percent change

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	12.75	12.65	9.54	5.79	1.69	1.44	3.64	10.53	16.07	18.18	17.33	.
Euro Area	10.39	9.21	10.86	12.10	11.82	12.95	11.22	10.61	7.45	6.76	5.38	.
Japan	7.66	8.26	6.87	8.62	11.72	13.01	12.01	10.54	8.55	5.15	3.84	.
United Kingdom	5.44	5.83	5.85	6.11	6.91	7.04	7.85	7.28	7.21	7.52	6.77	.
United States	11.08	11.90	14.23	14.46	13.56	12.24	9.46	8.32	7.71	7.83	8.03	10.94

Broad Money Growth

Percent change

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	-0.82	0.59	1.29	1.87	2.45	2.81	3.75	4.91	6.16	6.46	6.03	.
Euro Area	5.21	4.93	4.77	5.62	5.83	6.72	7.61	7.74	7.25	7.10	6.01	.
Japan	3.98	4.44	4.36	4.11	4.32	3.34	2.66	1.89	1.87	1.99	2.12	.
United Kingdom	3.84	8.99	8.41	6.55	5.46	3.11	3.95	5.36	6.86	9.28	7.97	.
United States	7.04	7.27	8.48	8.41	8.03	7.68	6.31	5.95	6.08	5.99	6.22	7.51

Short-Term Interest Rates

Percent

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	4.96	5.25	5.13	5.00	4.70	4.82	5.04	5.28	5.76	5.86	5.81	5.10
Euro Area	3.80	3.88	3.52	3.09	2.64	2.70	3.43	3.54	4.26	4.74	5.02	4.75
Japan	0.62	0.67	0.62	0.49	0.11	0.09	0.29	0.11	0.08	0.27	0.54	.
United Kingdom	7.49	7.58	6.79	5.50	5.20	5.19	5.89	6.12	6.19	6.12	5.99	5.63
United States	5.59	5.53	5.20	4.90	4.98	5.38	6.06	6.03	6.57	6.63	6.59	5.26

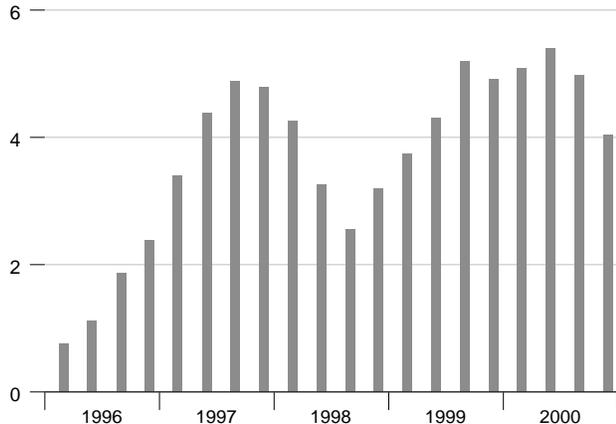
Long-Term Interest Rates

Percent

	98.2	98.3	98.4	99.1	99.2	99.3	99.4	00.1	00.2	00.3	00.4	01.1
Canada	5.49	5.50	5.21	5.24	5.49	5.78	6.21	6.20	5.96	5.81	5.72	5.67
Euro Area	4.99	4.56	4.15	3.99	4.26	5.05	5.32	5.62	5.43	5.44	5.28	.
France	5.04	4.64	4.45	4.31	4.55	5.20	5.71	5.93	5.90	5.99	5.75	.
Germany	4.90	4.40	4.03	3.87	4.10	4.87	5.17	5.43	5.27	5.27	5.10	4.75
Italy	5.14	4.76	4.32	4.09	4.36	5.14	5.42	5.72	5.58	5.60	5.48	5.17
Japan	1.36	1.13	1.02	1.83	1.39	1.79	1.78	1.79	1.71	1.79	1.74	1.39
United Kingdom	5.78	5.47	4.80	4.47	4.89	5.45	5.50	5.60	5.30	5.28	5.05	4.81
United States	5.92	5.58	5.32	5.60	6.04	6.34	6.55	6.54	6.29	6.06	5.85	5.56

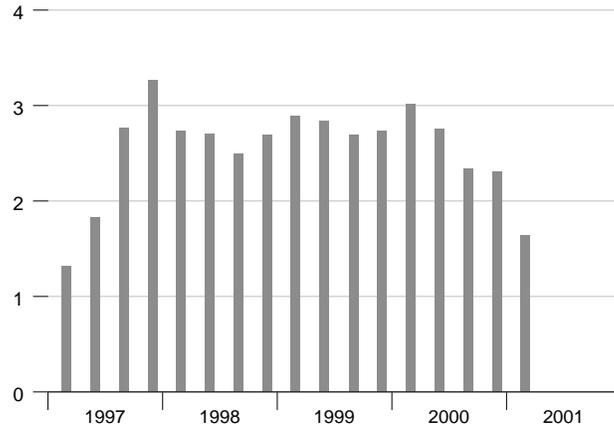
Real GDP Growth

Percent change
6



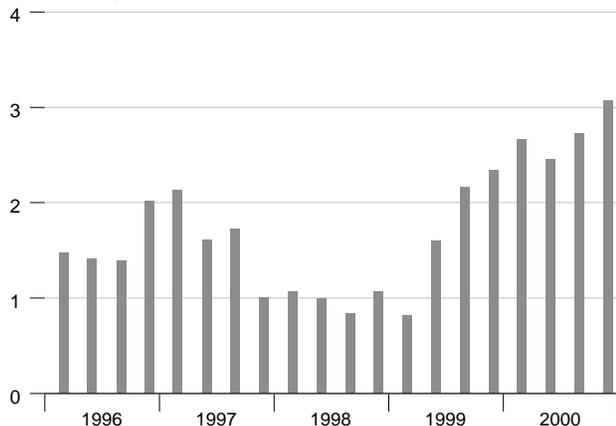
Employment Growth

Percent change
4



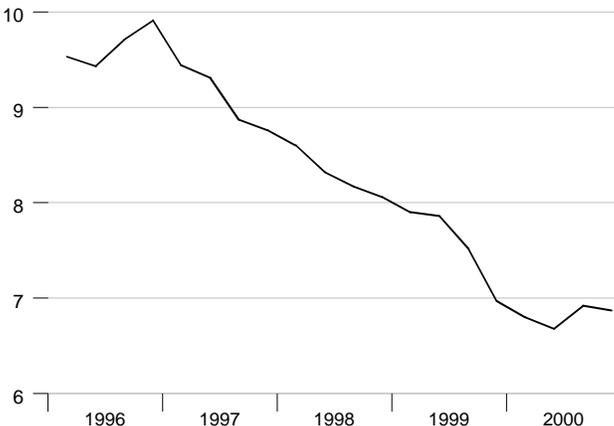
Consumer Price Index

Percent change
4



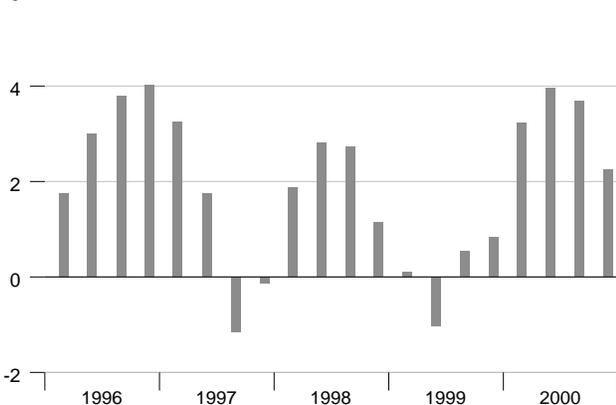
Unemployment Rate

Percent
10



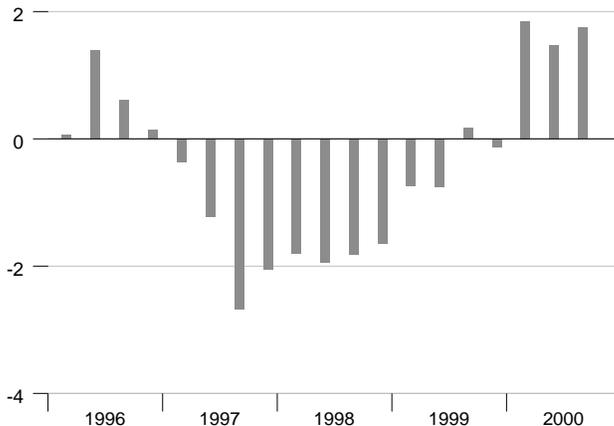
Hourly Earnings

Percent change
6

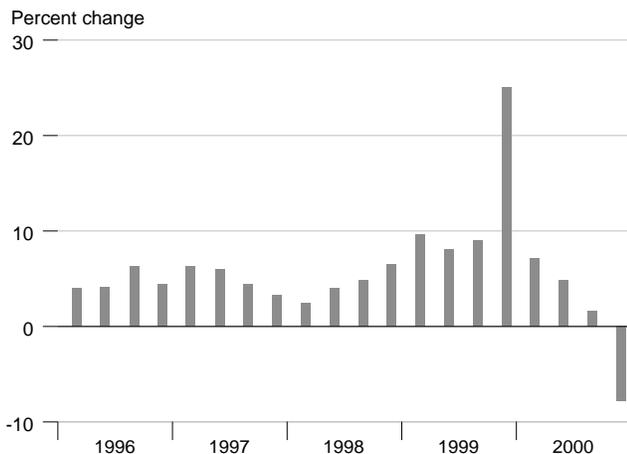


Current Account Balance

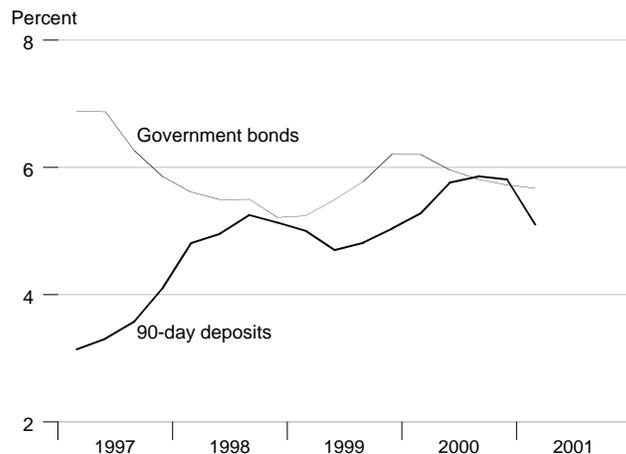
Percent of GDP
2



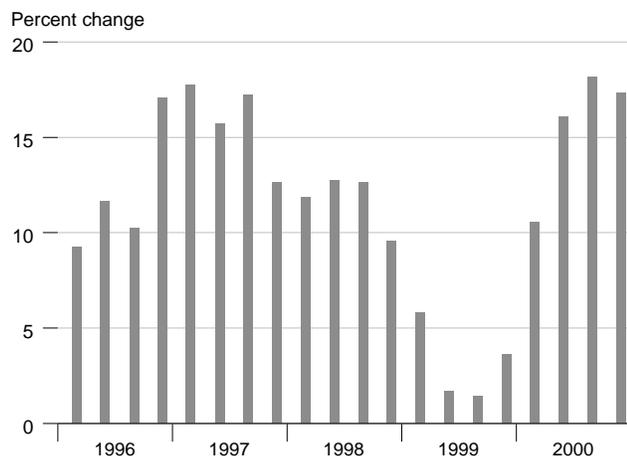
Reserve Money Growth



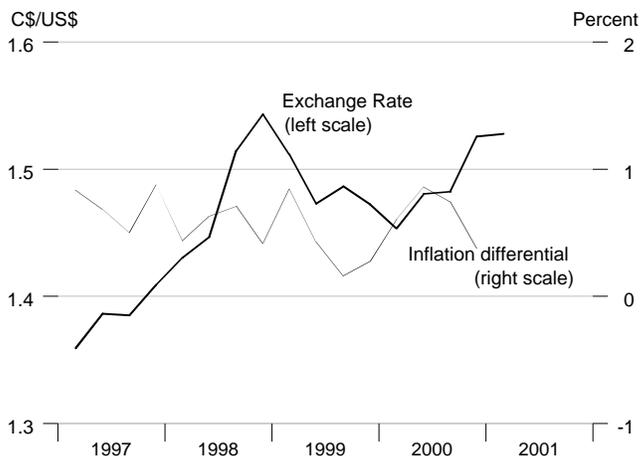
Interest Rates



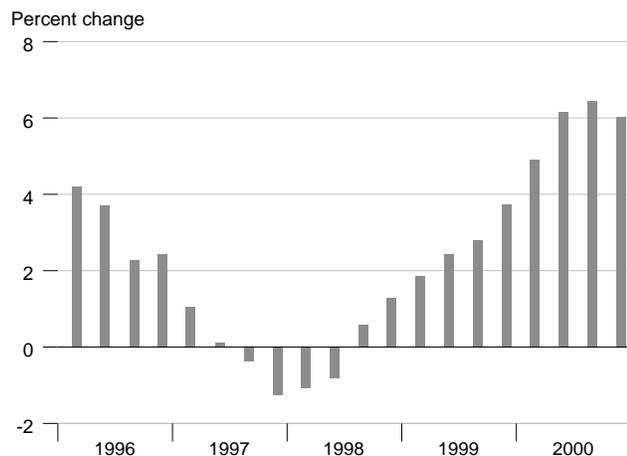
M1 Growth



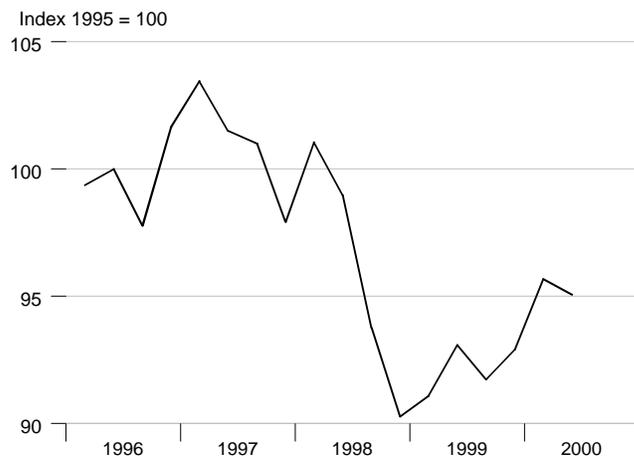
Exchange Rate and Inflation Differential



M2 Growth

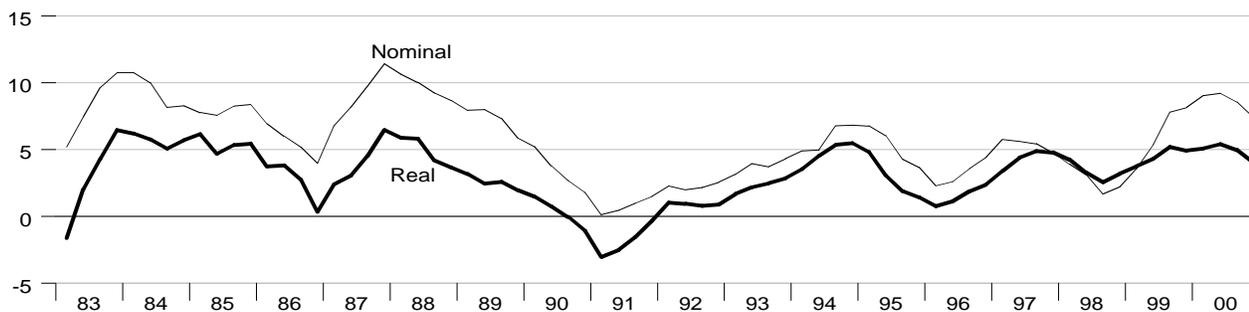


Real Effective Exchange Rate



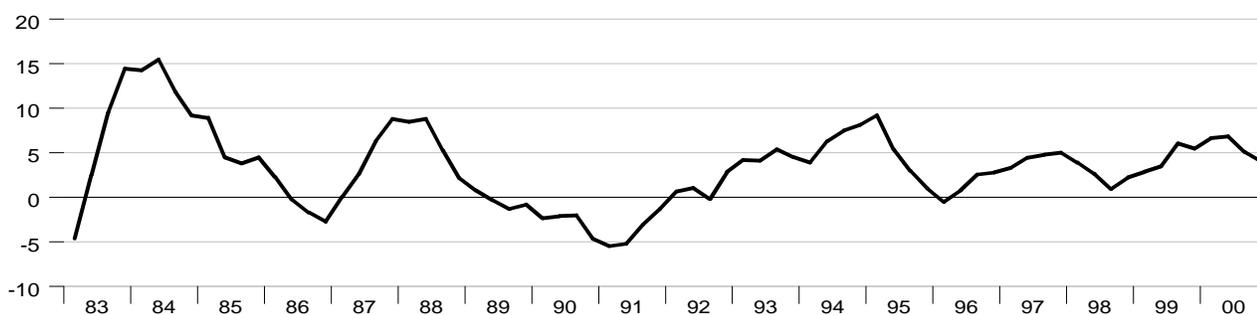
GDP Growth

Percent change



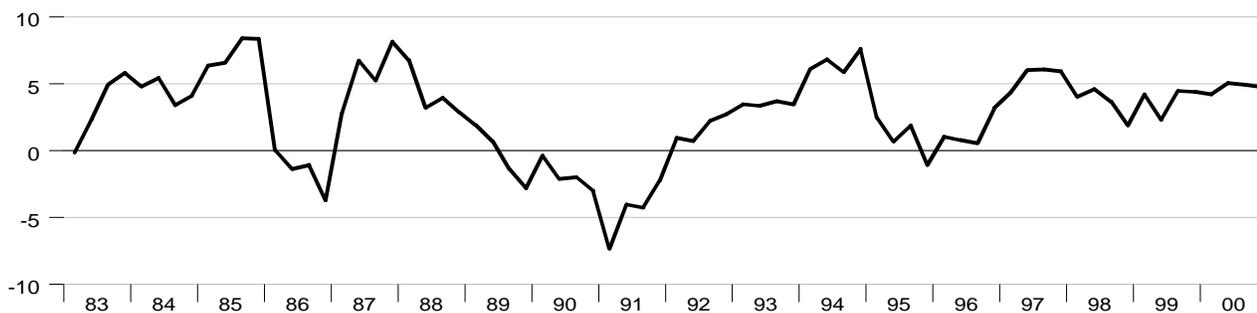
Industrial Production

Percent change



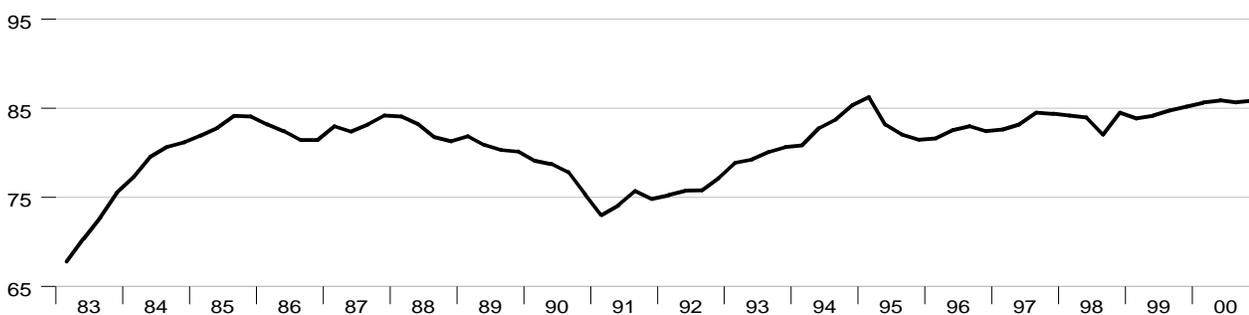
Retail Sales

Percent change

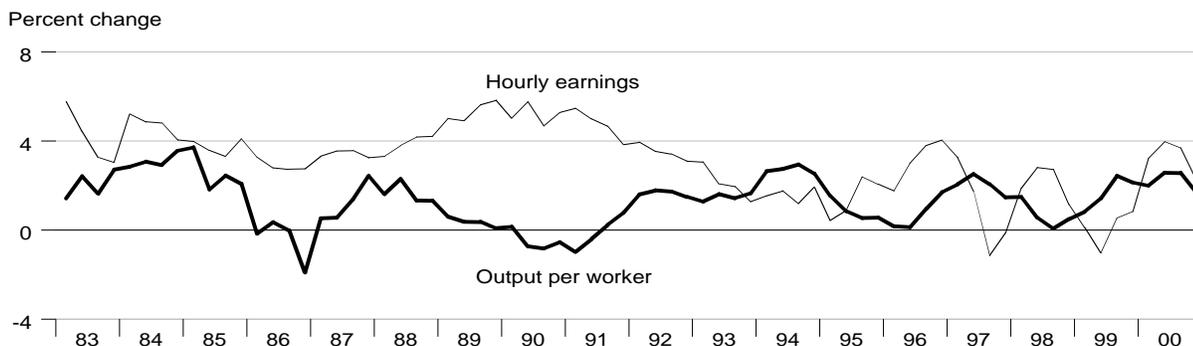


Capacity Utilization

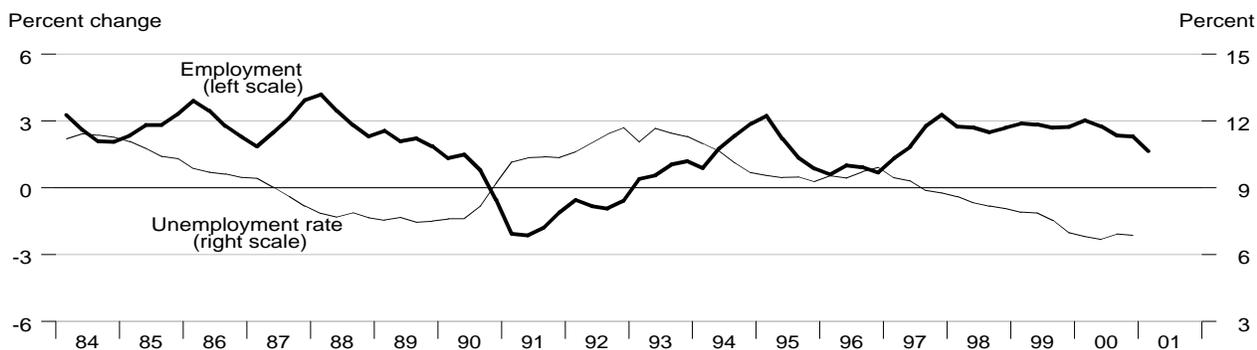
Percent



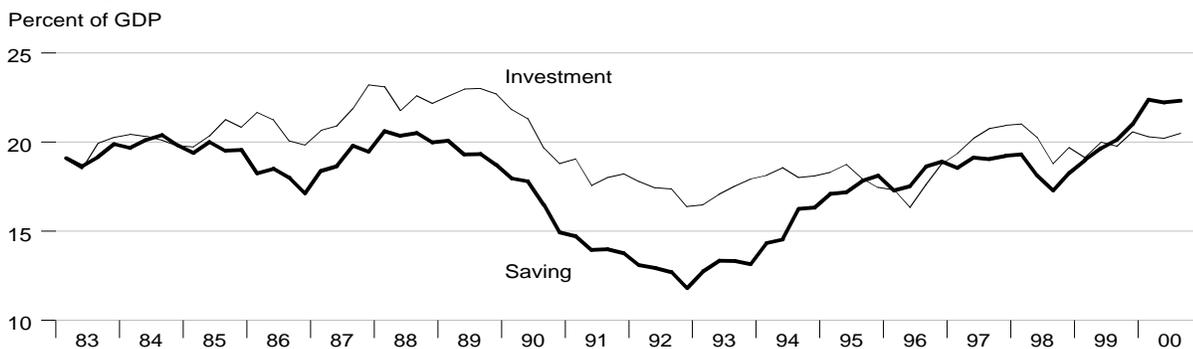
Hourly Earnings and Output per Worker



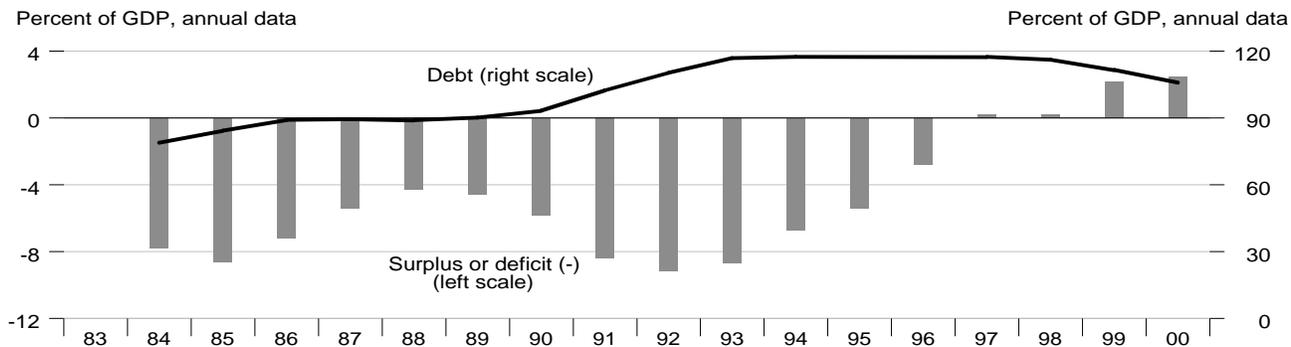
Labor Force Indicators



Saving and Investment

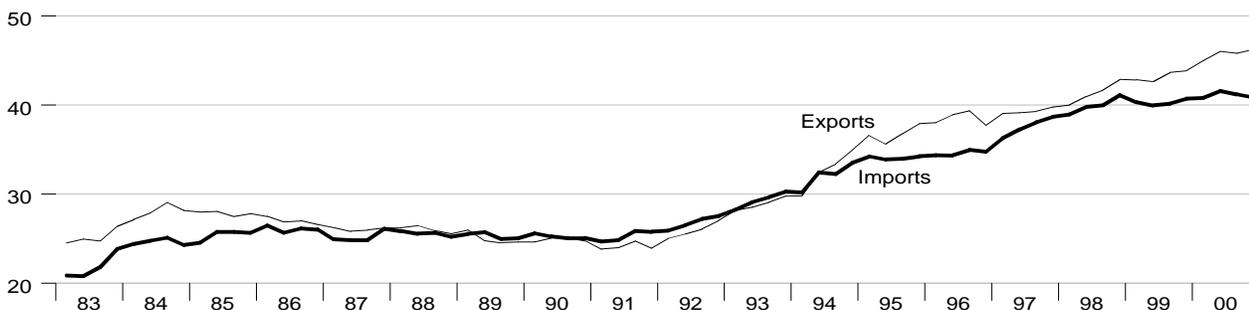


Government Debt and Budget Surplus or Deficit (-)



