

Please see page 48 for important information about your subscription

Technology, Globalization, and Economic Policy

Technological progress raises living standards by creating new goods and allowing existing goods to be produced at lower cost.¹ Unfortunately, technological change is not without cost. Recent advances in information technology have eliminated many jobs, which has aroused much concern. Neither economic theory nor history, however, suggests that technological change ultimately reduces the *total* number of jobs available. Rather, the total number of jobs has risen with increases in the labor force. The mechanization of agriculture illustrates this fact: More than seven million U.S. agricultural jobs have been eliminated over the past century; nonetheless, total U.S. employment has risen by more than 100 million.

Economic theory can be used to explain why technological changes do not permanently reduce the total number of jobs. If an innovation enables a firm to make its product or service with fewer employees, some workers might directly lose their jobs. However, the innovation also indirectly creates new jobs. Lower production costs reduce the price of the firm's good or service, increasing the purchasing power of consumers and the profits of the firm's owners. The resulting increase in demand stimulates increased output and provides jobs in other firms.

Through international trade and investment, technological changes have effects throughout the world. In addition to eliminating some jobs, technological changes have shifted some jobs to foreign countries. For example, advances in information and communications technology have made it feasible for firms to locate call centers abroad. The shifting of jobs, combined with increased anxiety about jobs generally, has generated pressures for a political response. Two approaches have been suggested. One approach tries to counteract the market forces underlying globalization, while an alternative approach relies on policies that assist market forces, while providing assistance to those adversely affected.

The fundamental question for policymakers is how to reap the benefits of technological changes, while limiting

the adverse effects on those who lose their jobs. Some legislative proposals would inhibit offshore outsourcing by favoring bidders that use only domestic workers. This attempt to save specific jobs raises costs to taxpayers and hinders economic growth. Restricting the international movement of goods and services will have a similar effect. Numerous studies have shown that trade restrictions provide benefits for some, but are harmful to the nation as a whole. Thus, attempts to inhibit the effects of technological change are potentially very costly.

Offshoring allows firms to produce goods and services at a lower cost than if production were restricted to the United States. Often, the decision on where to locate production is not a choice between producing in the United States or abroad, but rather between outsourcing or not producing at all. For U.S. firms, remaining competitive is necessary for maintaining jobs, many of them highly paid, in the United States.

Rather than attempting to counteract market forces, a better approach is to compensate those who lose their jobs and help them develop new skills. This can be accomplished by expanding unemployment insurance programs to include retraining provisions. The additional benefits allow the affected worker to acquire new skills to take advantage of other job opportunities.

Another proposal would add "wage insurance" to the existing unemployment insurance program. Wage insurance pays dislocated workers, for a period of time, some percentage of the difference between the worker's old wage and new wage. This policy provides a stronger incentive than the existing unemployment insurance program for a worker to become re-employed.

Technological improvements raise living standards. Workers, however, must adapt to this dynamic environment by changing jobs and acquiring new skills. Attempts by the government to counteract the changes caused by technological improvements are likely, in the long run, to make the nation poorer than it need be. On the other hand, policies that assist workers with the process of change will allow the nation to mitigate the costs of change, while still capturing its benefits.

—Cletus C. Coughlin

¹ Many of the ideas in this cover page were discussed in a speech by William Poole, President of the Federal Bank of St. Louis, on March 25, 2004, at LeMoyné Owen College, Memphis, Tennessee.

Contents

Page

3	Reference Tables
5	Canada
11	Euro Area
16	France
20	Germany
24	Italy
28	Japan
34	United Kingdom
40	United States
46	Notes and Sources
48	How to Register for <i>International Economic Trends</i> Email Notifications

Conventions used in this publication:

1. Charts and tables contain data that were current through April 2004. 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 quarter $t-4$ and the current quarter t is: $[(x_t/x_{t-4})-1] \times 100$.
3. All data with significant seasonal patterns are adjusted accordingly.

Beginning this issue, the interest rate on 90-day deposits for Canada is replaced with the rate on 90-day prime corporate paper, as reported on pages 4, 6, and 10.

Dear Reader,

Thank you for reading *International Economic Trends*. Please assist us in providing you with the most useful international economic data by offering your comments and suggestions for how the publication could be improved. Such feedback can be sent to one of the following addresses:

stlsIET@stls.frb.org

or

Editor, *International Economic Trends*
Research Department
Federal Reserve Bank of St. Louis
411 Locust St.
St. Louis, MO 63102

Please keep in mind that technical limitations preclude us from adding more pages to the publication. So, we must make some difficult choices with respect to the material we include.

Thank you in advance for your help in making *International Economic Trends* a great publication.

Sincerely,

Christopher J. Neely

Editor, *International Economic Trends*

Real Gross Domestic Product

Percent change from year ago

	01.1	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4
Canada	3.12	2.35	0.86	1.39	2.48	3.15	4.02	3.46	2.66	1.46	1.10	1.63
Euro Area	2.49	1.64	1.50	0.76	0.46	0.93	0.99	1.11	0.71	0.11	0.25	0.56
France	3.16	2.25	2.30	0.64	0.78	1.42	1.32	1.33	0.69	-0.34	-0.20	0.54
Germany	1.95	0.81	0.73	0.55	-0.12	0.10	0.40	0.48	0.06	-0.30	-0.26	0.02
Italy	2.38	1.98	1.18	0.78	0.00	0.39	0.39	0.78	0.78	0.00	0.77	0.38
Japan	3.19	1.15	-0.36	-2.30	-3.12	-0.90	0.99	1.71	2.71	2.37	1.98	3.64
United Kingdom	2.56	2.23	1.80	1.95	1.39	1.37	1.90	1.88	1.89	2.16	2.17	2.65
United States	1.92	0.19	-0.02	-0.04	1.17	1.81	2.99