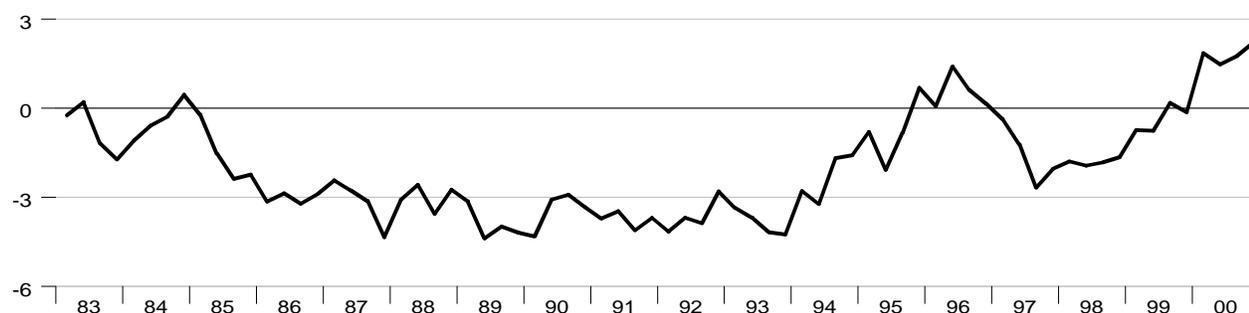
International Trade - Goods and Services

Percent of GDP



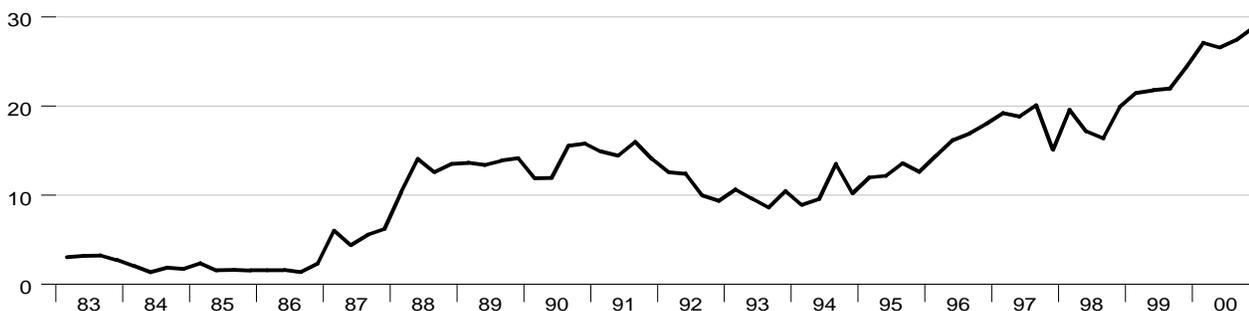
Current Account Balance

Percent of GDP



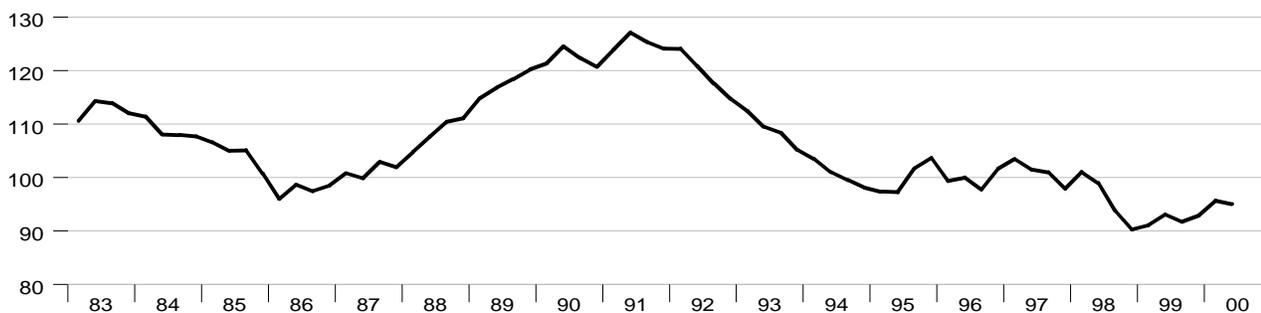
Foreign Exchange Reserves

Billions of US\$



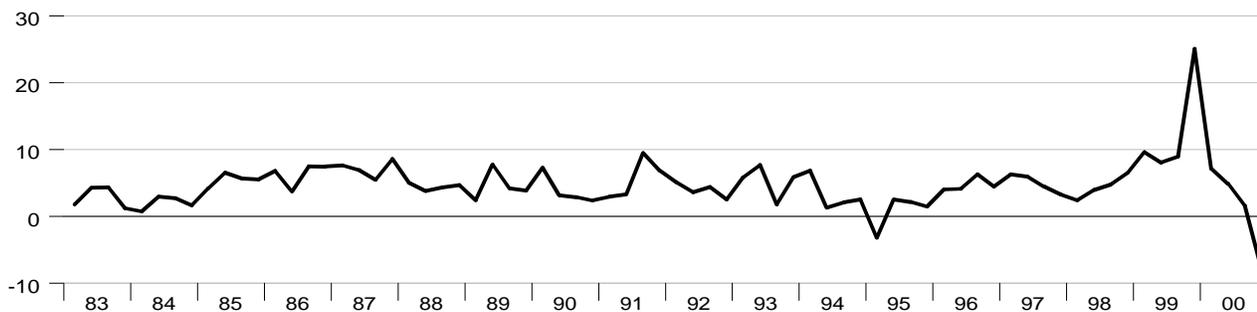
Real Effective Exchange Rate

Index 1995 = 100



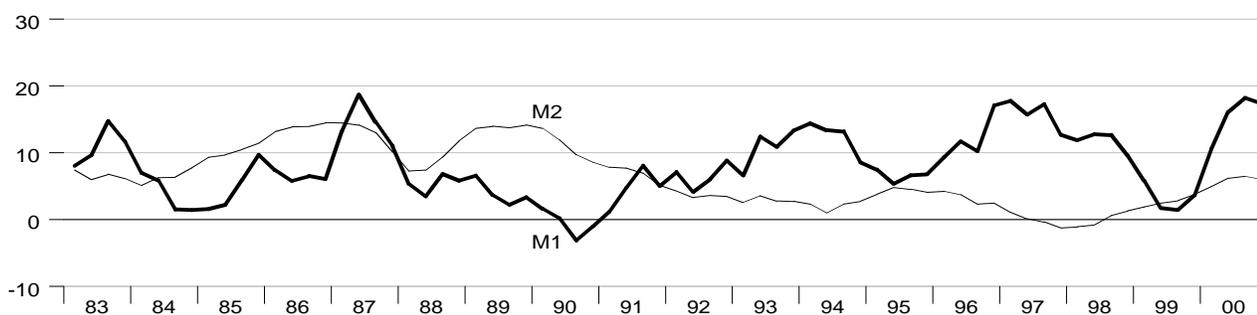
Reserve Money Growth

Percent change



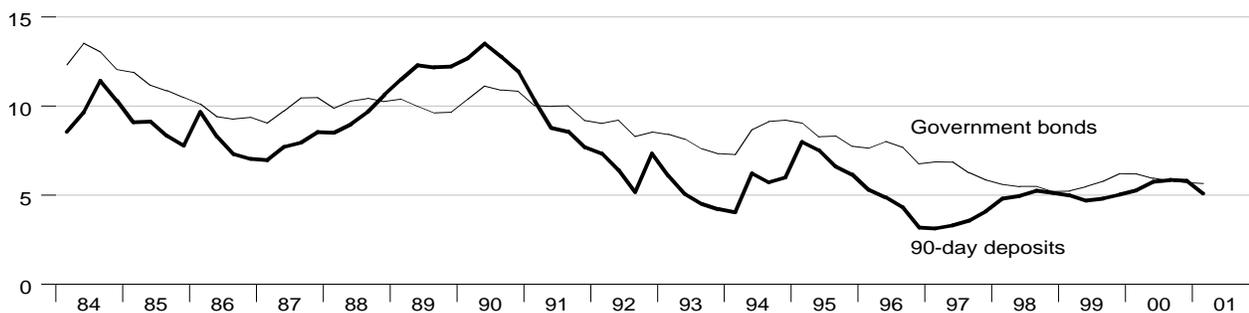
Monetary Aggregates

Percent change



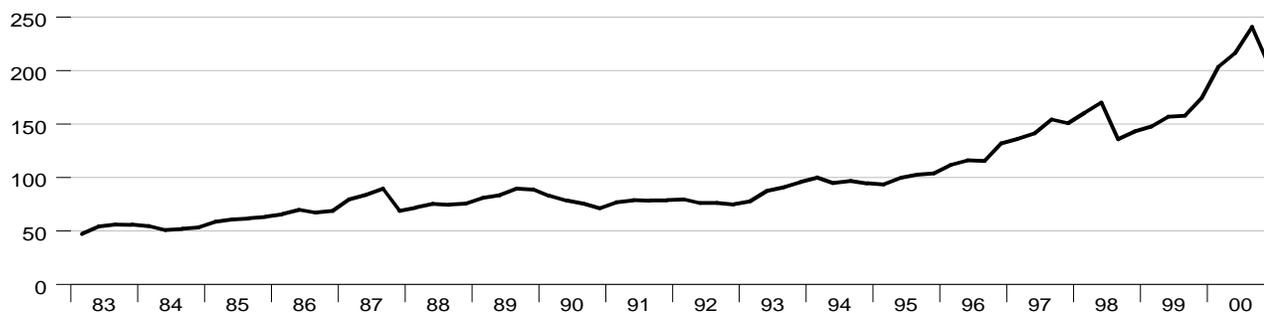
Interest Rates

Percent

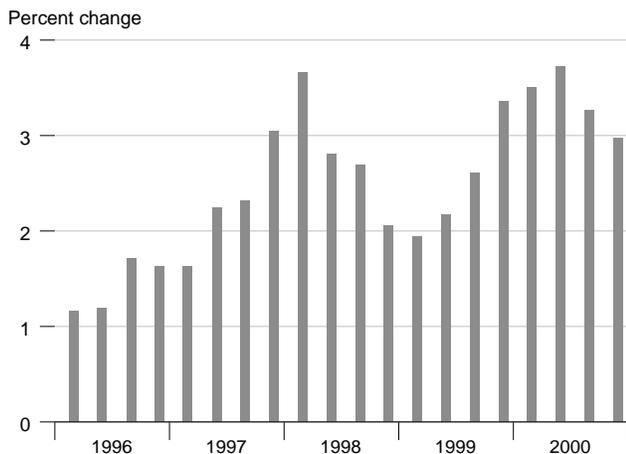


Stock Exchange Index - Toronto Stock Exchange

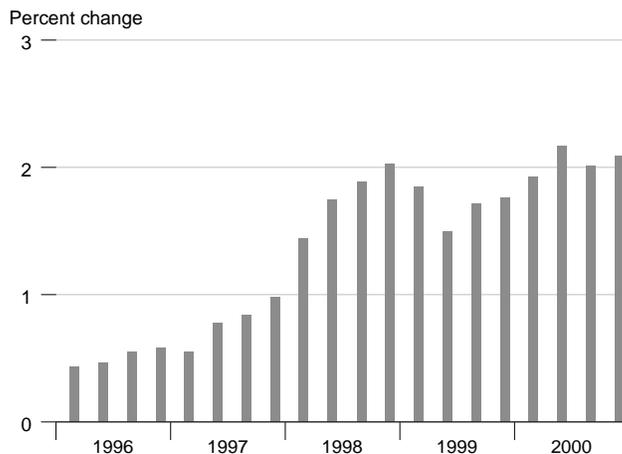
1995 = 100



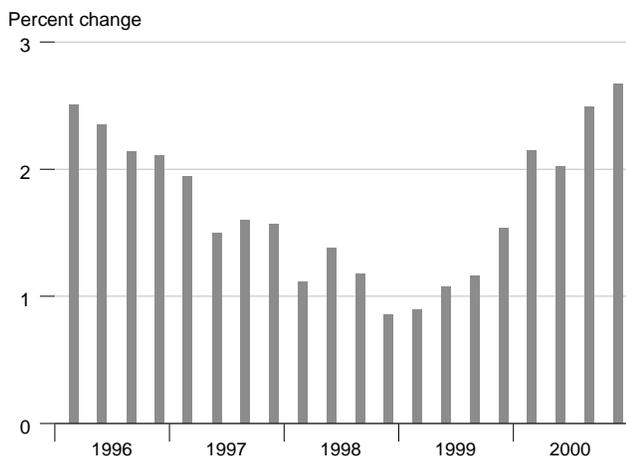
Real GDP Growth



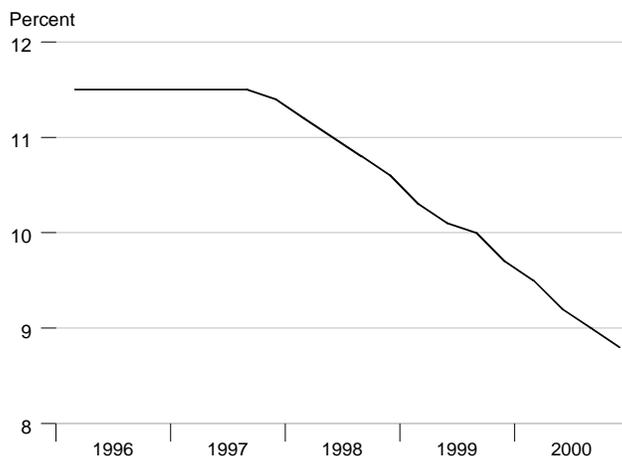
Employment Growth



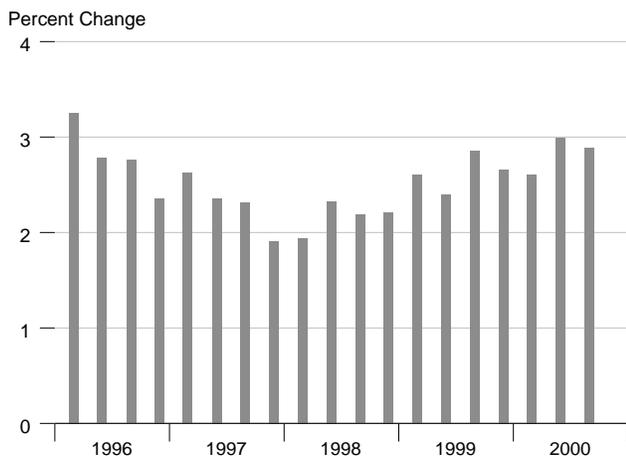
Consumer Price Index



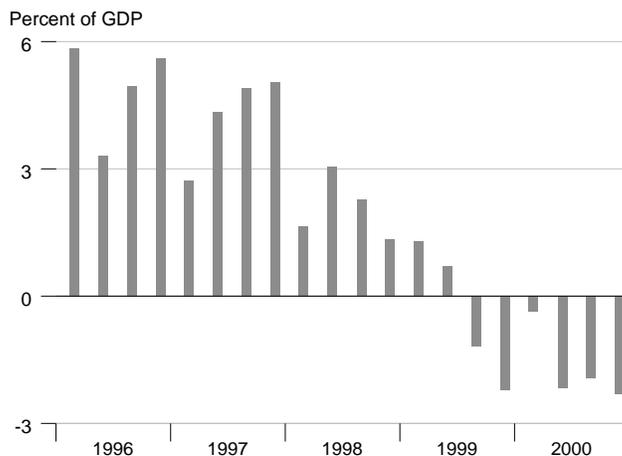
Unemployment Rate



Hourly Earnings

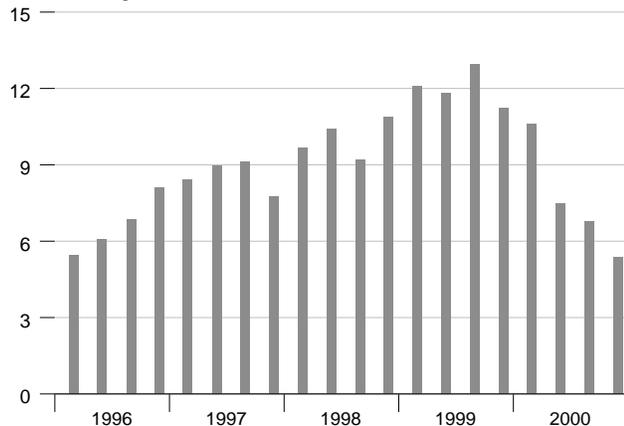


Current Account Balance



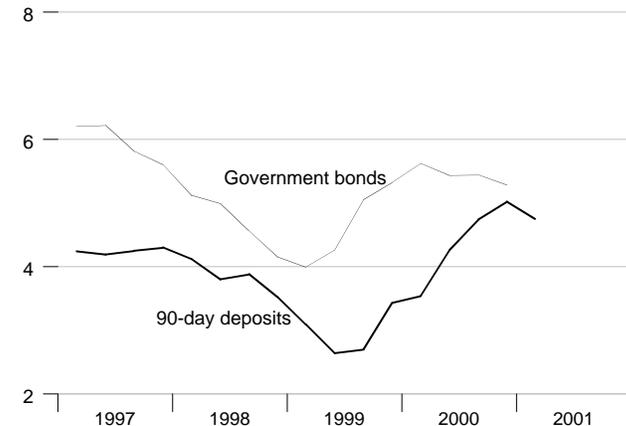
M1 Growth

Percent change



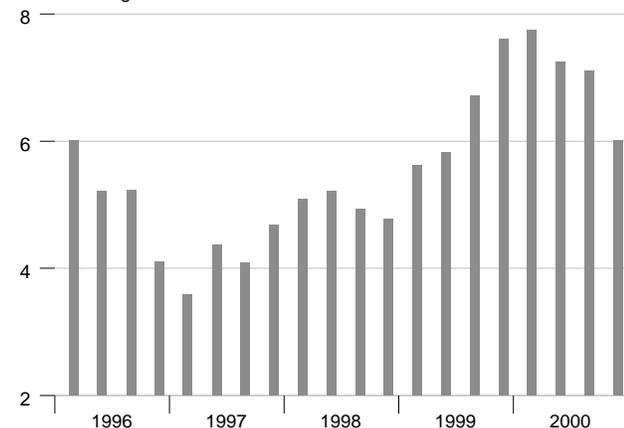
Interest Rates

Percent



M3 Growth

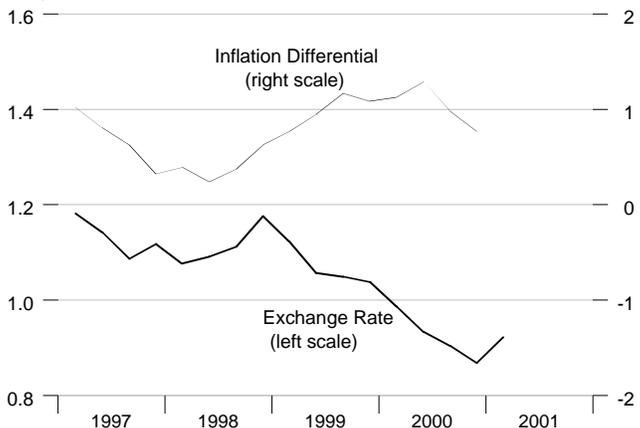
Percent change



Exchange Rate and Inflation Differential

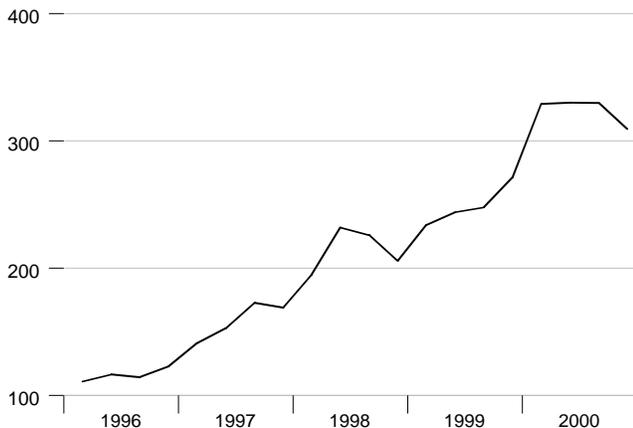
US\$/Euro

Percent



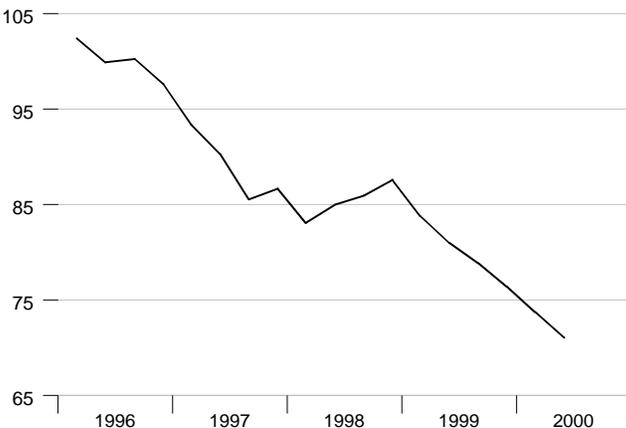
Stock Exchange Index - Dow Jones EURO STOXX SM

1995 = 100

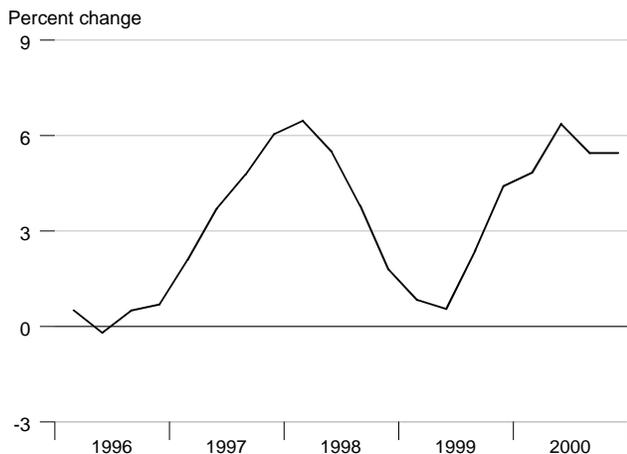


Real Effective Exchange Rate

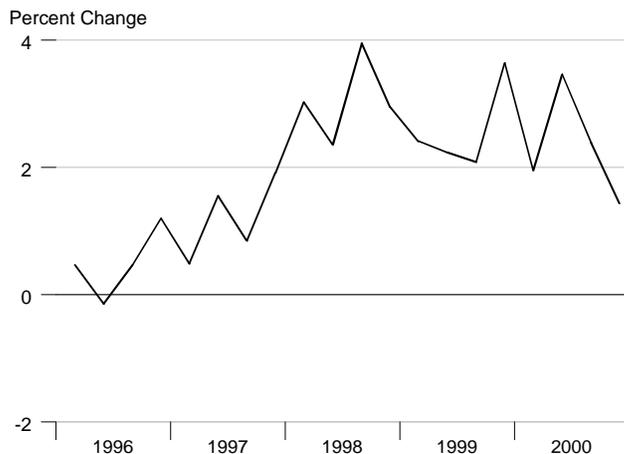
Index 1995 = 100



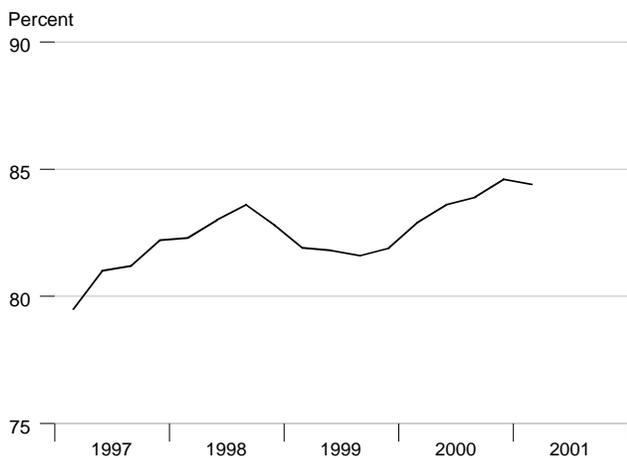
Industrial Production



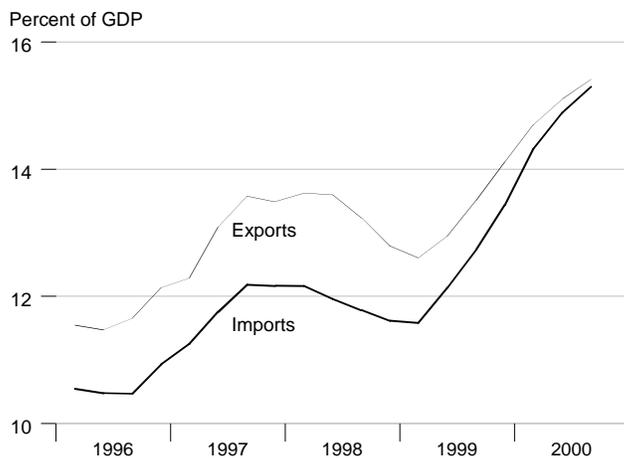
Retail Sales



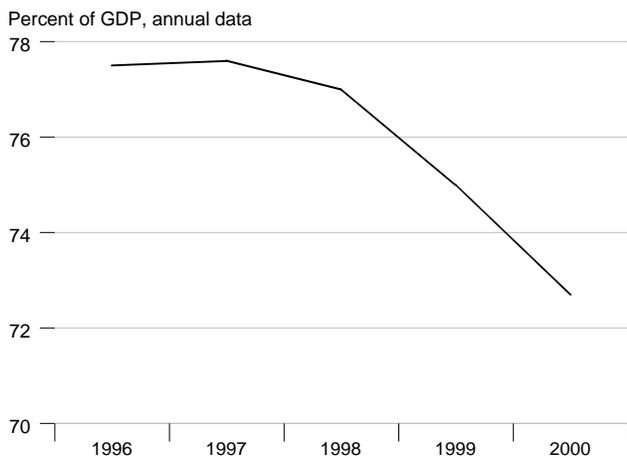
Capacity Utilization



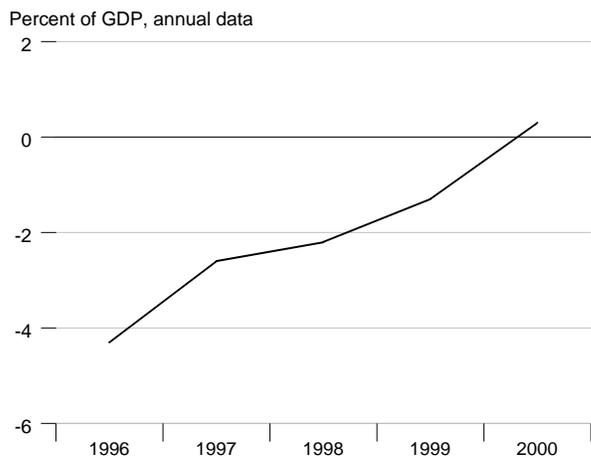
International Trade - Goods



Government Debt

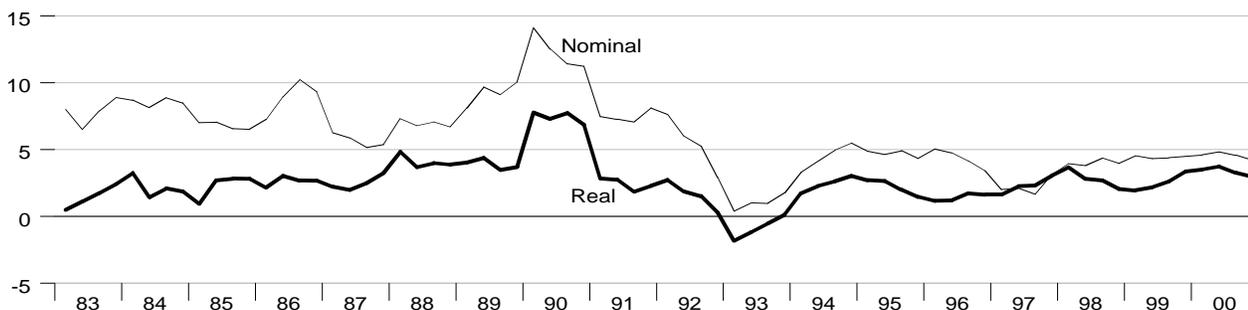


Budget Surplus or Deficit (-)



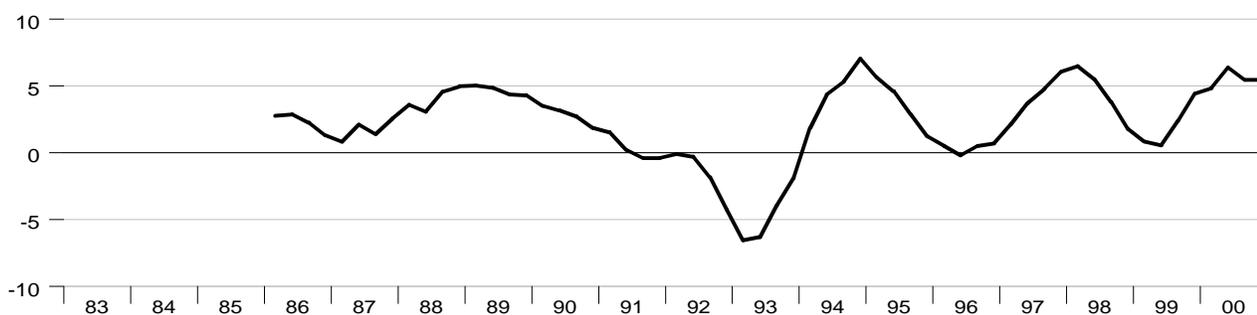
GDP Growth

Percent change



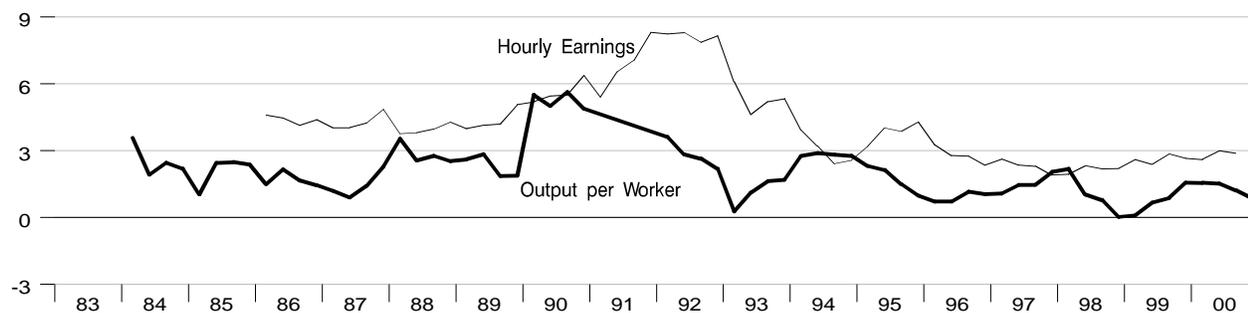
Industrial Production

Percent change



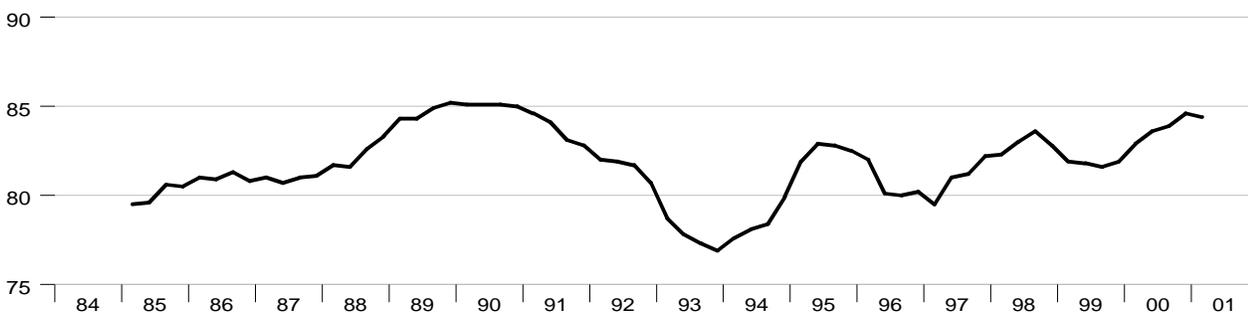
Hourly Earnings and Output per Worker

Percent change



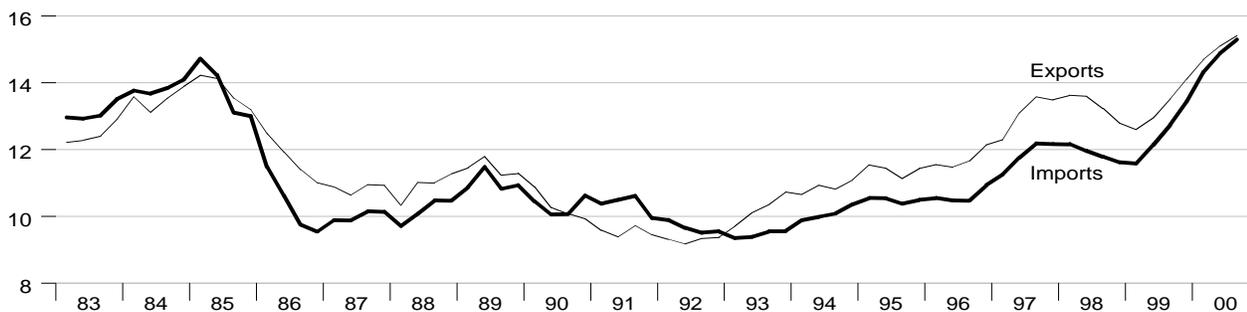
Capacity Utilization

Percent



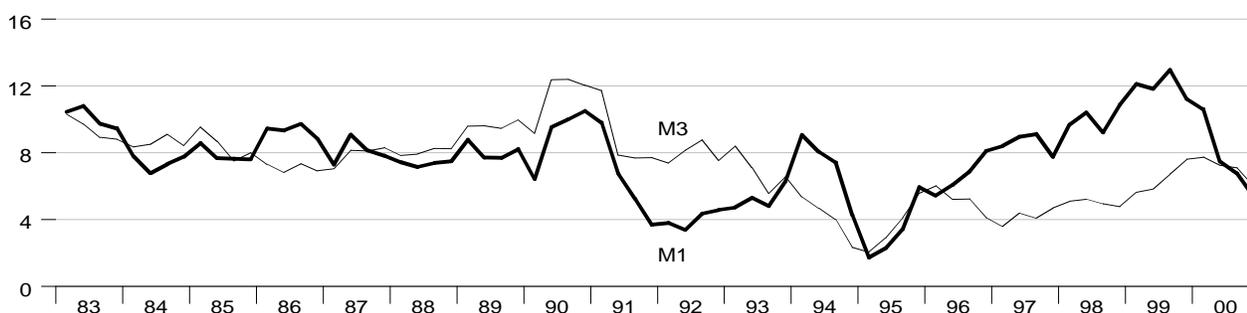
International Trade - Goods

Percent of GDP



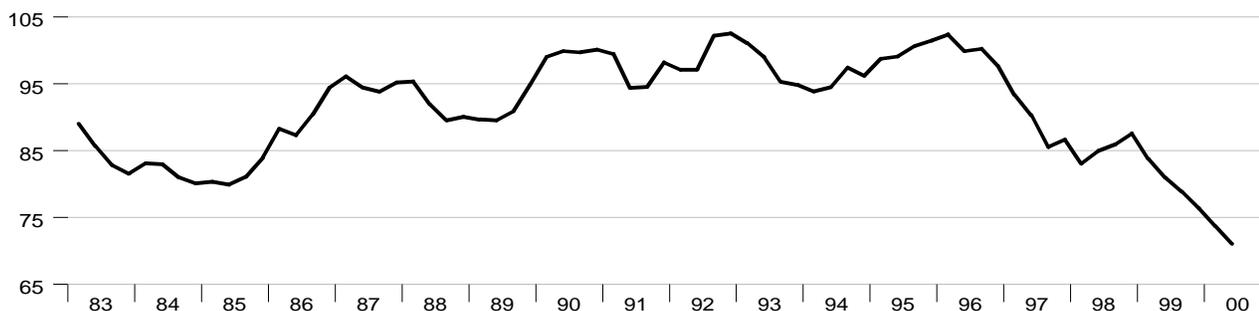
Monetary Aggregates

Percent Change



Real Effective Exchange Rate

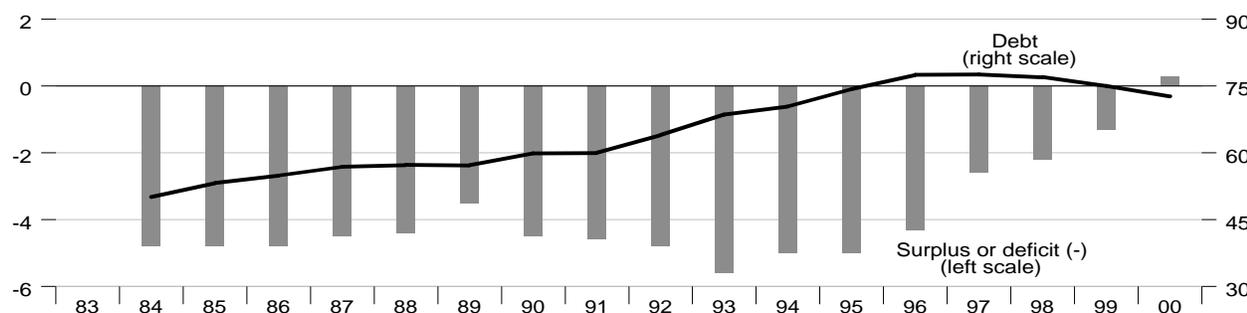
Index 1995 = 100



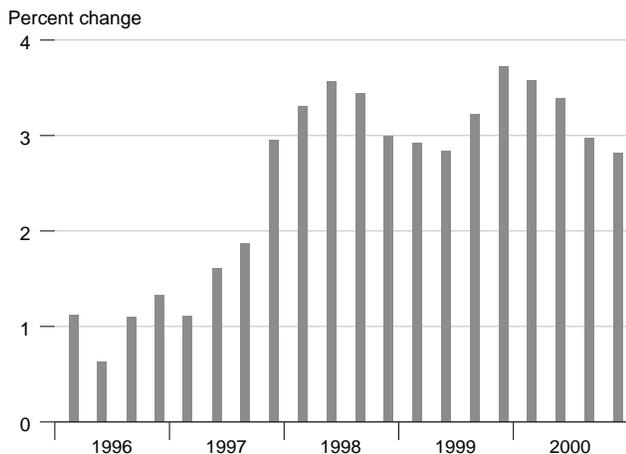
Government Debt and Budget Surplus or Deficit (-)

Percent of GDP, annual data

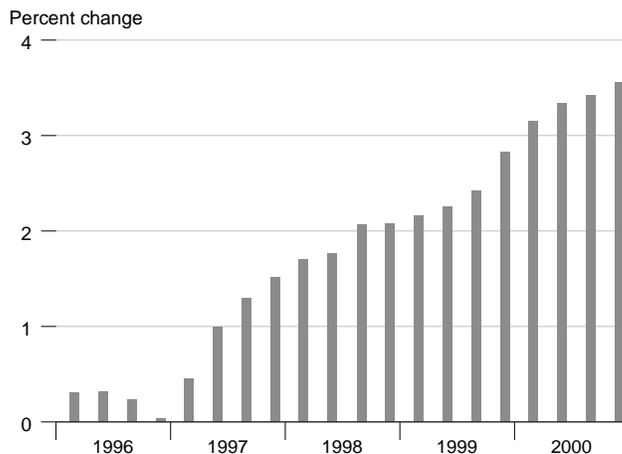
Percent of GDP, annual data



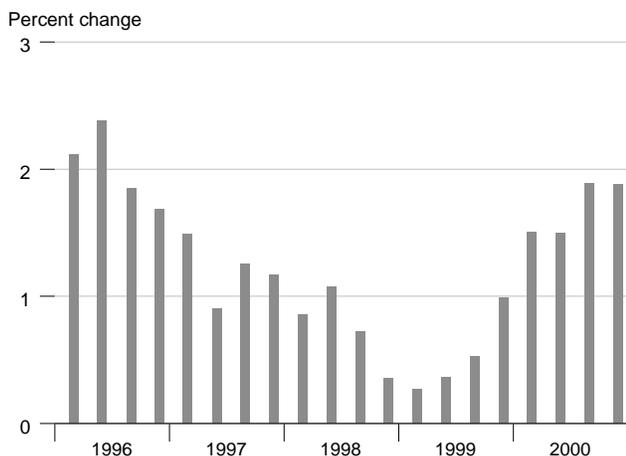
Real GDP Growth



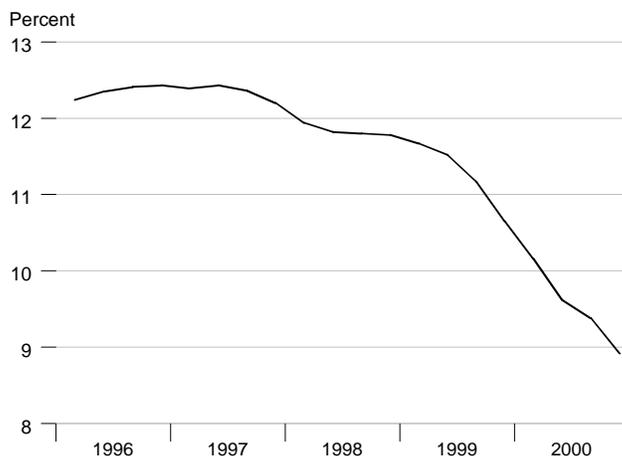
Employment Growth



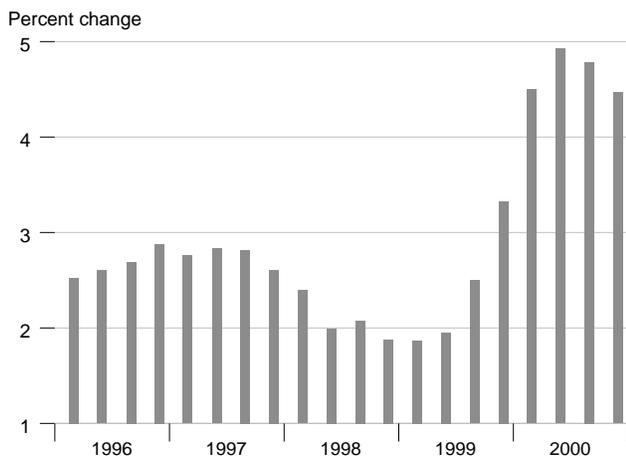
Consumer Price Index



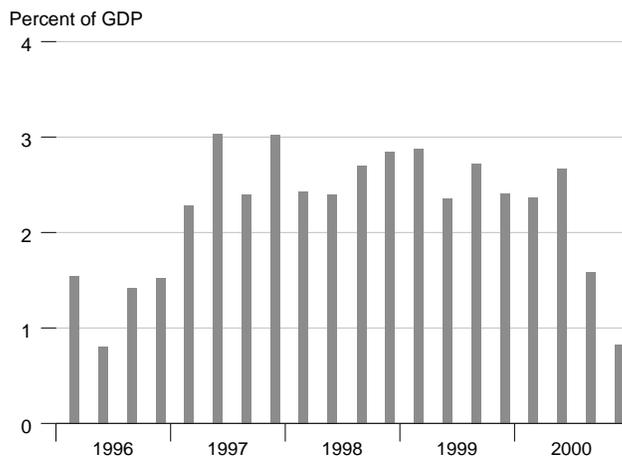
Unemployment Rate



Hourly Earnings

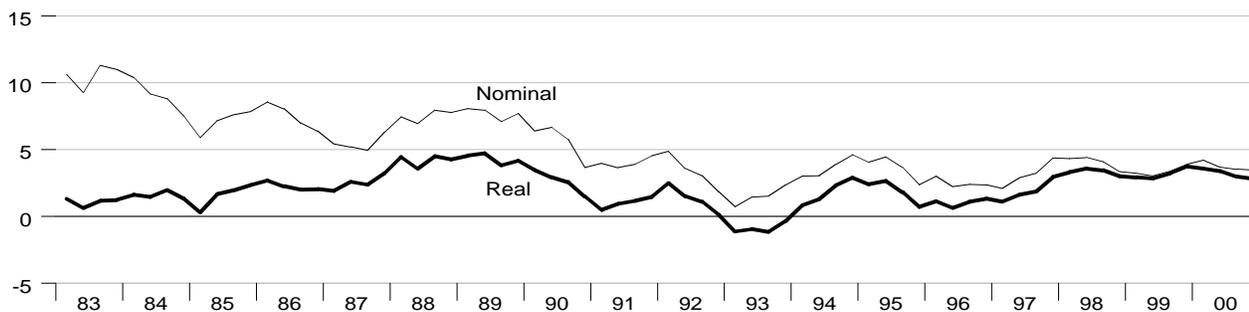


Current Account Balance



GDP Growth

Percent change



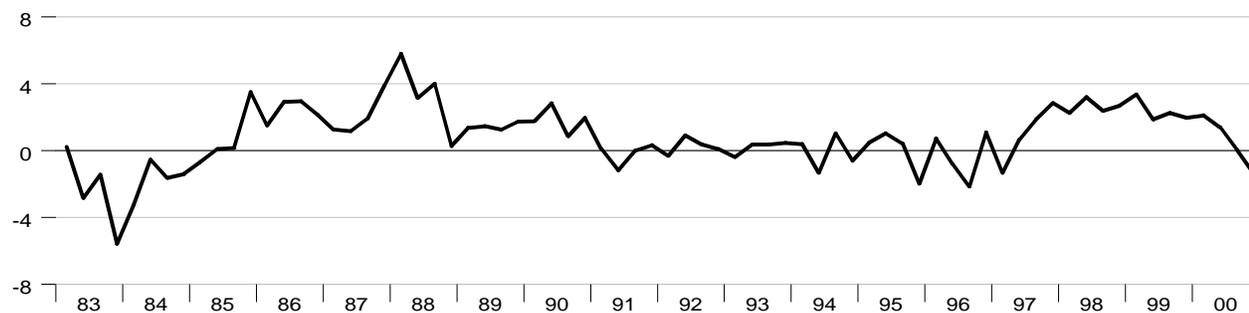
Industrial Production

Percent change



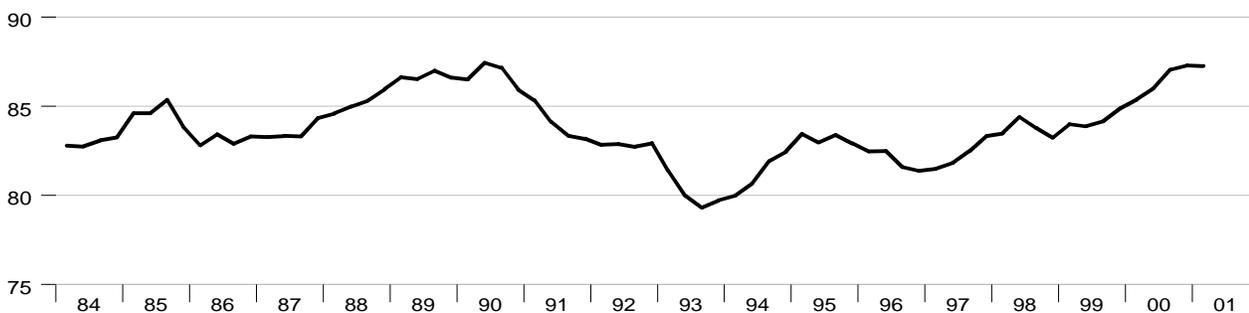
Retail Sales

Percent change



Capacity Utilization

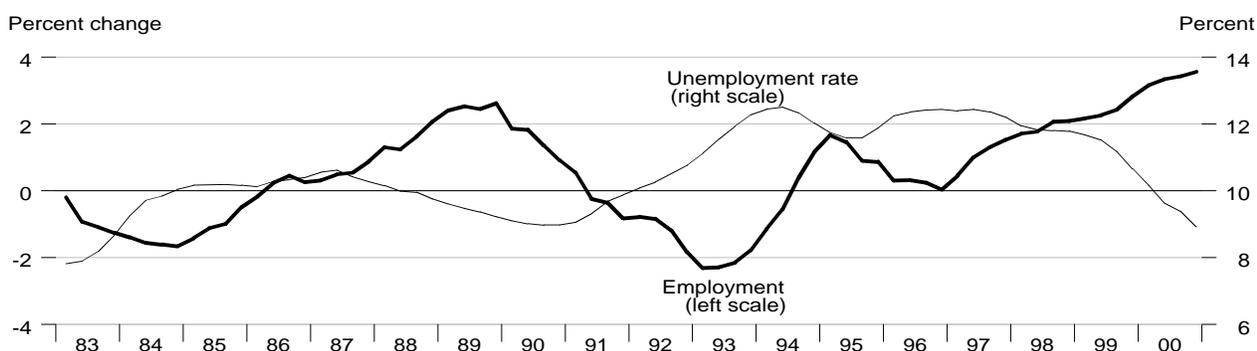
Percent



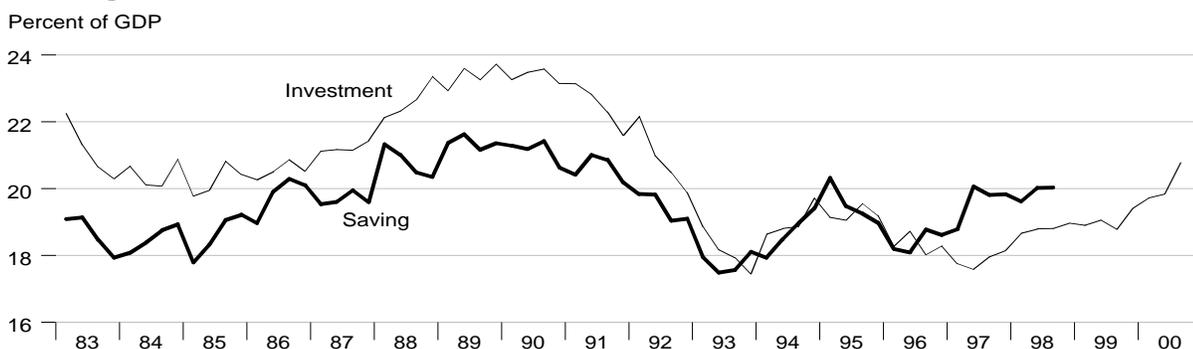
Hourly Earnings and Output per Worker



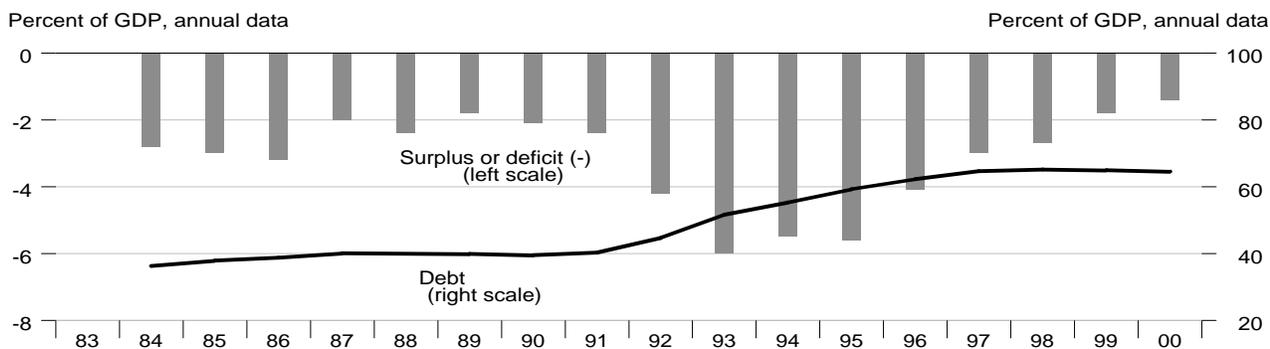
Labor Force Indicators



Saving and Investment

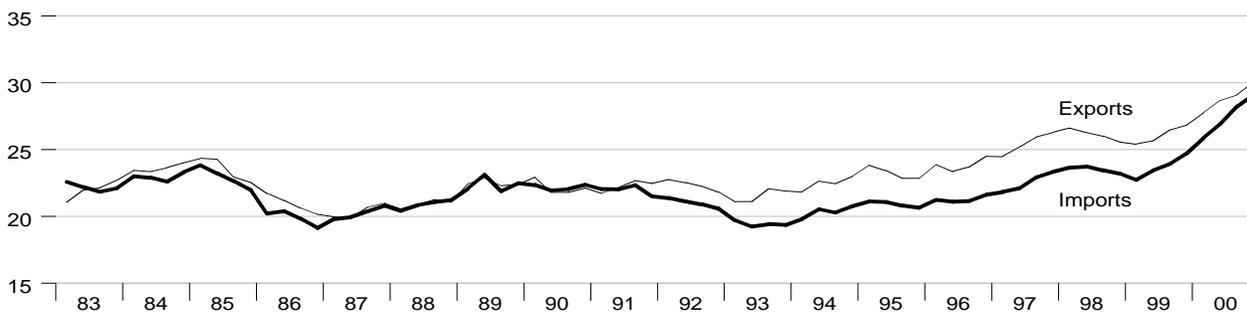


Government Debt and Budget Surplus or Deficit (-)



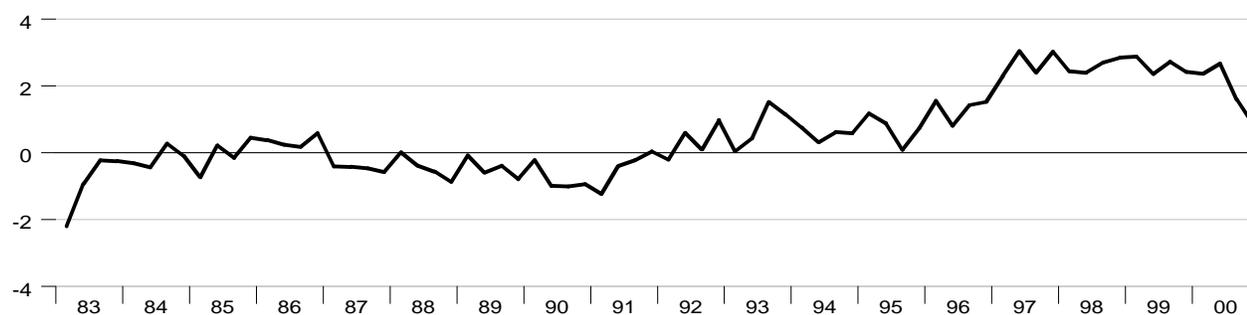
International Trade - Goods and Services

Percent of GDP



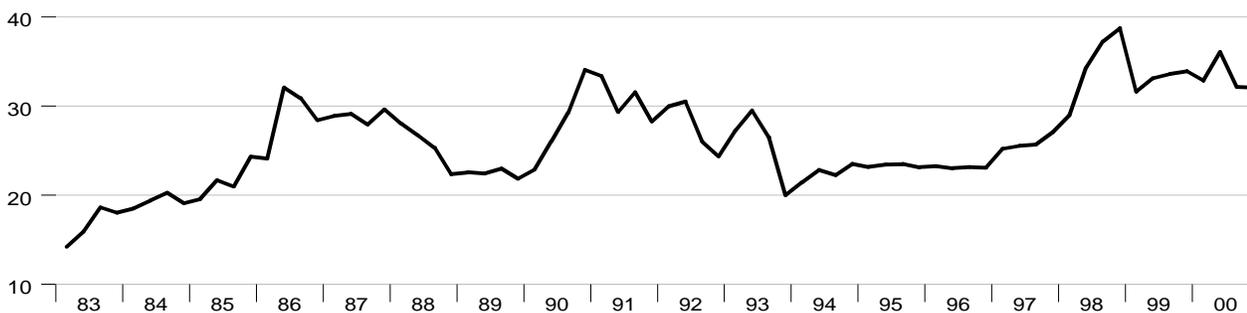
Current Account Balance

Percent of GDP



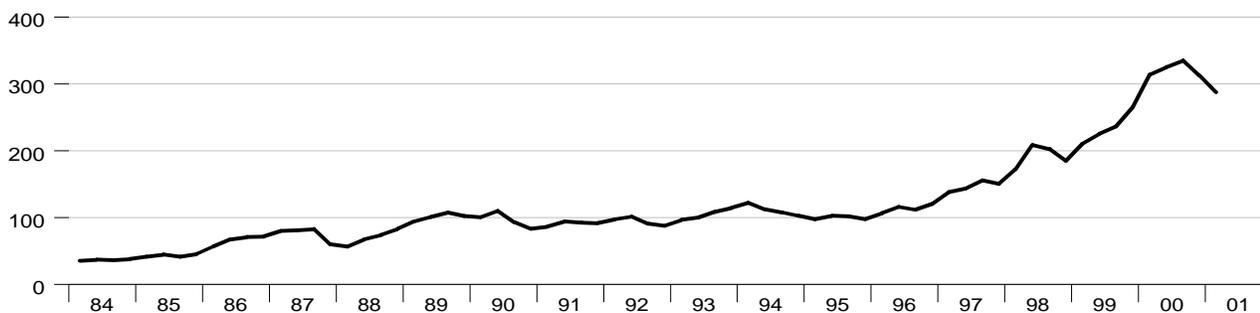
Foreign Exchange Reserves

Billions of US\$

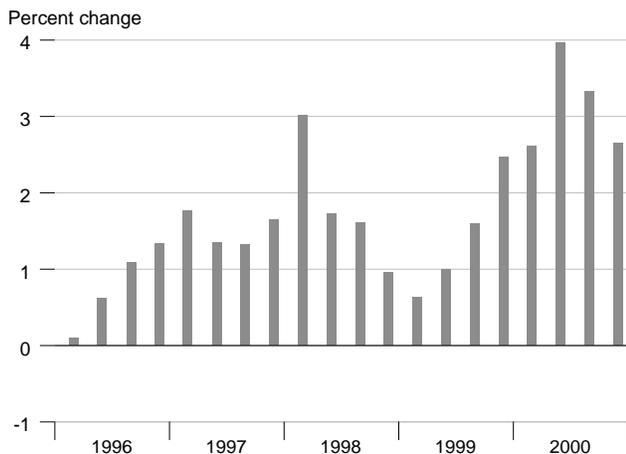


Stock Exchange Index - SBF 250

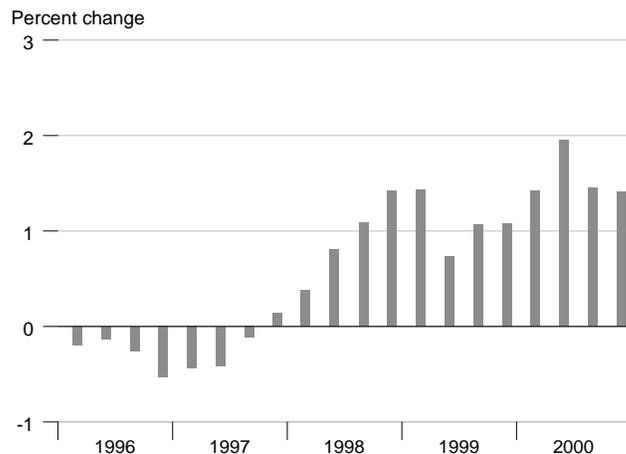
1995 = 100



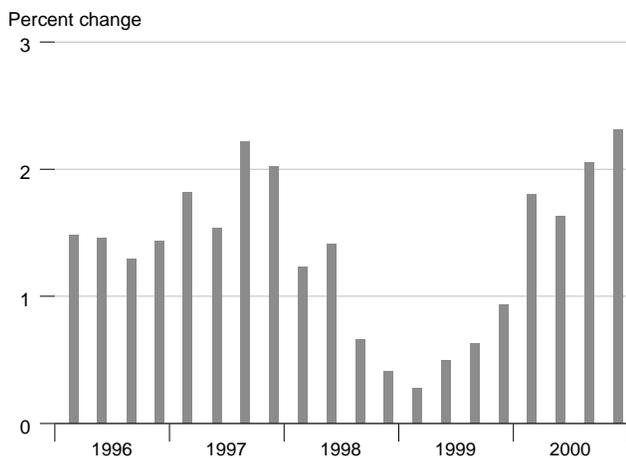
Real GDP Growth



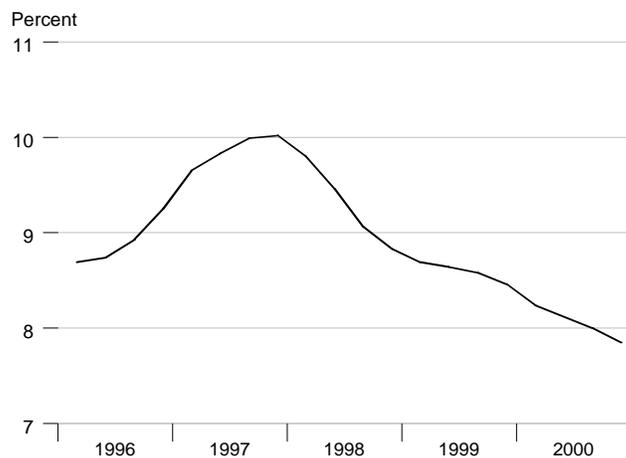
Employment Growth



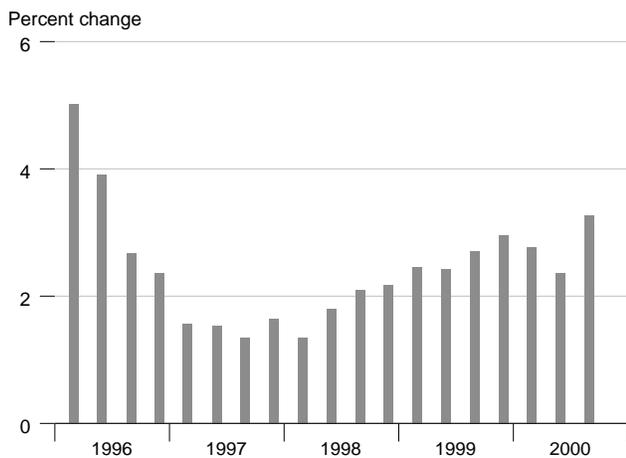
Consumer Price Index



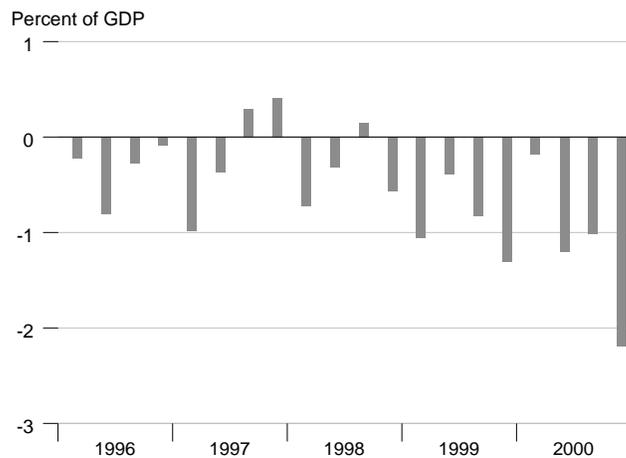
Unemployment Rate



Hourly Earnings

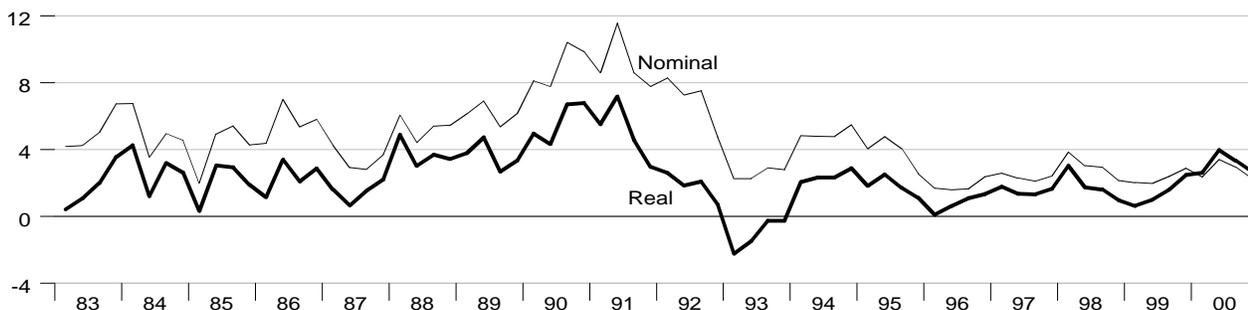


Current Account Balance



GDP Growth

Percent change



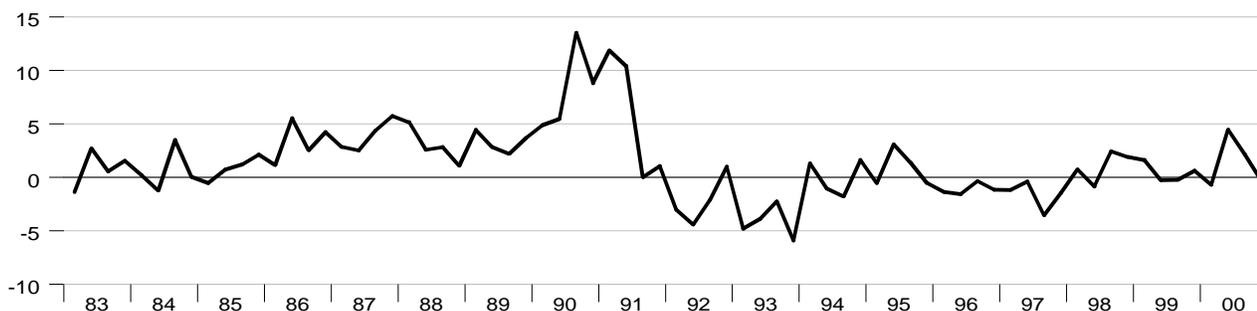
Industrial Production

Percent change



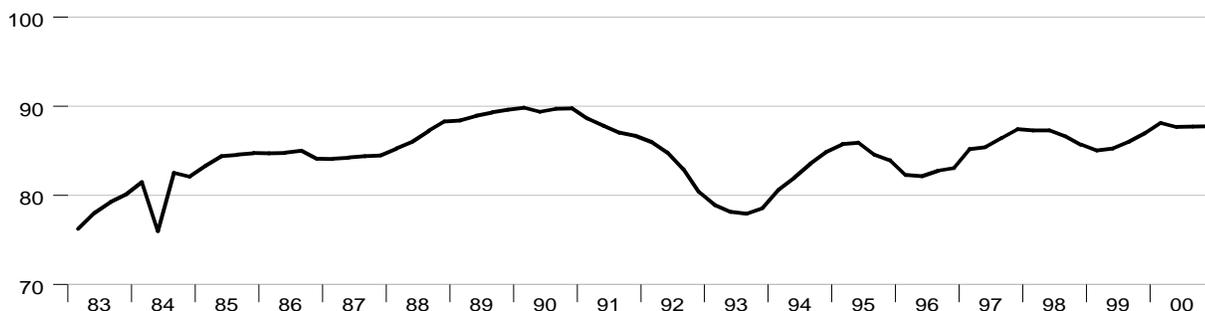
Retail Sales

Percent change



Capacity Utilization

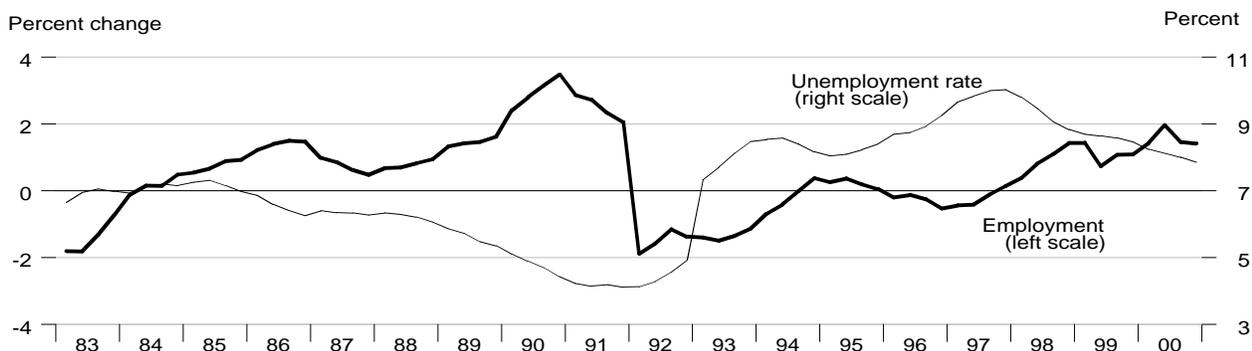
Percent



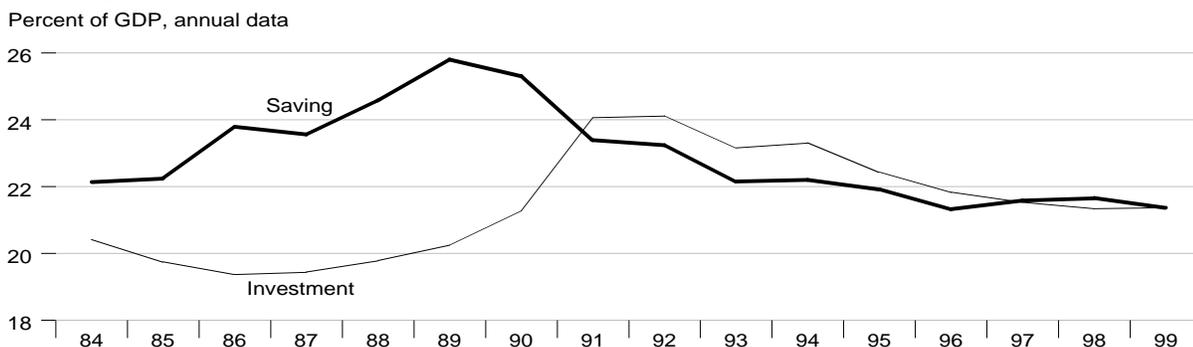
Hourly Earnings and Output per Worker



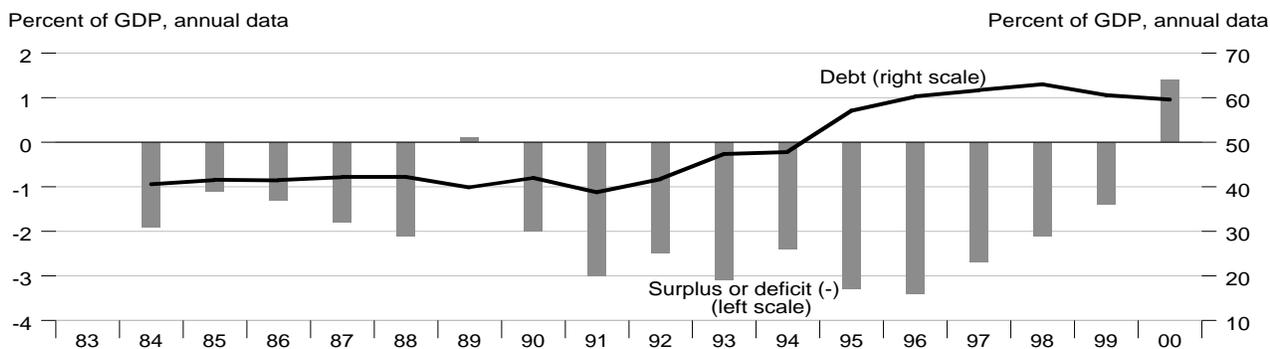
Labor Force Indicators



Saving and Investment

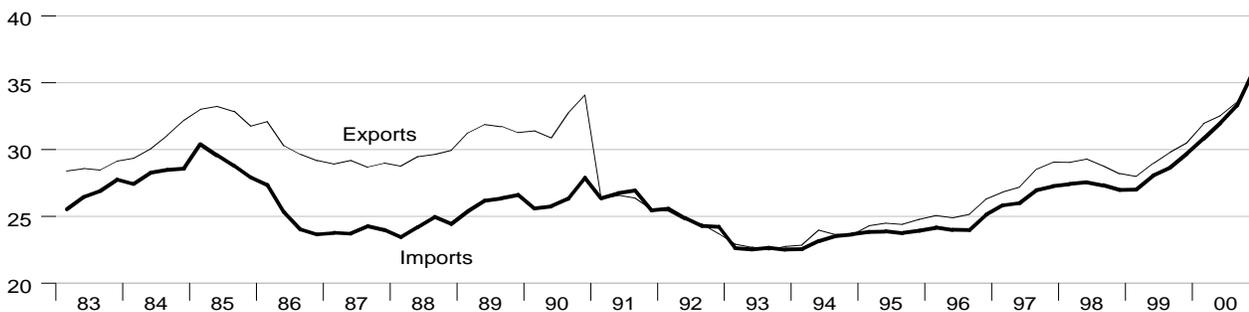


Government Debt and Budget Surplus or Deficit (-)



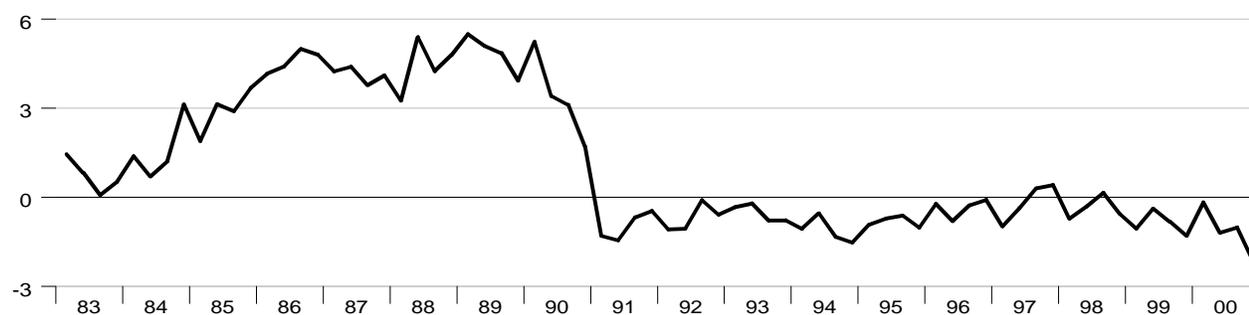
International Trade - Goods and Services

Percent of GDP



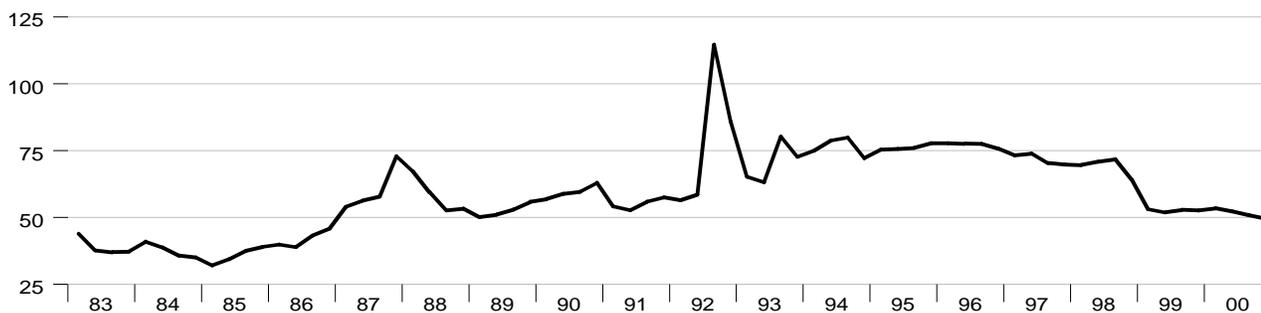
Current Account Balance

Percent of GDP



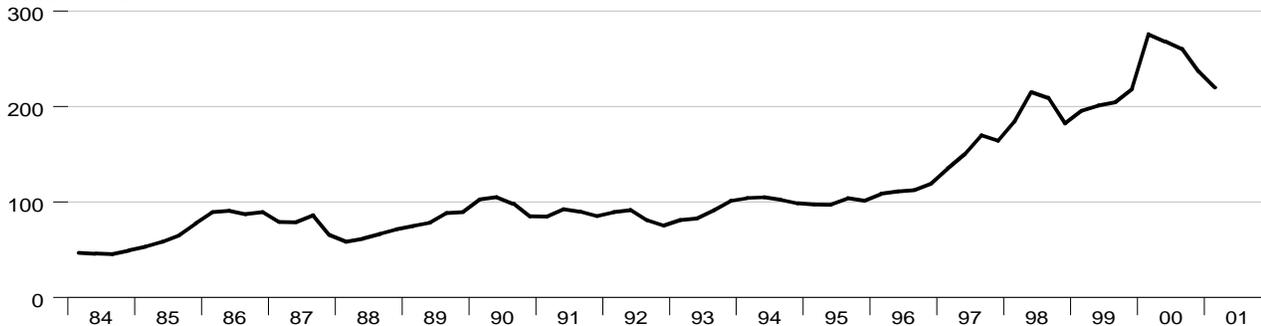
Foreign Exchange Reserves

Billion of US\$

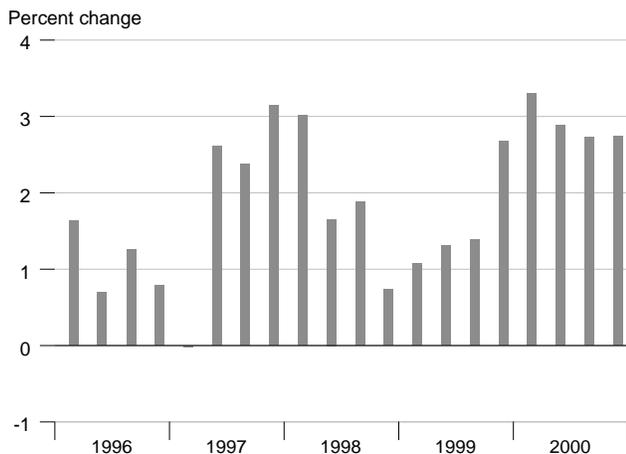


Stock Exchange Index - CDAX

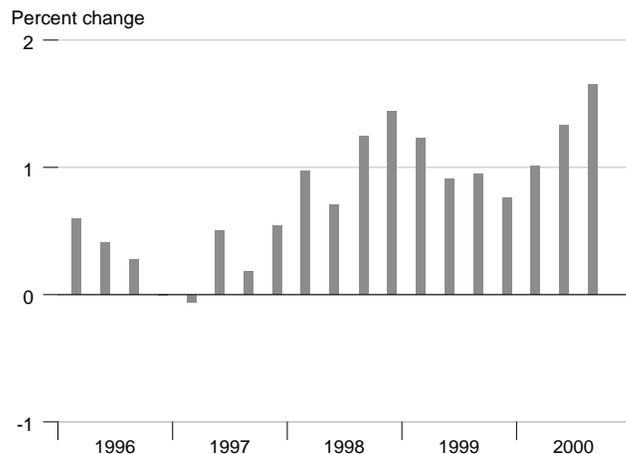
1995 = 100



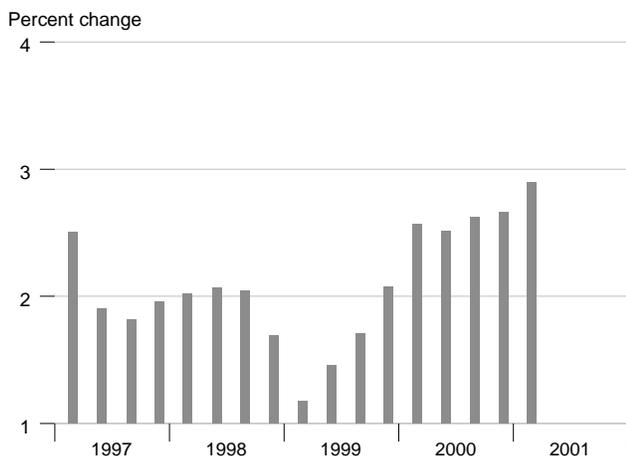
Real GDP Growth



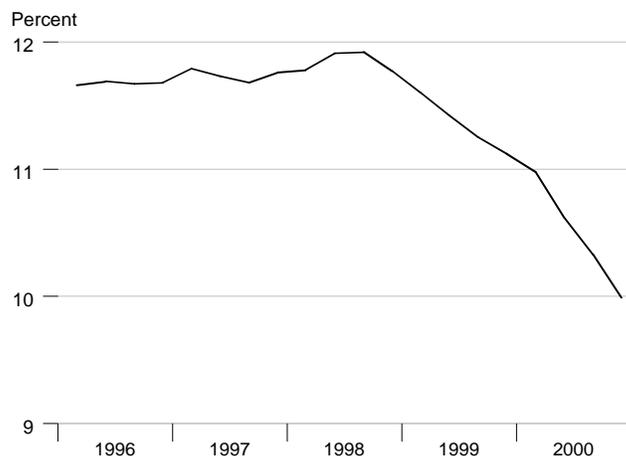
Employment Growth



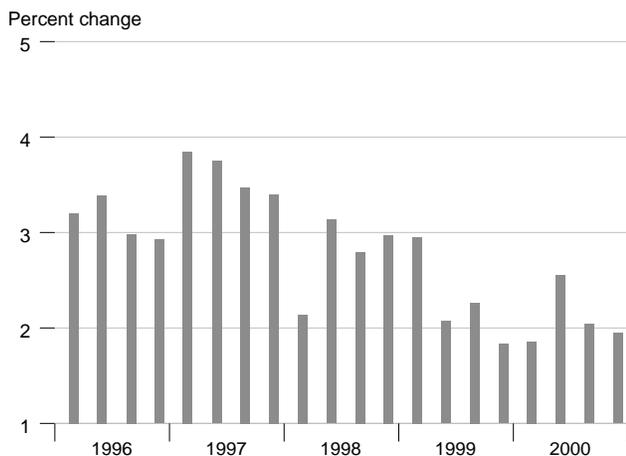
Consumer Price Index



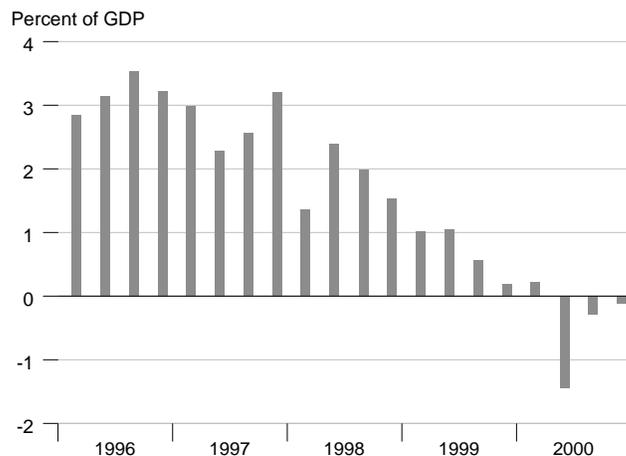
Unemployment Rate



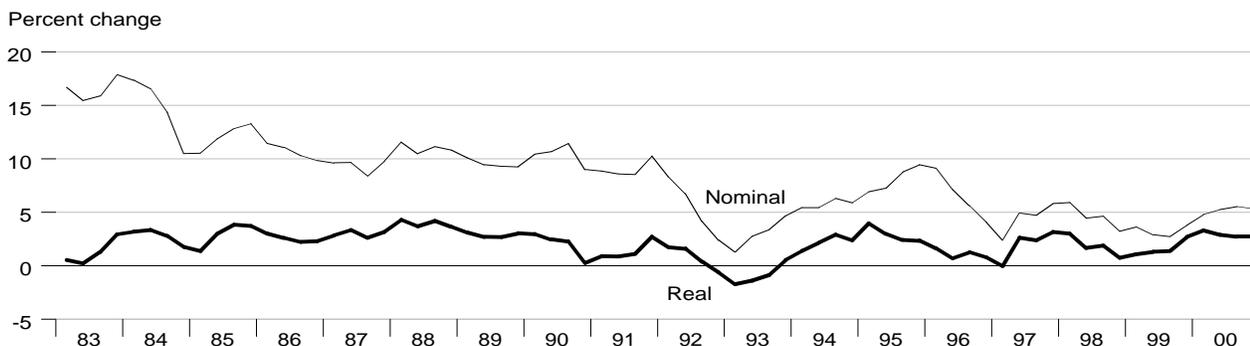
Hourly Earnings



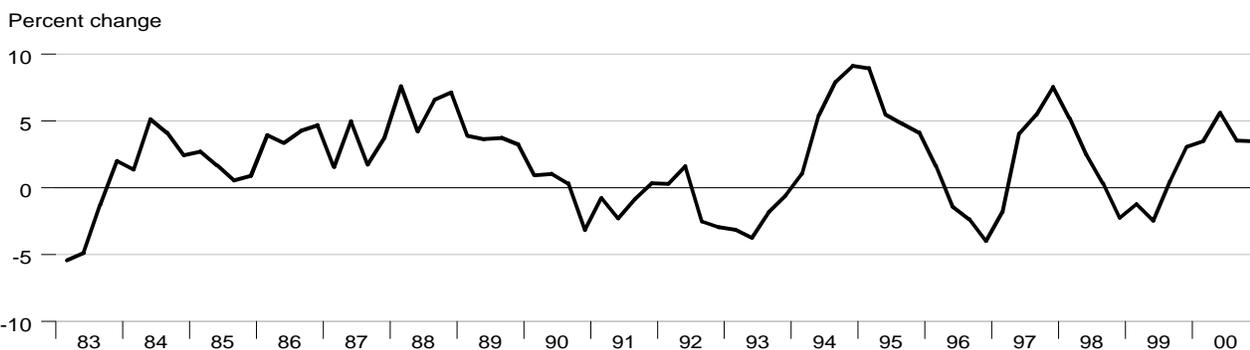
Current Account Balance



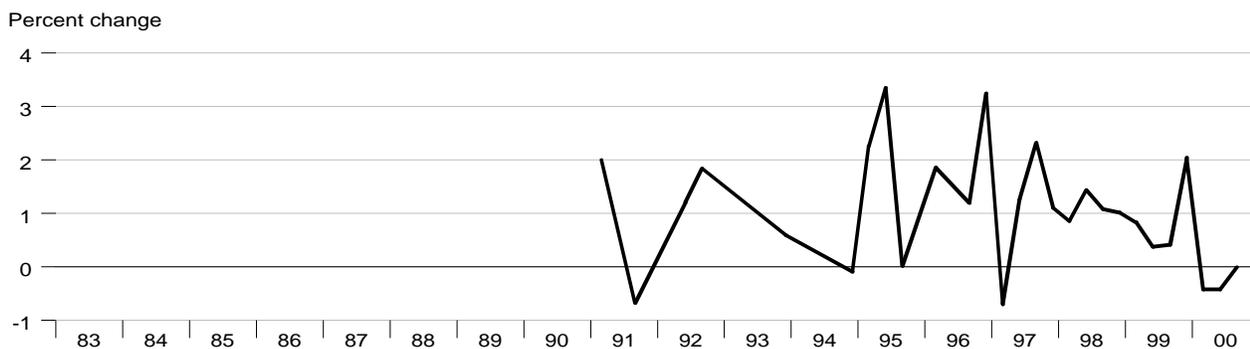
GDP Growth



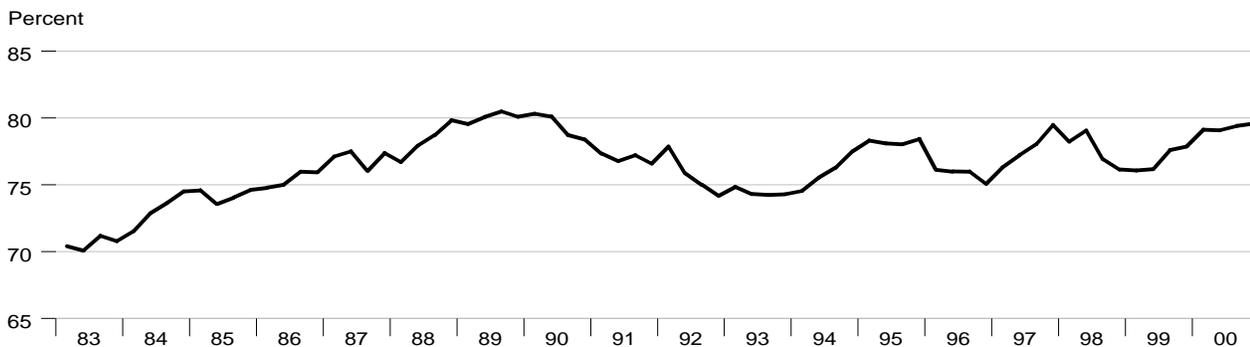
Industrial Production



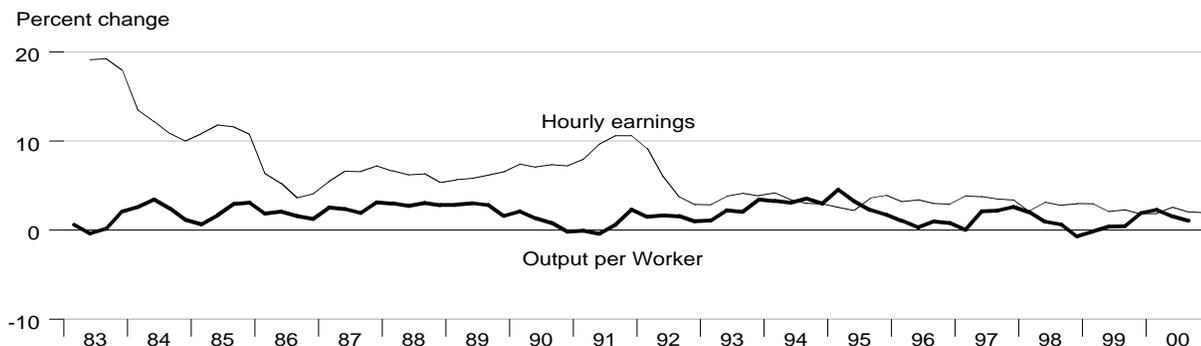
Retail Sales



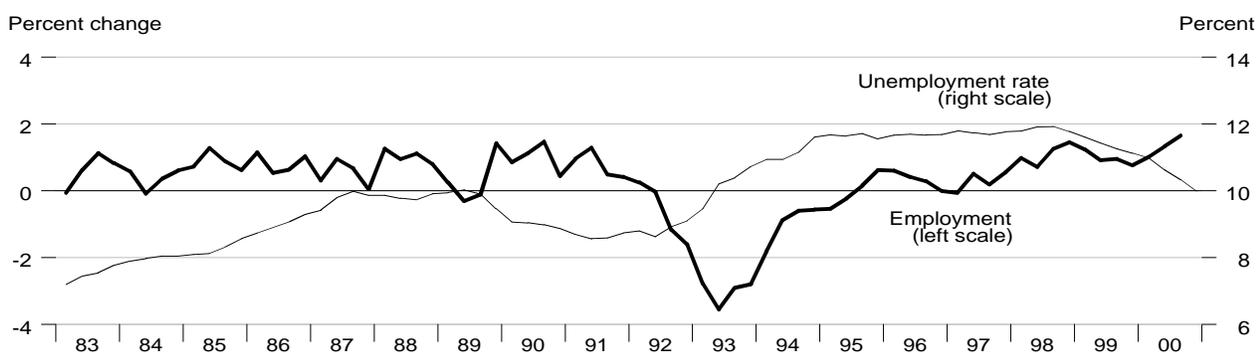
Capacity Utilization



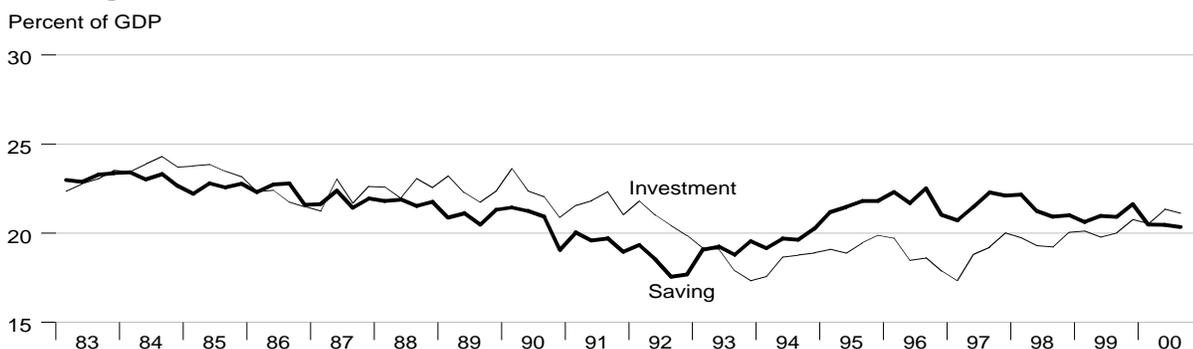
Hourly Earnings and Output per Worker



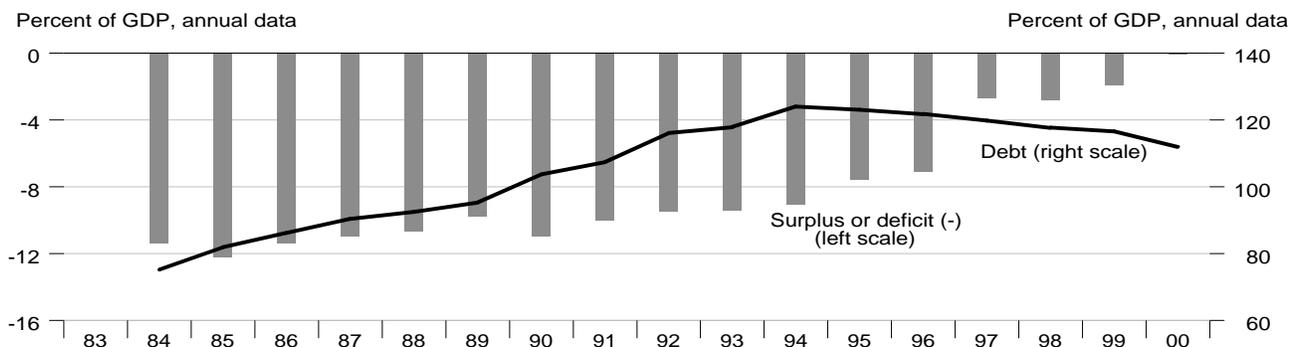
Labor Force Indicators



Saving and Investment

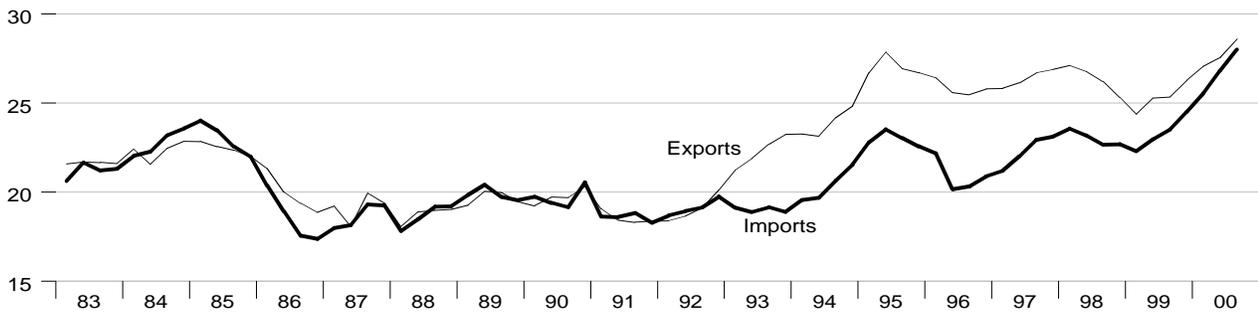


Government Debt and Budget Surplus or Deficit (-)



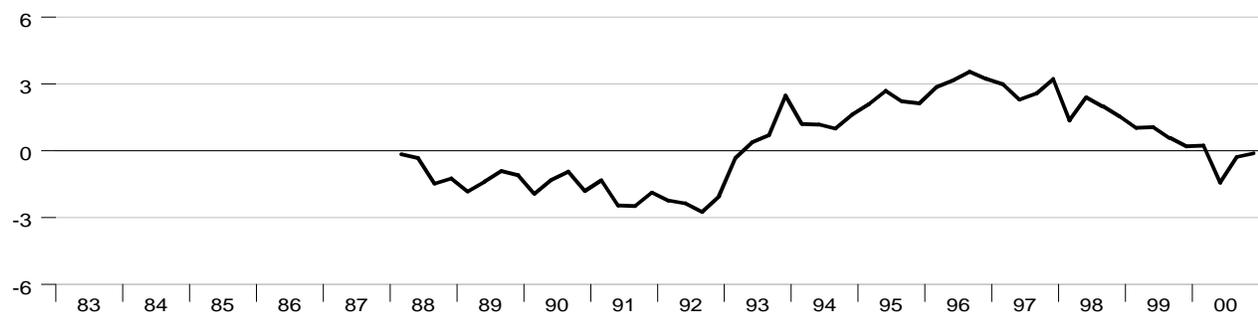
International Trade - Goods and Services

Percent of GDP



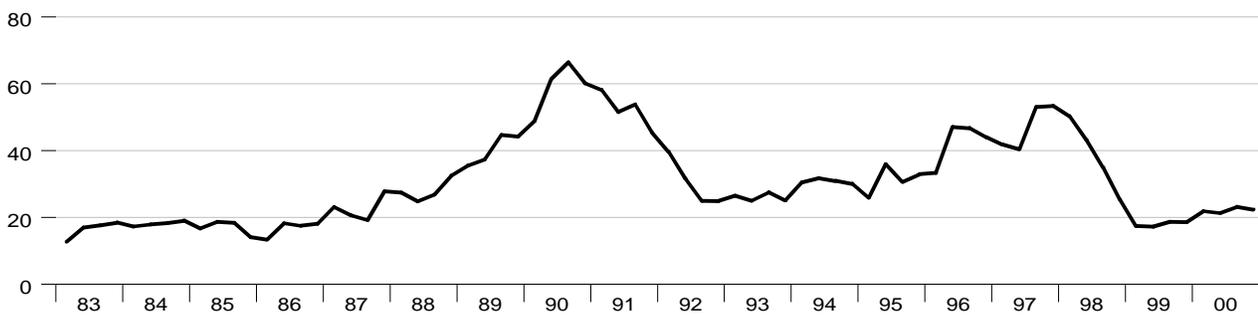
Current Account Balance

Percent of GDP



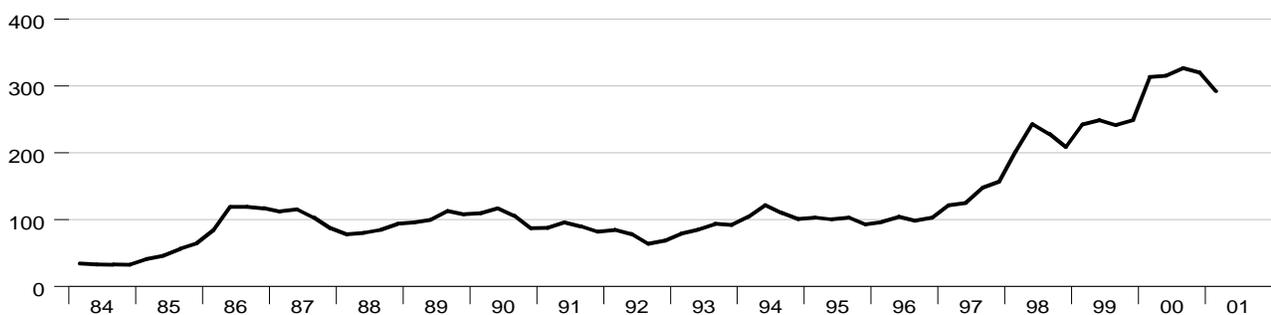
Foreign Exchange Reserves

Billions of US\$

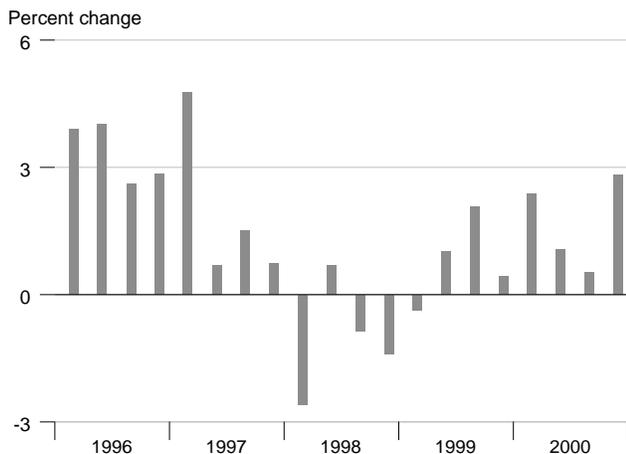


Stock Exchange Index - Milan Stock Exchange

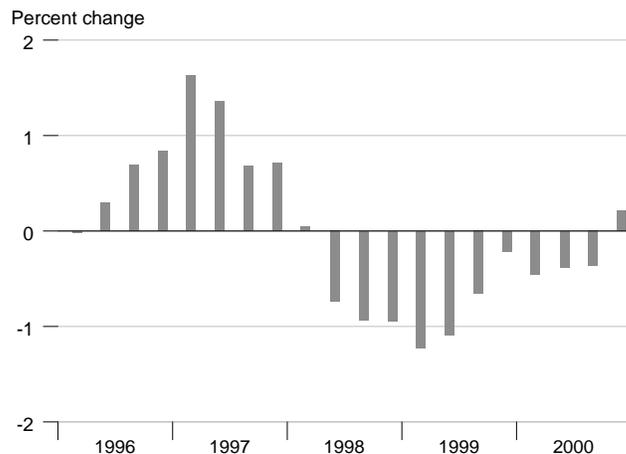
1995 = 100



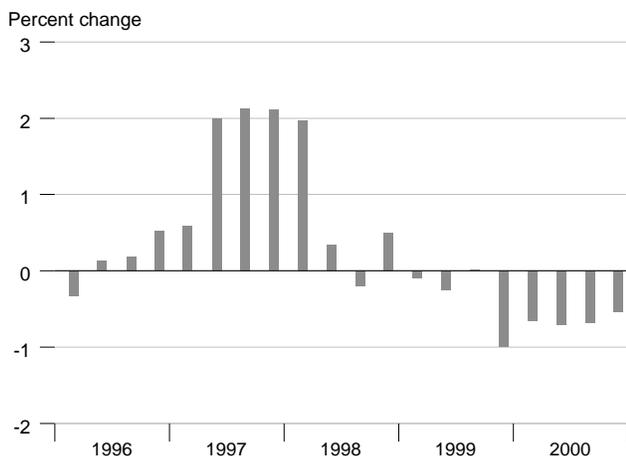
Real GDP Growth



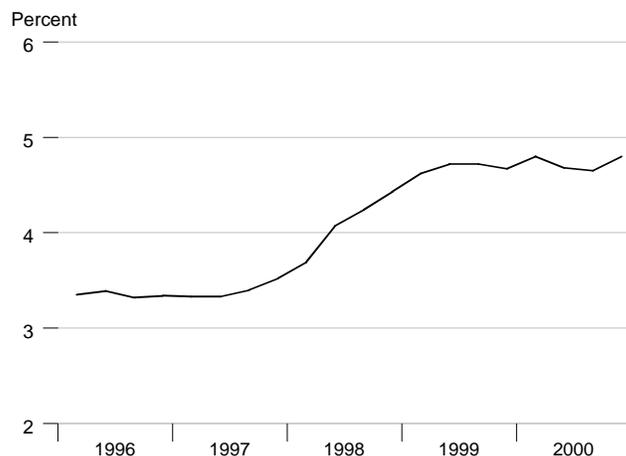
Employment Growth



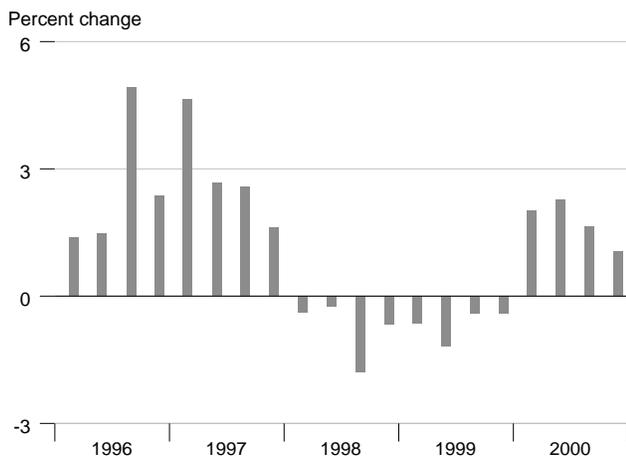
Consumer Price Index



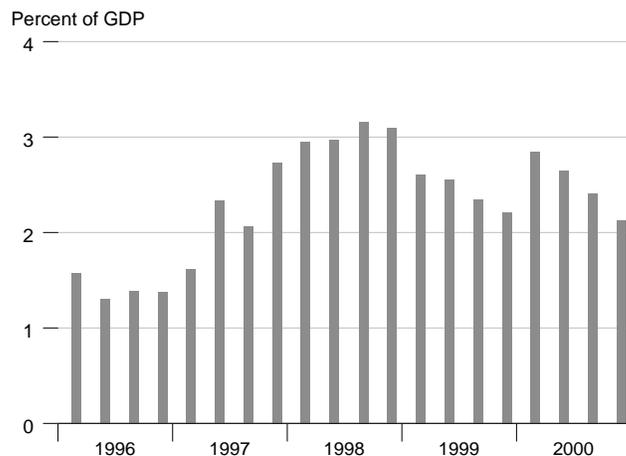
Unemployment Rate



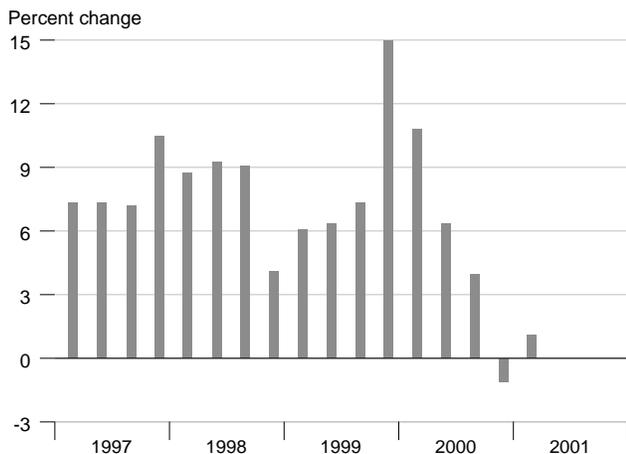
Monthly Earnings



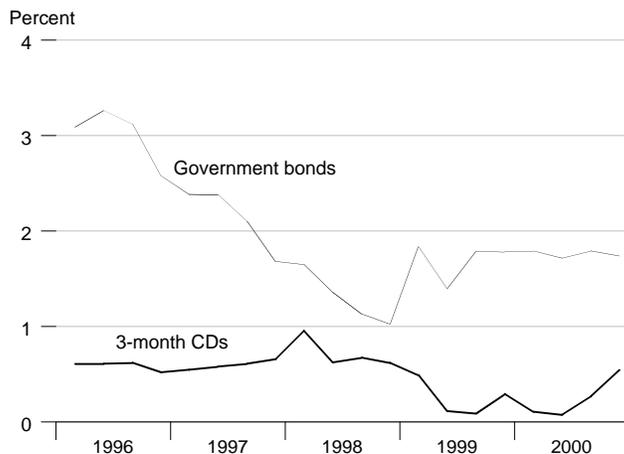
Current Account Balance



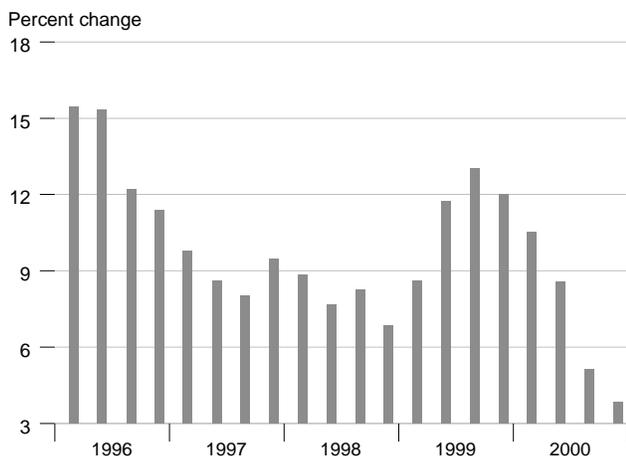
Adjusted Monetary Base Growth



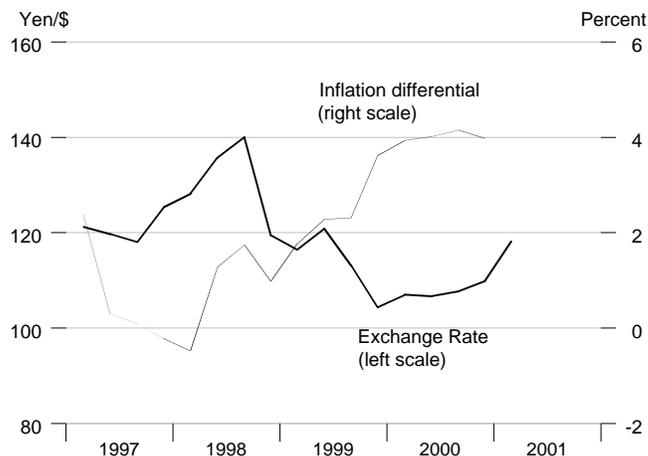
Interest Rates



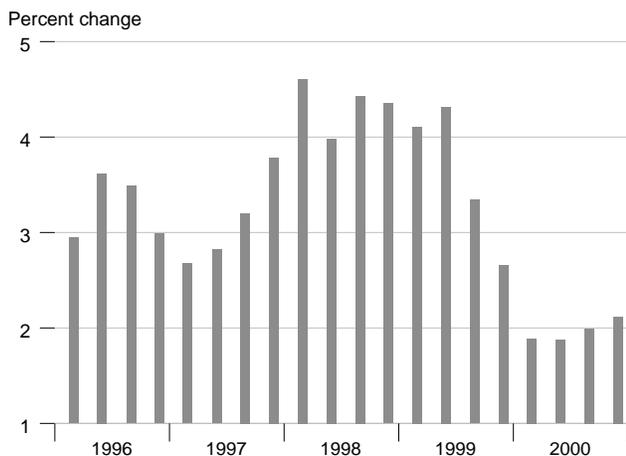
M1 Growth



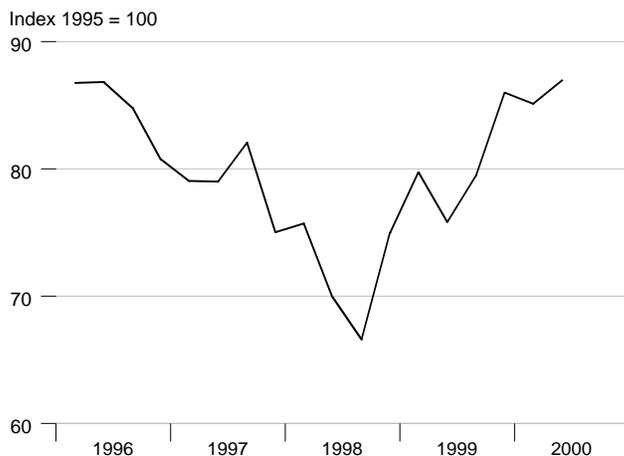
Exchange Rate and Inflation Differential



M2 Growth

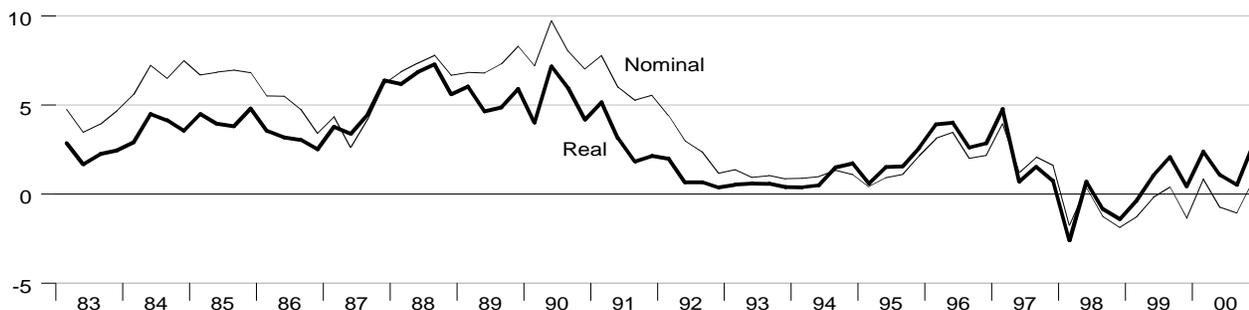


Real Effective Exchange Rate



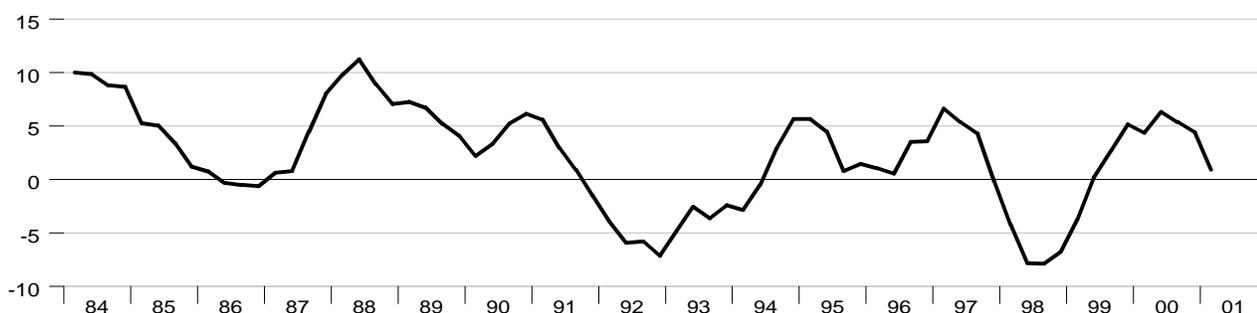
GDP Growth

Percent change



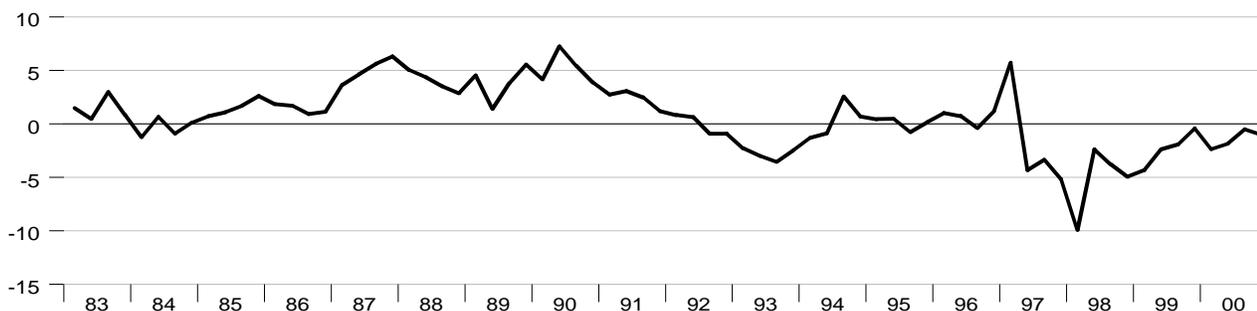
Industrial Production

Percent change



Retail Sales

Percent change

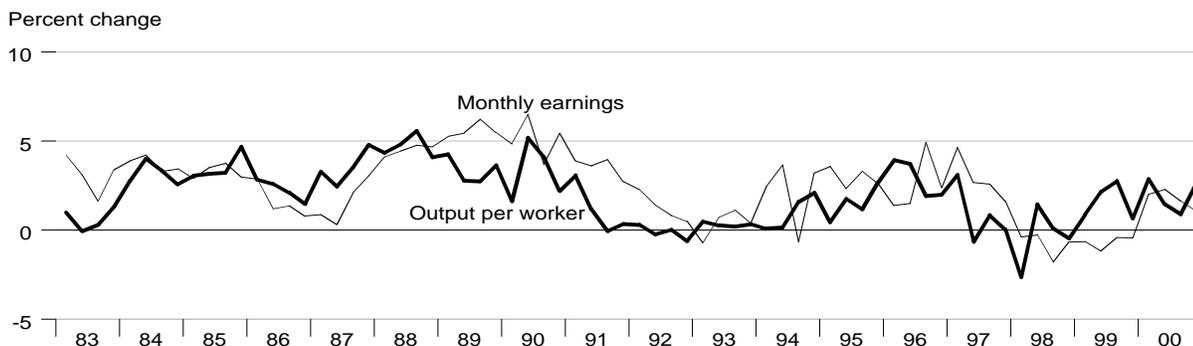


Capacity Utilization

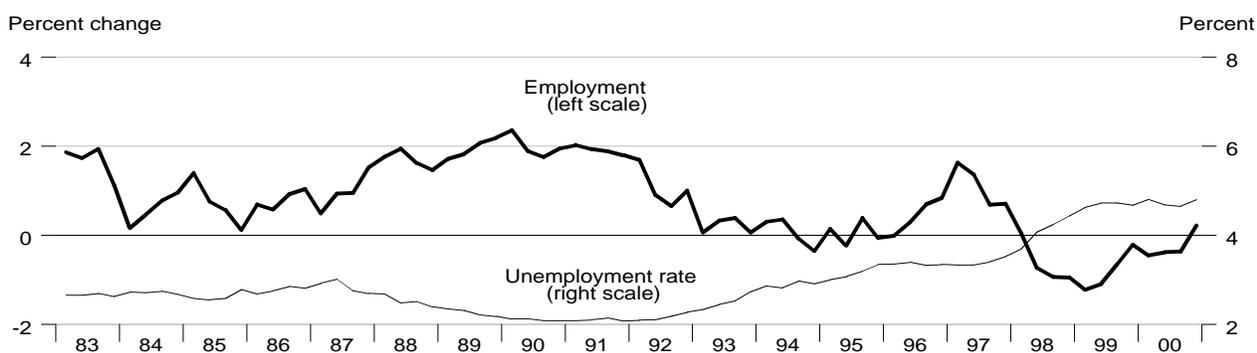
1995 = 100



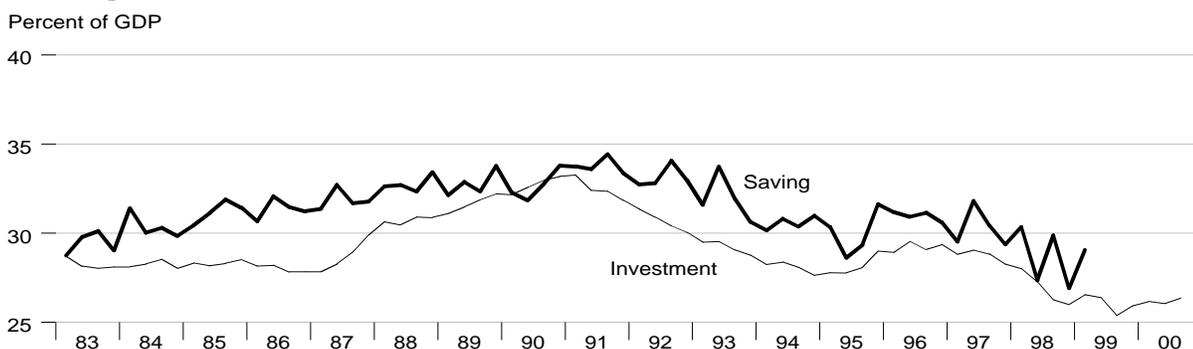
Monthly Earnings and Output per Worker



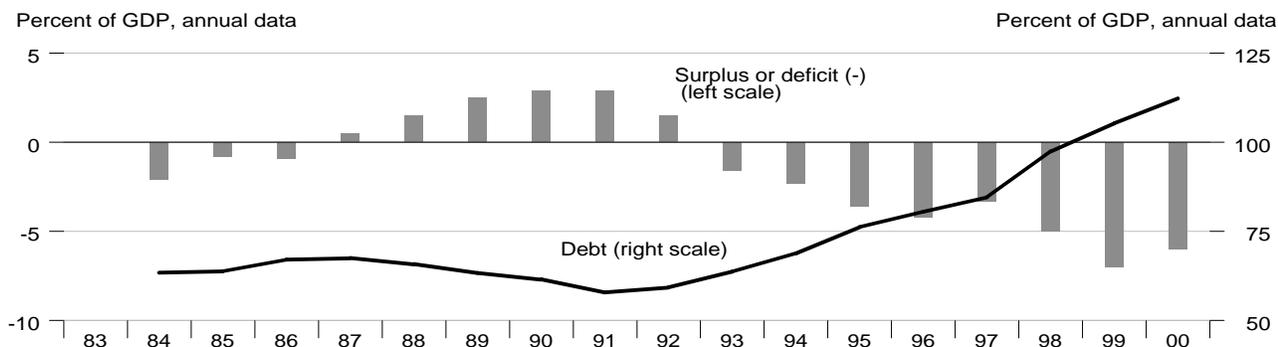
Labor Force Indicators



Saving and Investment

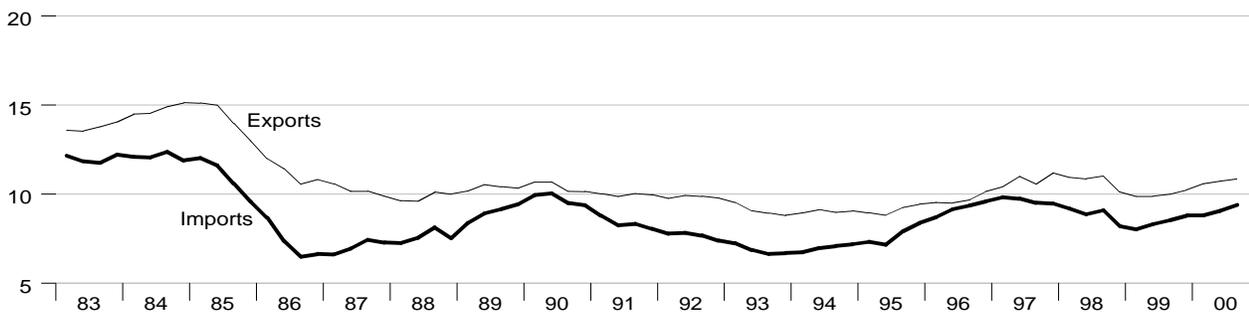


Government Debt and Budget Surplus or Deficit (-)



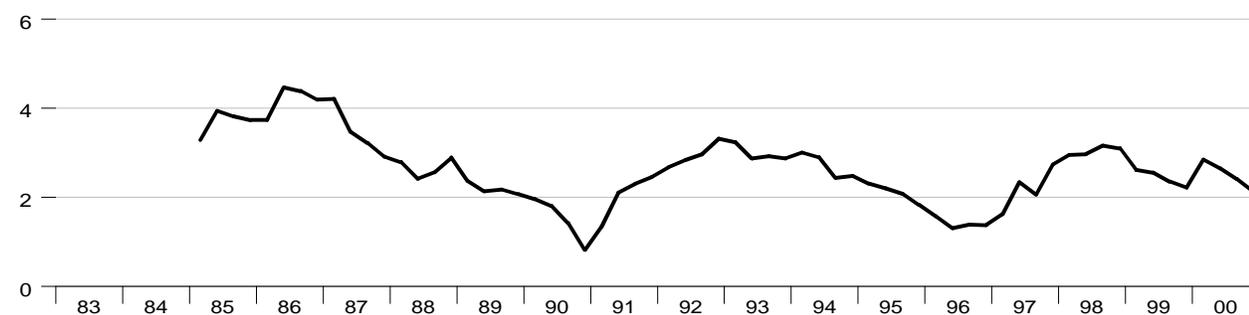
International Trade - Goods and Services

Percent of GDP



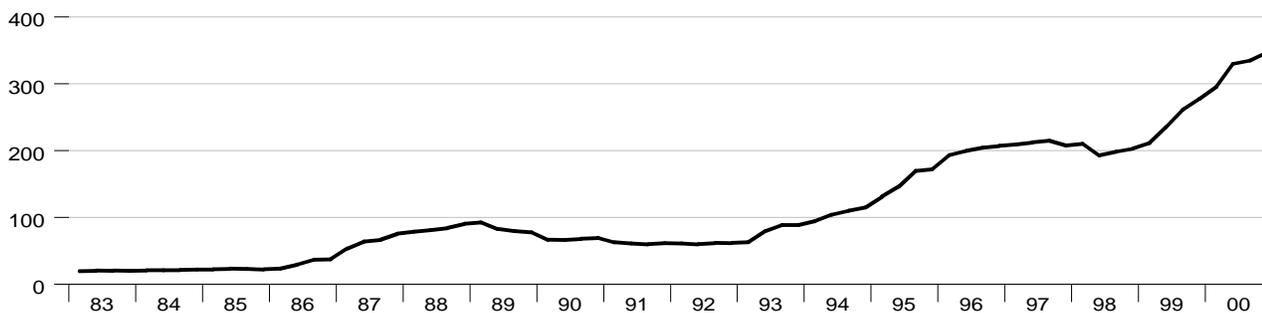
Current Account Balance

Percent of GDP



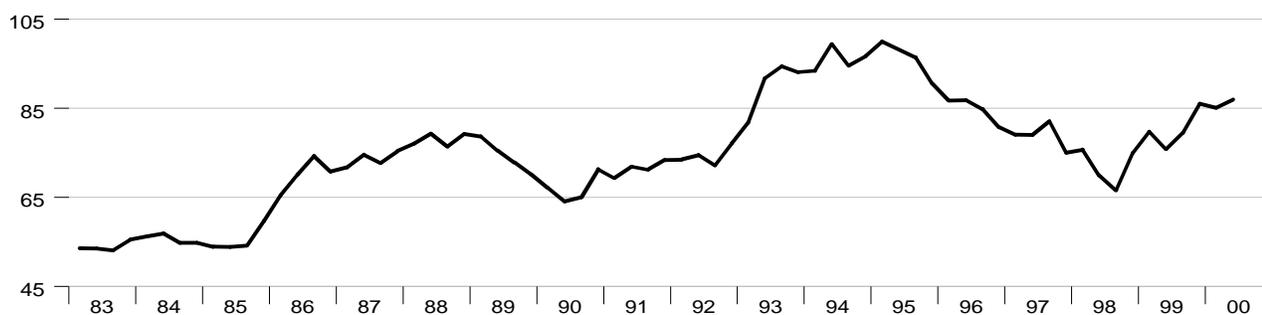
Foreign Exchange Reserves

Billions of US\$



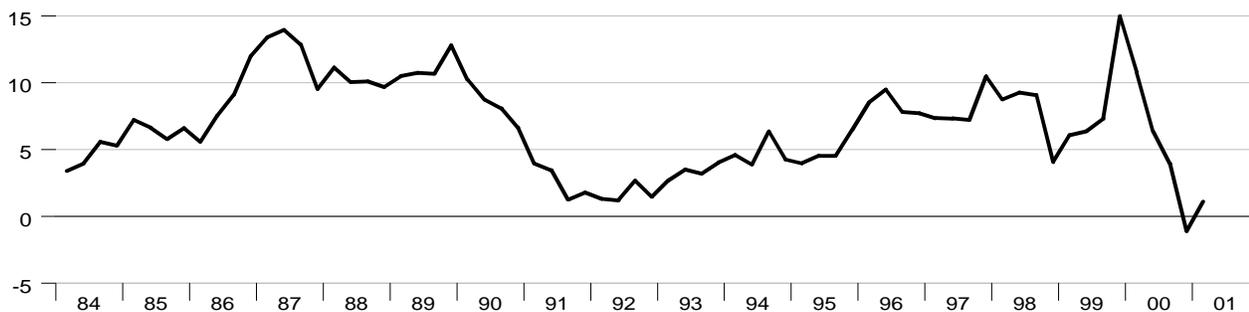
Real Effective Exchange Rate

Index 1995 = 100



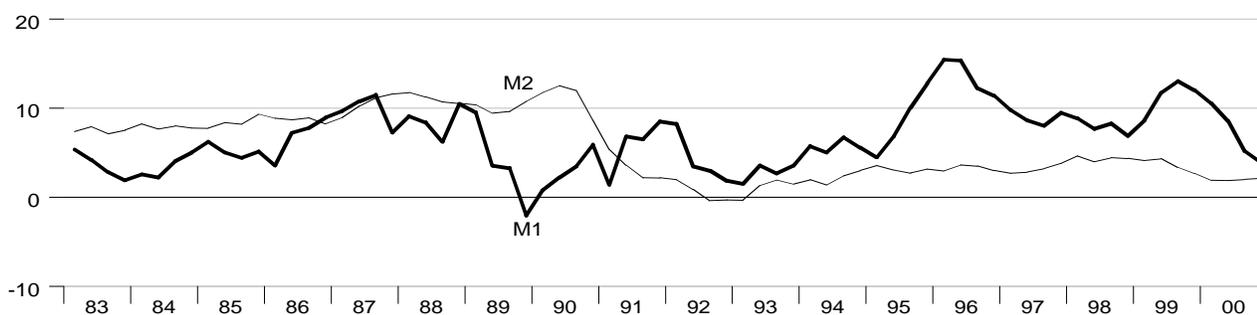
Adjusted Monetary Base Growth

Percent change



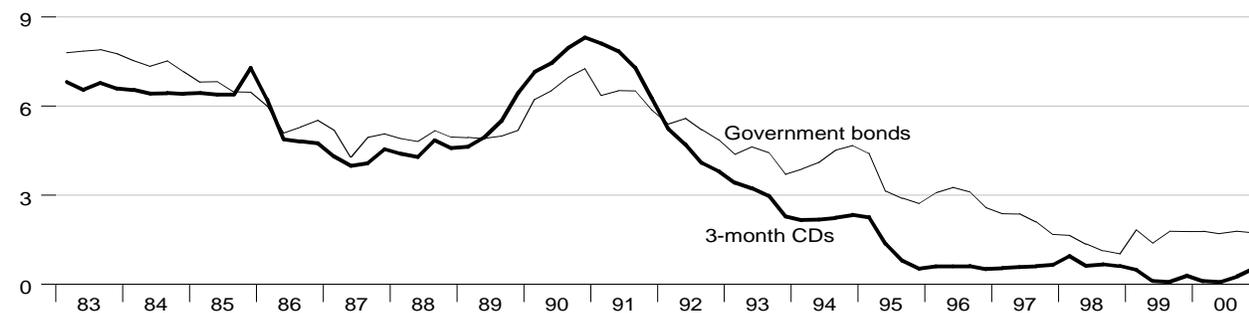
Monetary Aggregates

Percent change



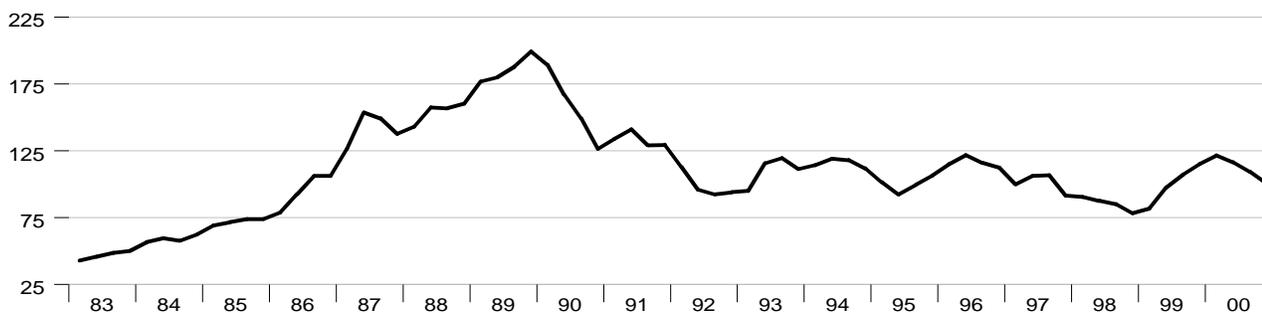
Interest Rates

Percent

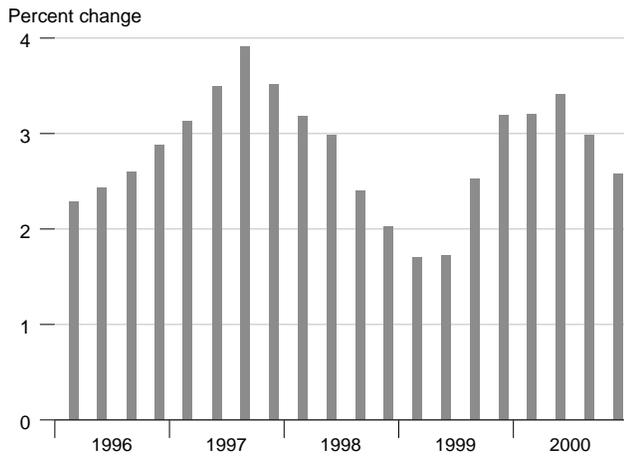


Stock Exchange Index - Tokyo Stock Exchange

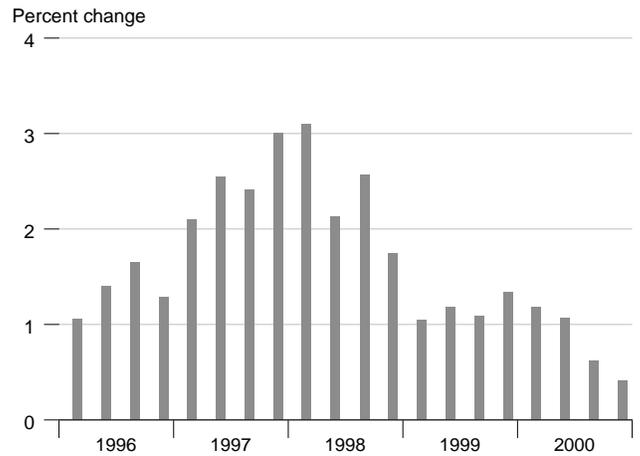
1995 = 100



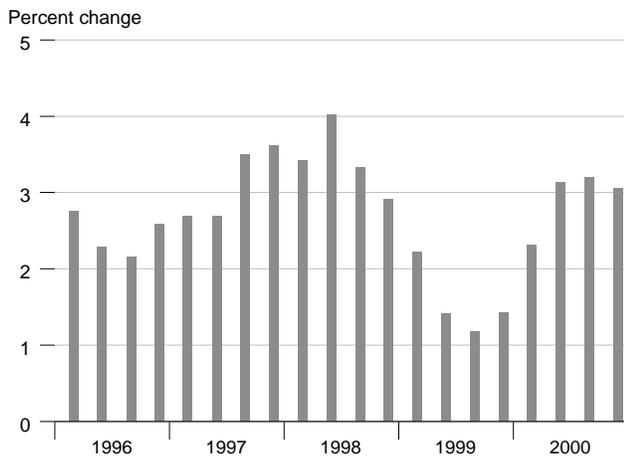
Real GDP Growth



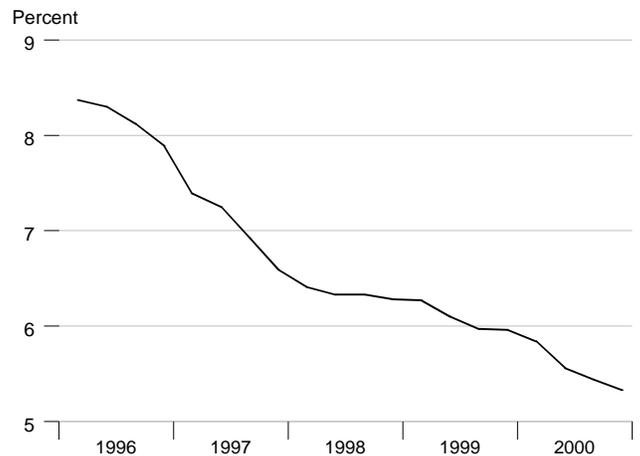
Employment Growth



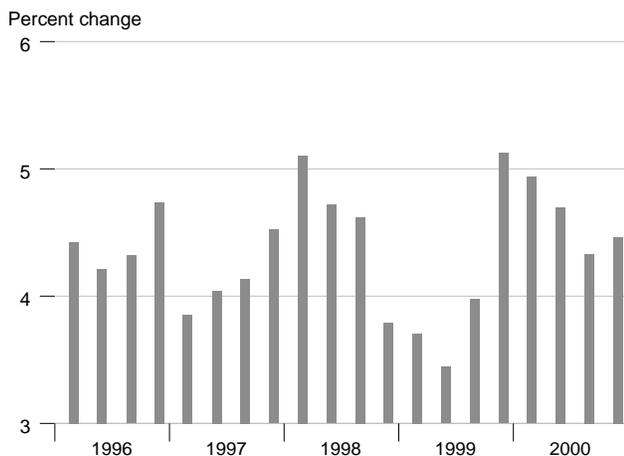
Consumer Price Index



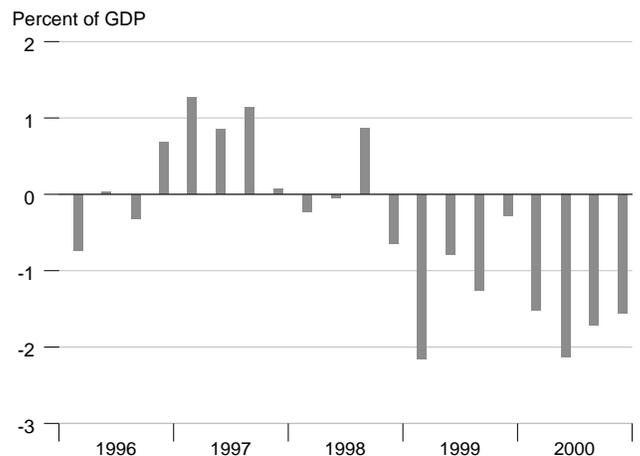
Unemployment Rate



Weekly Earnings

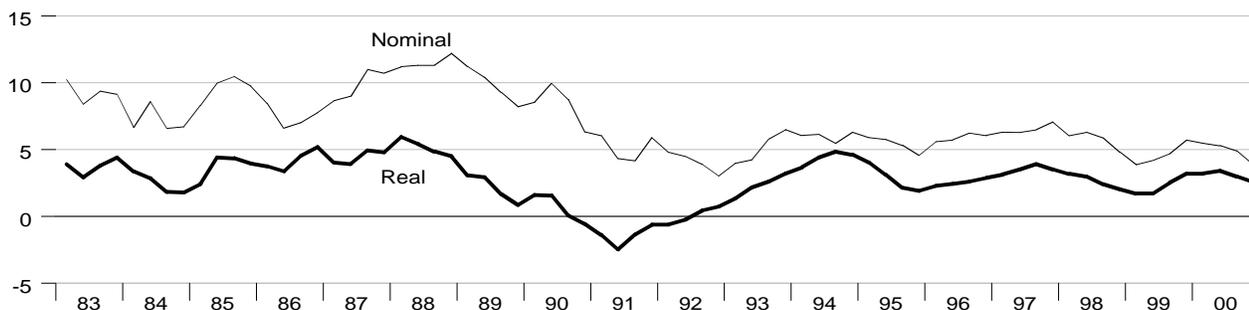


Current Account Balance



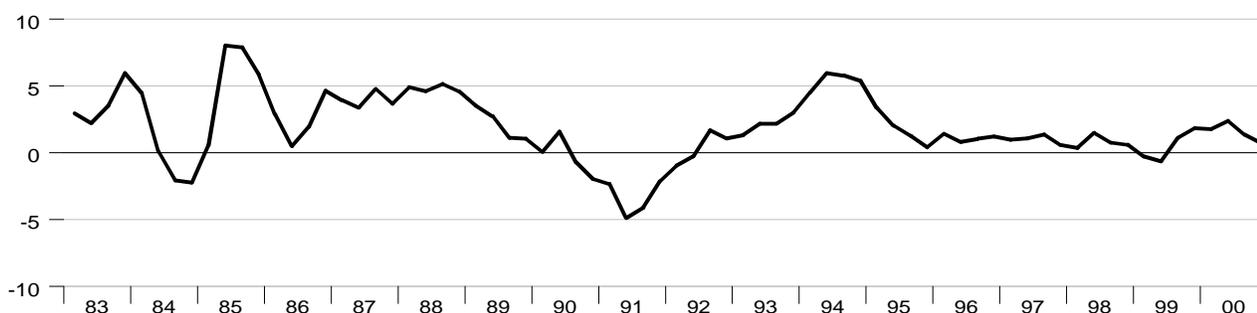
GDP Growth

Percent change



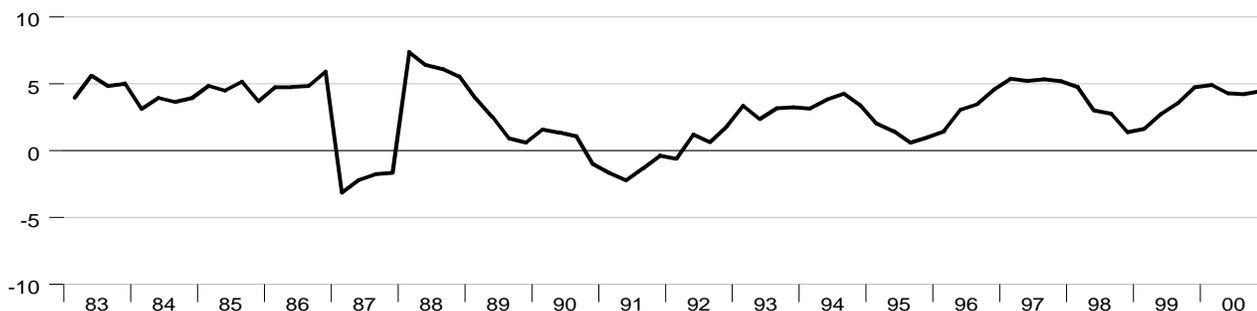
Industrial Production

Percent change



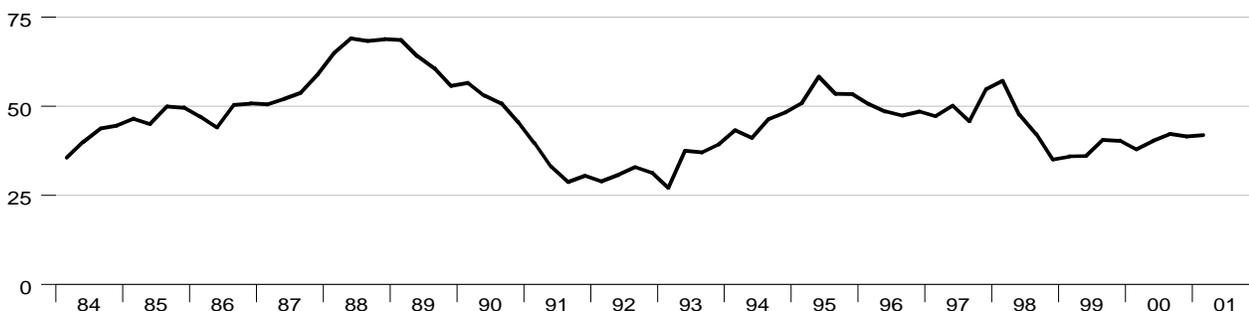
Retail Sales

Percent change

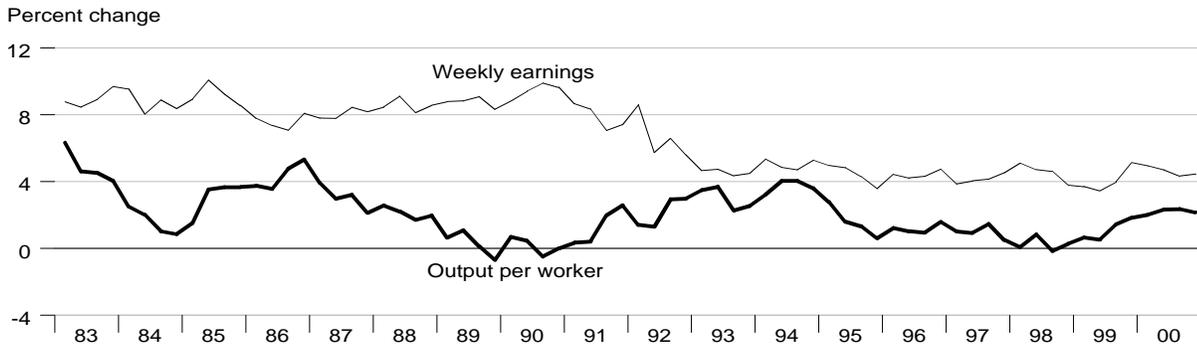


Firms Operating at Capacity

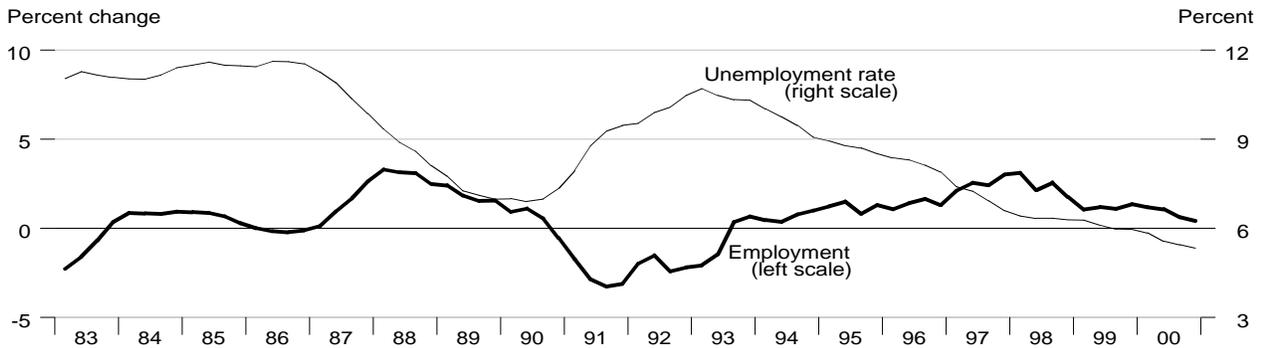
Percent



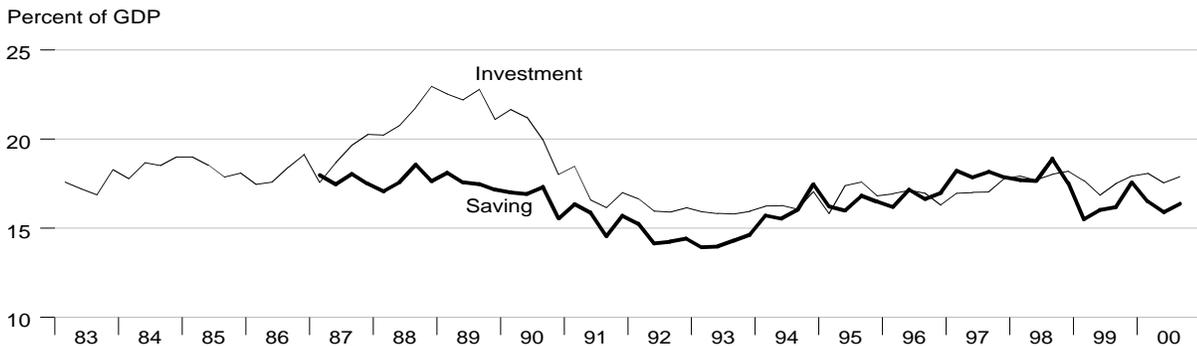
Weekly Earnings and Output per Worker



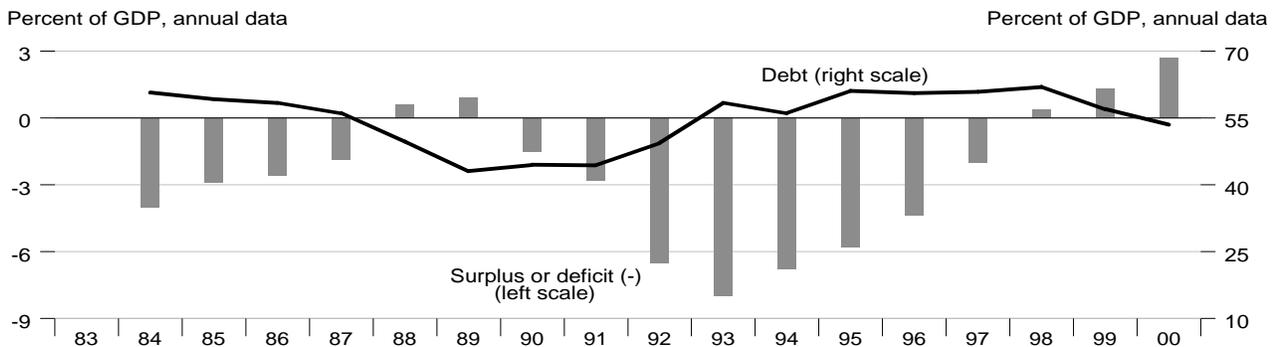
Labor Force Indicators



Saving and Investment

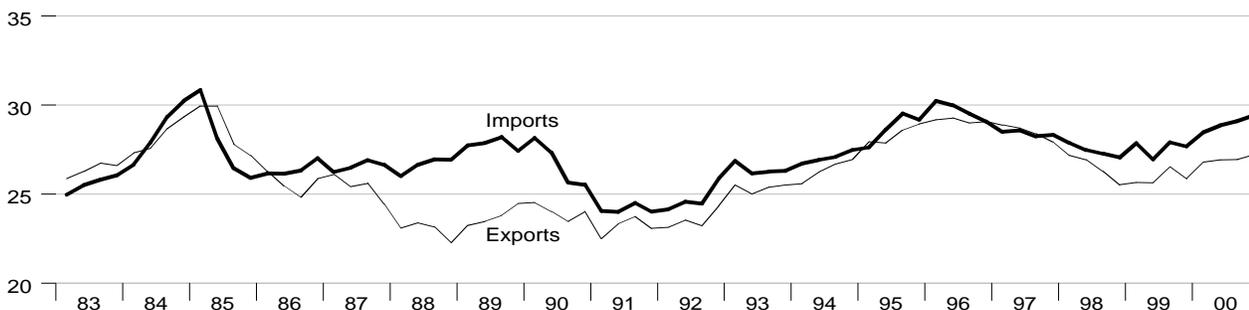


Government Debt and Budget Surplus or Deficit (-)



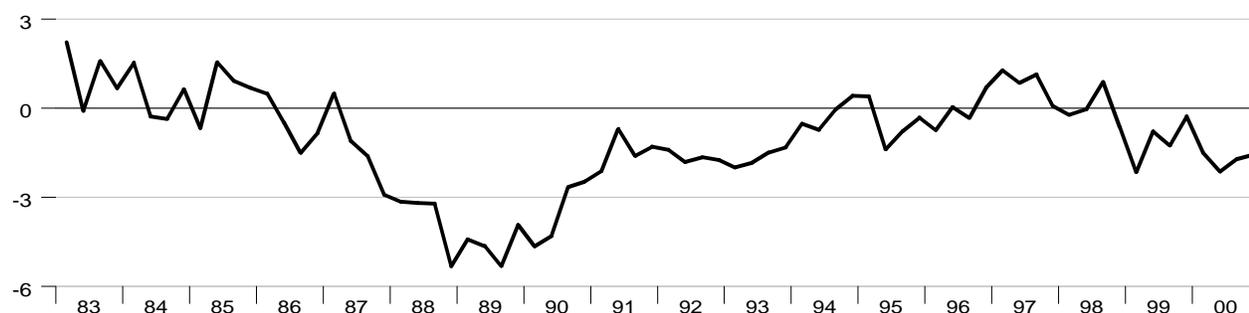
International Trade - Goods and Services

Percent of GDP



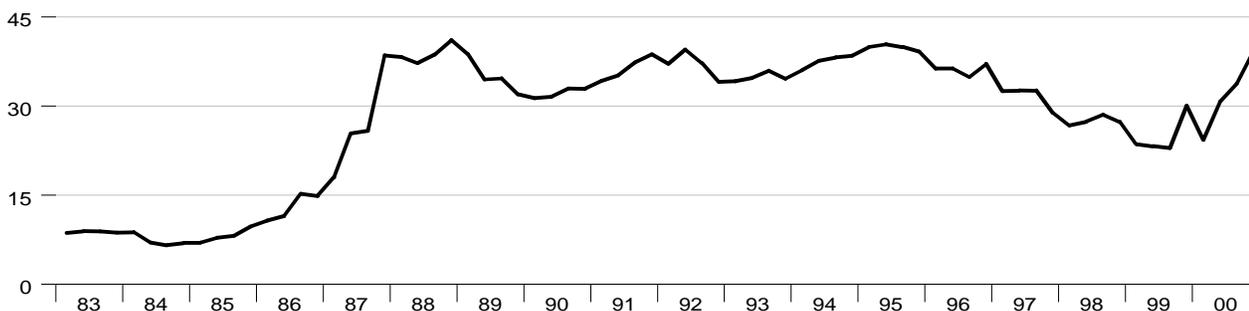
Current Account Balance

Percent of GDP



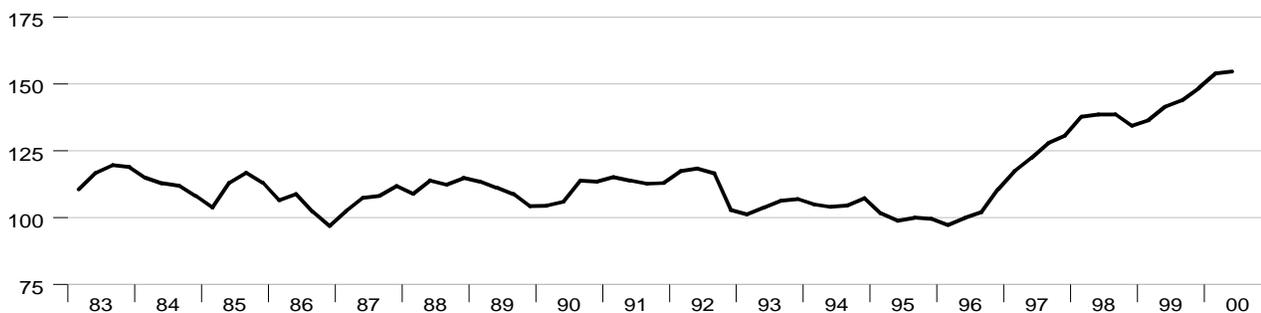
Foreign Exchange Reserves

Billions of US\$



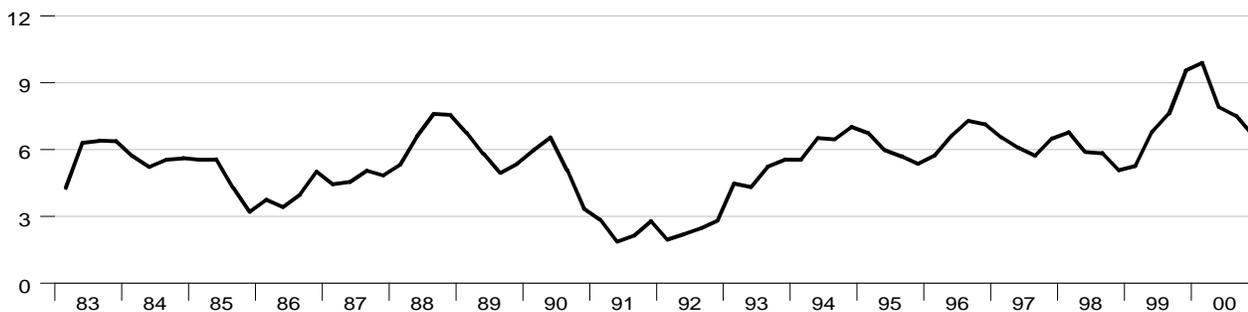
Real Effective Exchange Rate

Index 1995 = 100



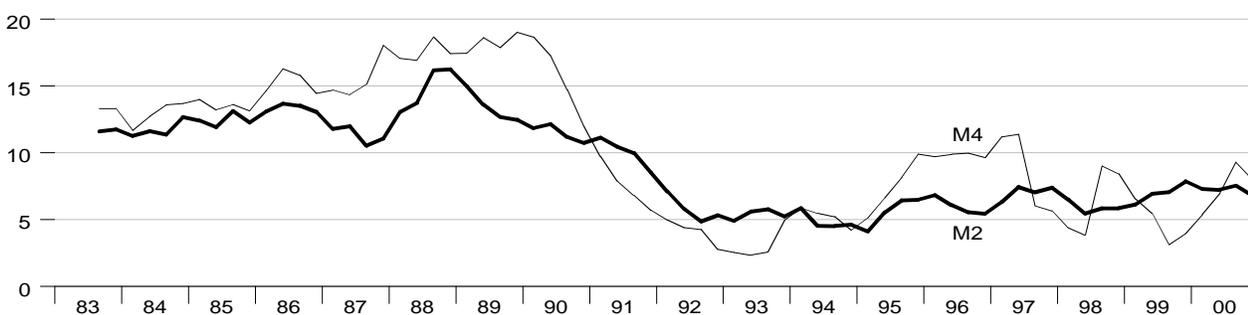
M0 Growth

Percent change



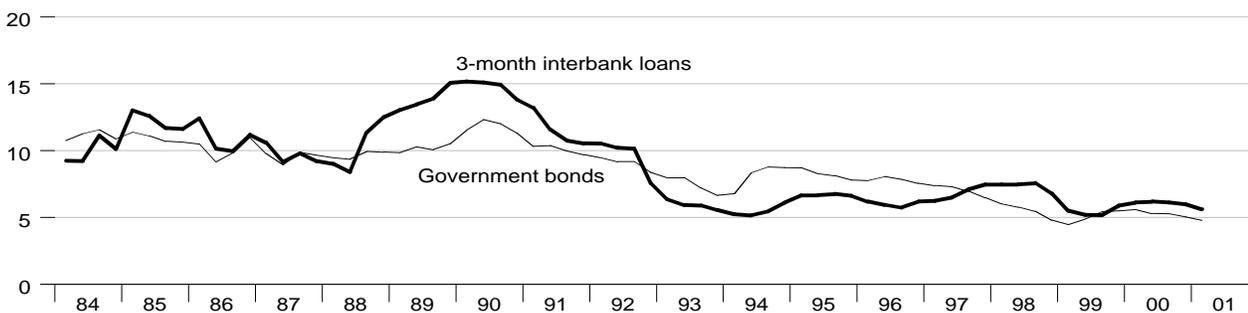
Monetary Aggregates

Percent change



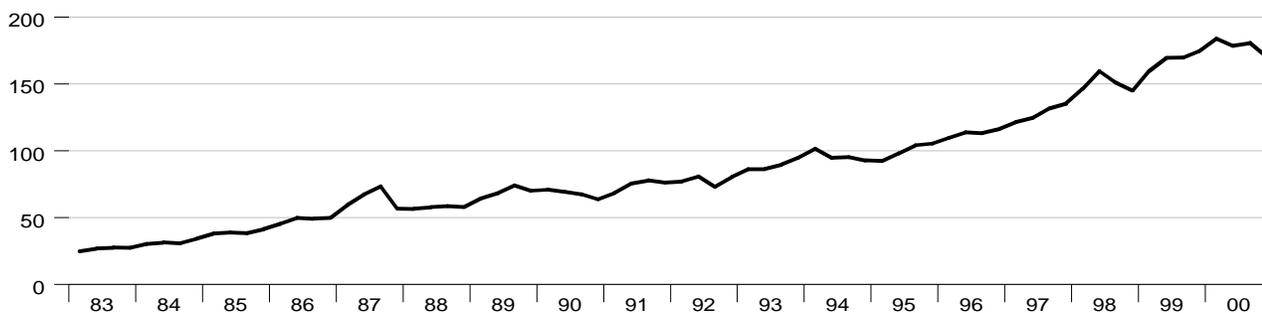
Interest Rates

Percent



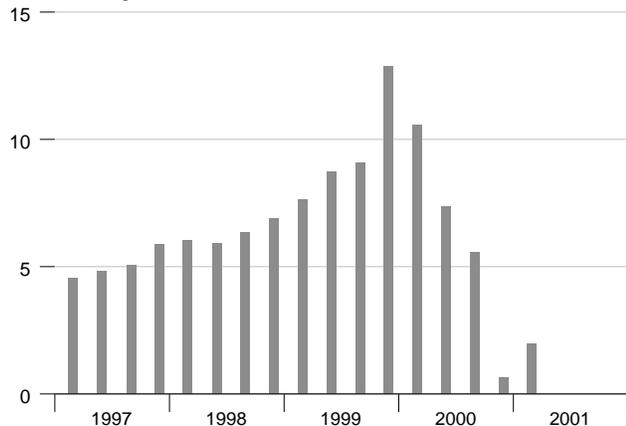
Stock Exchange Index - Financial Times Stock Exchange

1995 = 100



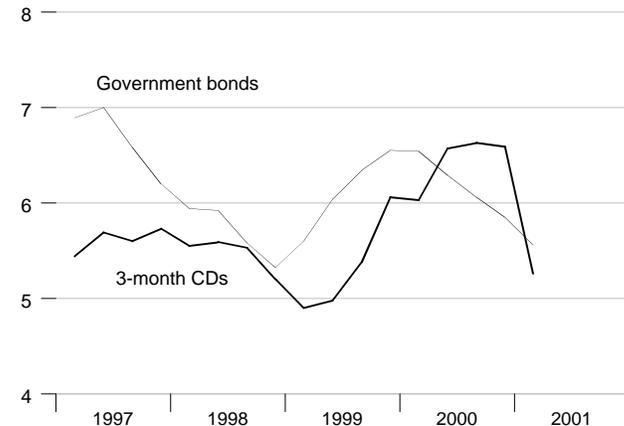
Adjusted Monetary Base Growth

Percent change



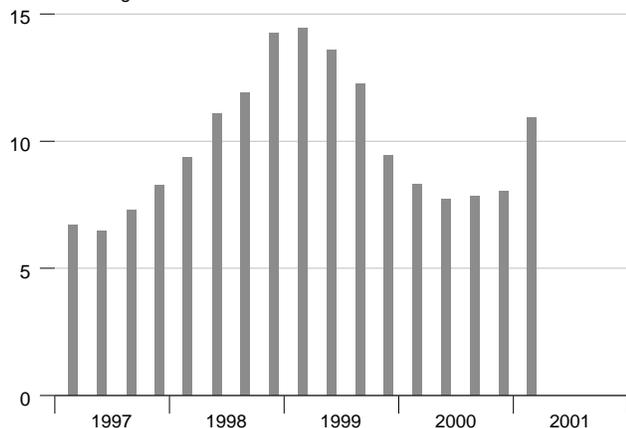
Interest Rates

Percent



MZM Growth

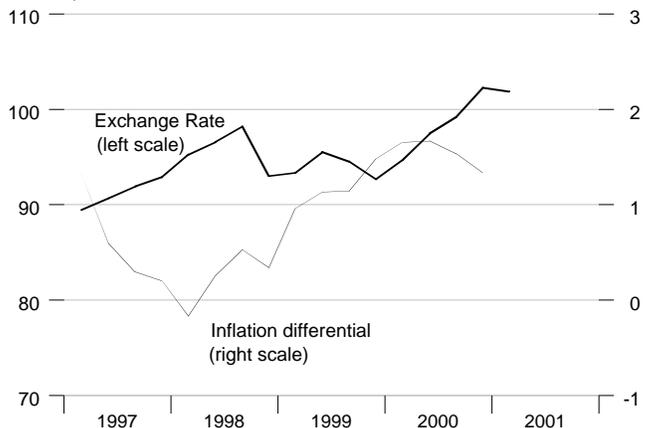
Percent change



Exchange Rate and Inflation Differential

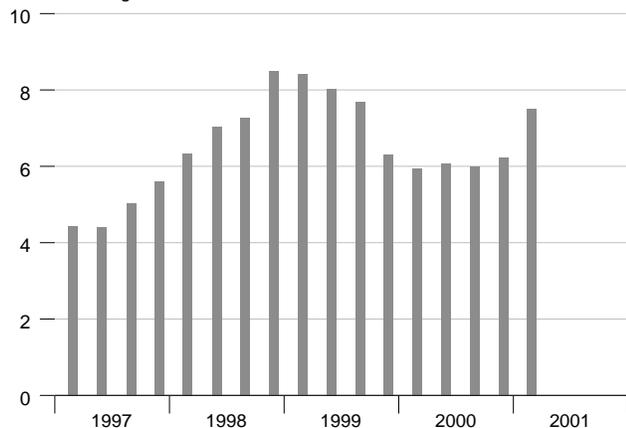
TWEX, March 1973=100

Percent



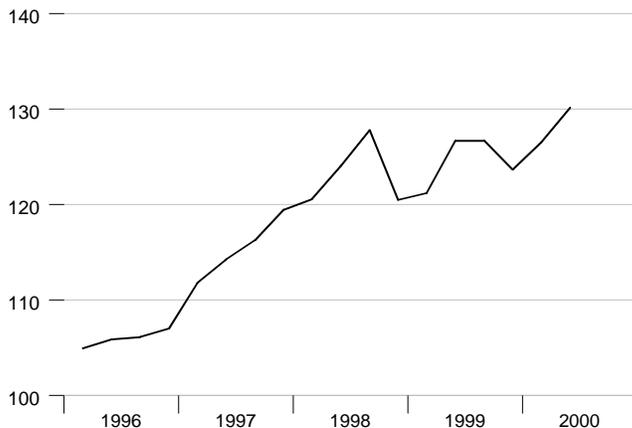
M2 Growth

Percent change



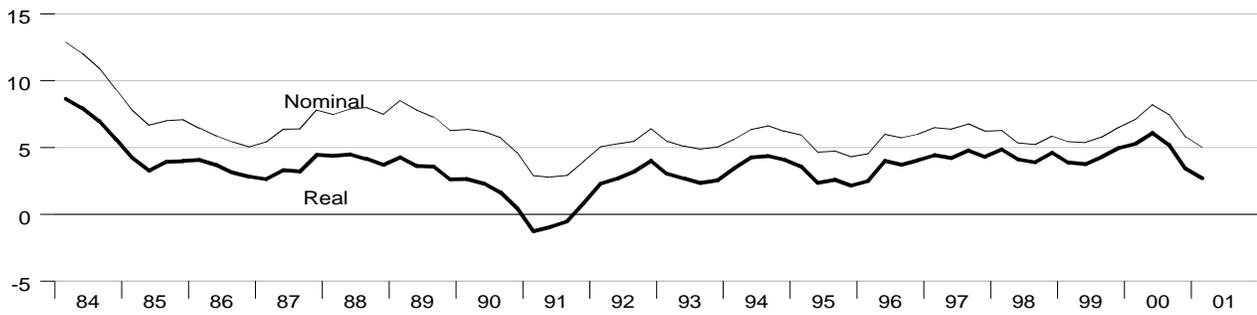
Real Effective Exchange Rate

Index 1995 = 100



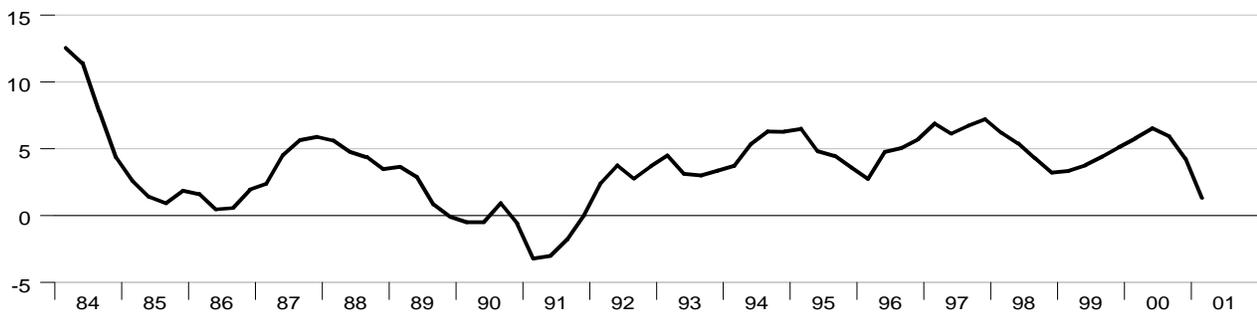
GDP Growth

Percent change



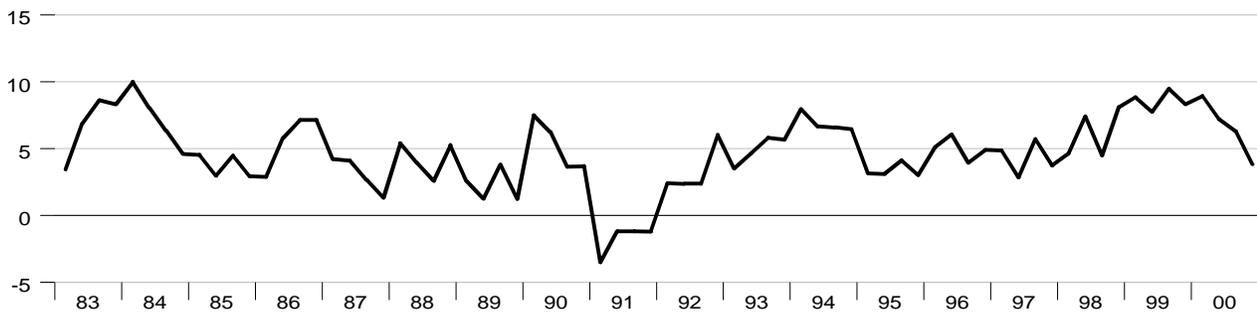
Industrial Production

Percent change



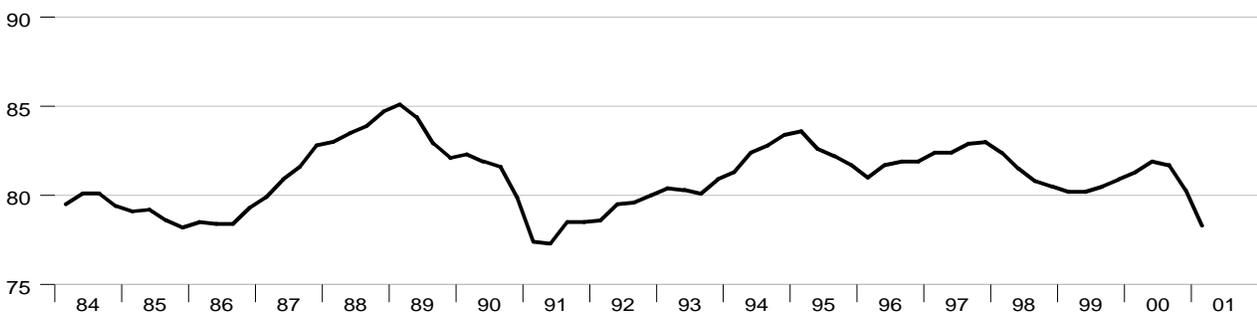
Retail Sales

Percent change

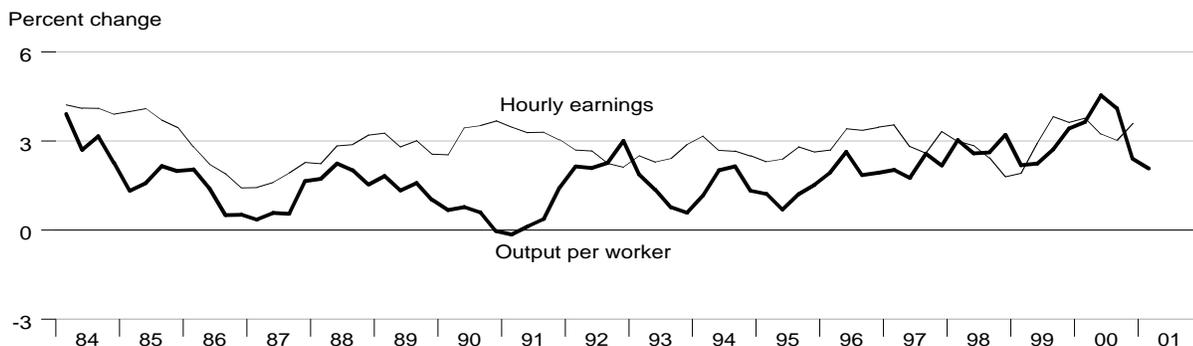


Capacity Utilization

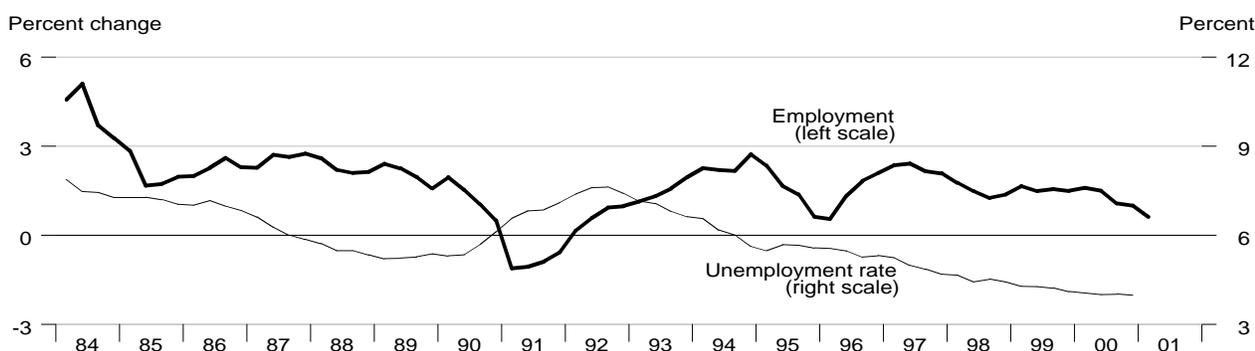
Percent



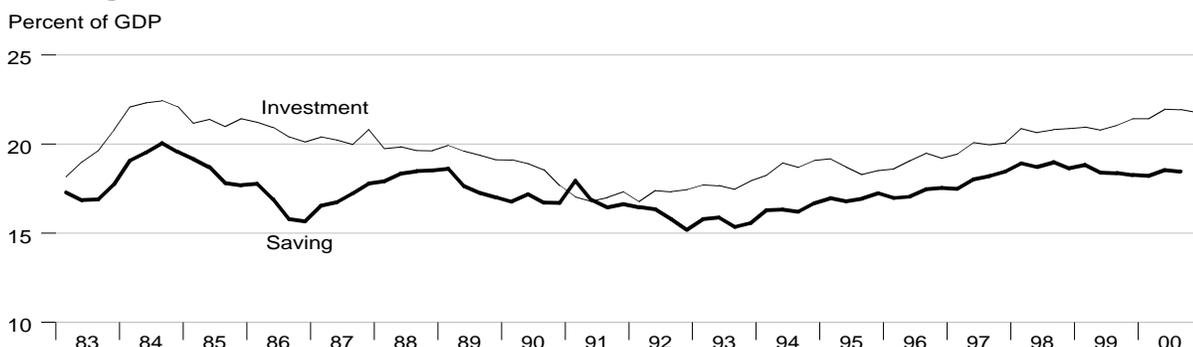
Hourly Earnings and Output per Worker



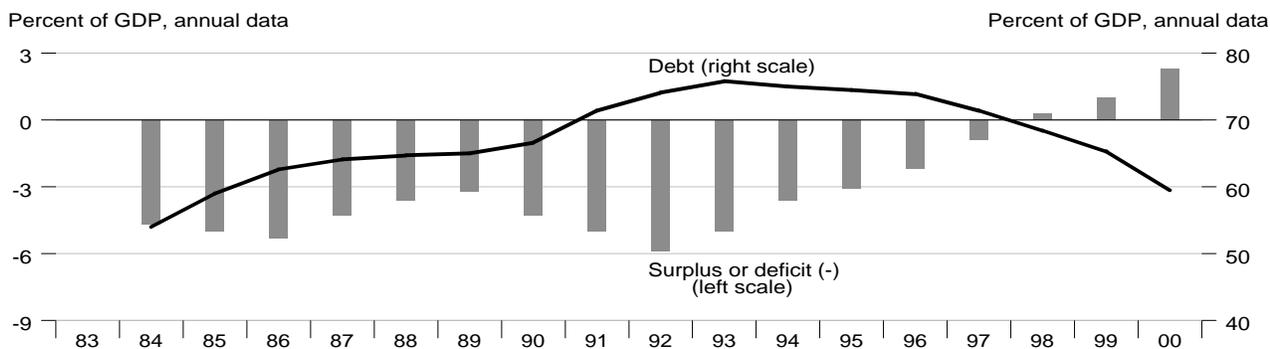
Labor Force Indicators



Saving and Investment

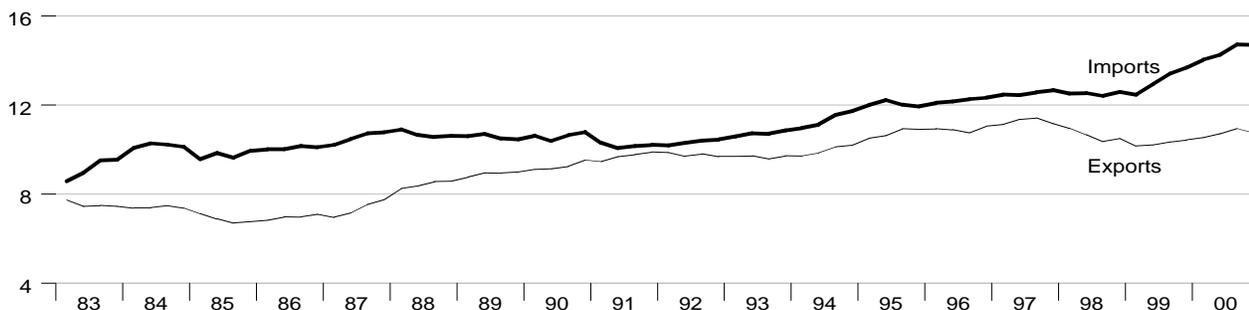


Government Debt and Budget Surplus or Deficit (-)



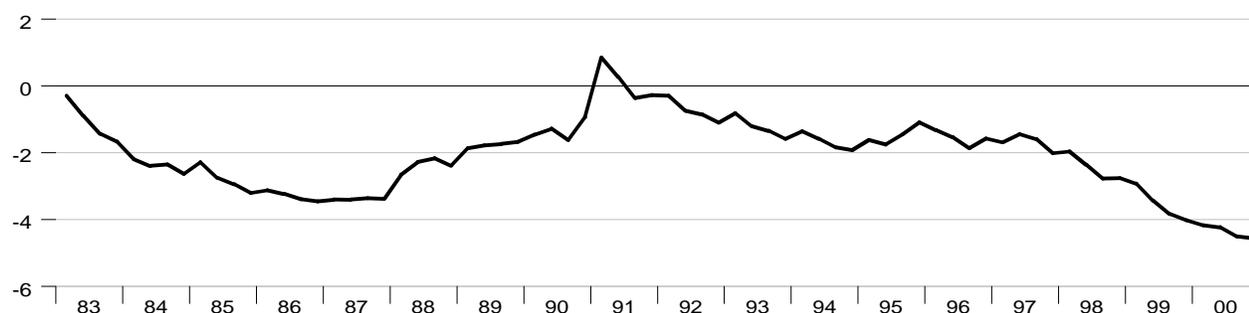
International Trade - Goods and Services

Percent of GDP



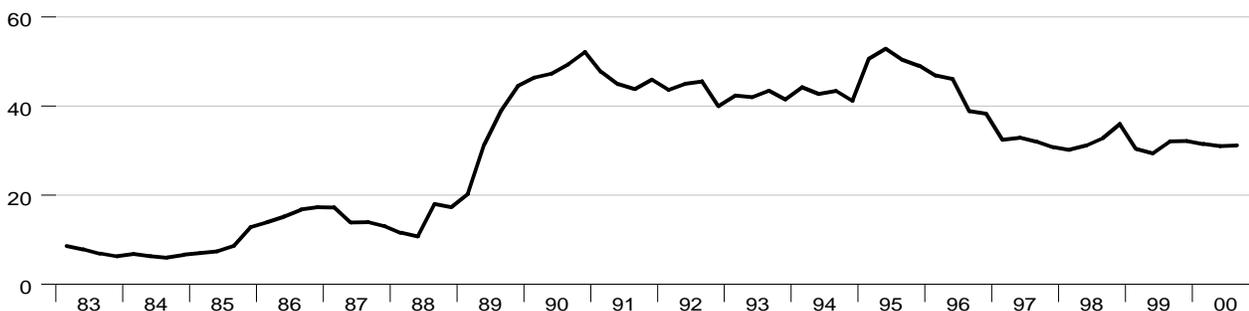
Current Account Balance

Percent of GDP



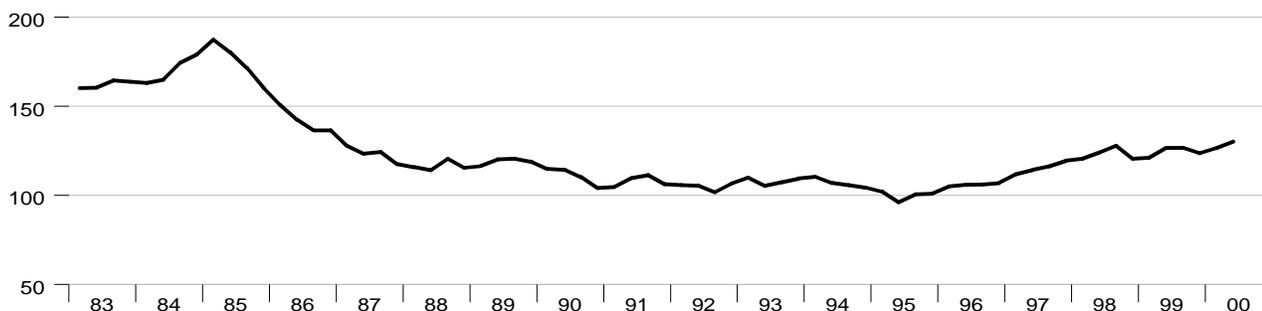
Foreign Exchange Reserves

Billions of US\$



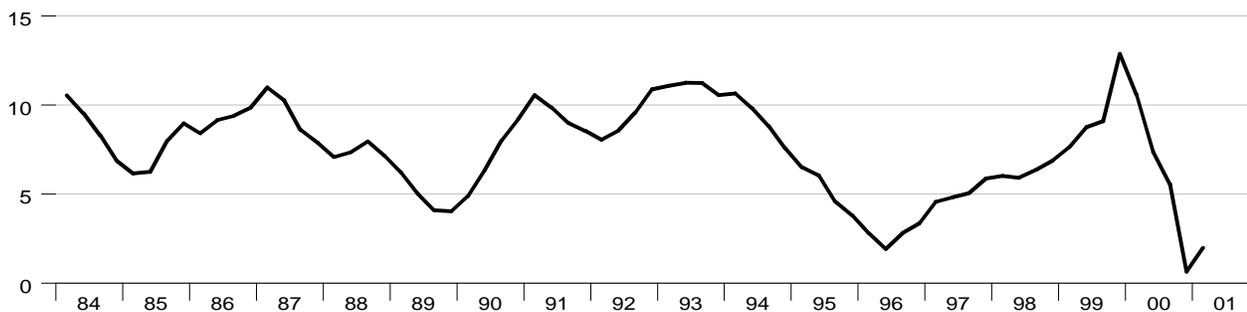
Real Effective Exchange Rate

Index 1995 = 100



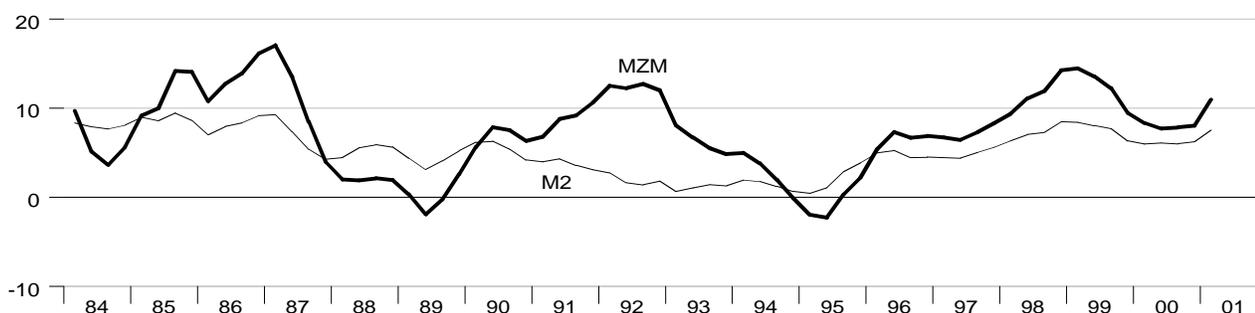
Adjusted Monetary Base Growth

Percent change



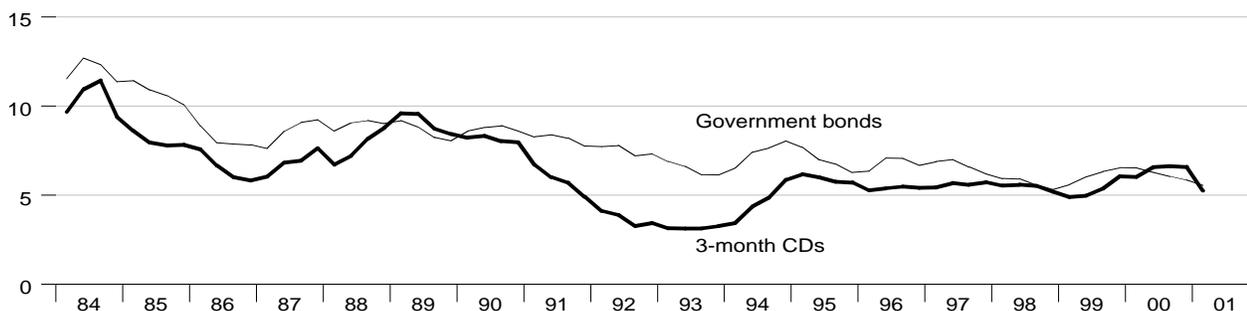
Monetary Aggregates

Percent change



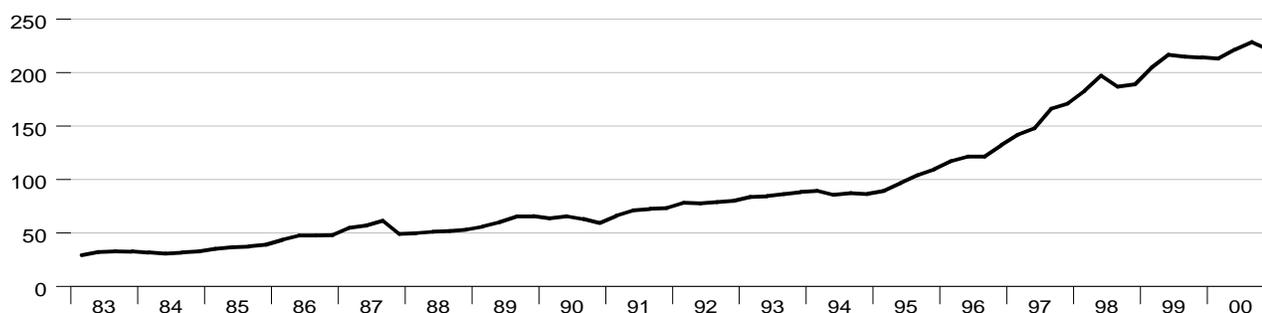
Interest Rates

Percent



Stock Exchange Index - New York Stock Exchange

1995 = 100



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 remains for western Germany only.

Third quarter 1990: current account balance and international trade.
First quarter 1991: employment, GDP, industrial production, investment, output per worker, and saving.
Fourth quarter 1991: unemployment.
First quarter 1993: stock exchange index.
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 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, Japan, the United States, and the euro area; industrial employment for France; employed persons excluding conscripts for Italy; and total employment for 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 the euro-area inflation rate as measured by the harmonized consumer price index.

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 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.

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.

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

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)
Financial and Economic Research International (FERI)
International Monetary Fund, *International Financial Statistics* (IMF)
Organization for Economic Cooperation and Development,
Economic Outlook (OECD1)
Main Economic Indicators (OECD2)
Quarterly National Accounts (OECD3)
Annual National Accounts (OECD4)

Canada

Bank of Canada: M1 and M2.
BOG: exchange rate.
IMF: foreign exchange reserves, merchandise and service trade, real effective exchange rate and reserve money.
OECD1: government debt and budget surplus or deficit.
OECD2: capacity utilization, consumer price index, current account balance, GDP, hourly earnings, industrial production, retail sales, short and long-term interest rates, stock exchange index and unemployment rate,
OECD3: investment and savings.
Statistics Canada: employment.

Euro-Area

Eurostat: current account balance, gross domestic product and retail sales.
Federal Reserve Bank of St. Louis: inflation differential.
FERI: employment, hourly earnings, and merchandise trade.
Haver Analytics: synthetic euro exchange rate.
IMF: real effective exchange rate.
OECD1: government debt and budget surplus or deficit.
OECD2: capacity utilization, consumer price index, industrial production, M1, M3, short and long-term interest rates, stock exchange index and unemployment.

France

BOG: exchange rate.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
Ministere du Travail et des Affaires Sociales: employment.
OECD1: government debt and budget surplus or deficit.
OECD2: capacity utilization, consumer price index, current account balance, GDP, hourly earnings, industrial production, retail sales, short and long-term interest rates, stock exchange index and unemployment.
OECD3: investment and savings.

Germany

BOG: exchange rate.
Bundesanstalt Fur Arbeit: employment.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD1: government debt and budget surplus or deficit.
OECD2: capacity utilization, consumer price index, current account balance, GDP, hourly earnings, industrial production, M1, M3, retail sales, short and long-term interest rates, stock exchange index and unemployment.
OECD4: investment and savings.

Italy

Banca D'Italia: long-term interest rate.
BOG: exchange rate.
Istituto Centrale di Statistica: employment.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD1: government debt and budget surplus or deficit.
OECD2: capacity utilization, consumer price index, current account balance, GDP, hourly earnings, industrial production, retail sales, stock exchange index and unemployment.
OECD3: investment and savings.

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: government debt and budget surplus or deficit.
OECD2: capacity utilization, consumer price index, current account balance, employment, GDP, hourly earnings, industrial production, M1, M2, retail sales, short-term interest rate, stock exchange index and unemployment.
OECD3: investment and savings.

United Kingdom

Bank of England: M2.
BOG: exchange rate.
IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.
OECD1: government debt and budget surplus or deficit.
OECD2: capacity utilization, consumer price index, current account balance, GDP, industrial production, retail sales, stock exchange index, short and long-term interest rates, M4, unemployment, weekly earnings.
OECD3: investment and savings.
U.K. Office for National Statistics: employment and M0.

United States

BOG: capacity utilization, exchange rate, industrial production index, M2, and short and long-term interest rates.
BEA: gross domestic product, current account balance, and merchandise and service trade.
BLS: employment and consumer price index.
Federal Reserve Bank of St. Louis: adjusted monetary base, inflation differential and MZM.
IMF: foreign exchange reserves and real effective exchange rate.
OECD1: government debt and budget surplus or deficit.
OECD2: hourly earnings, retail sales, stock exchange index and unemployment.
OECD3: investment and savings.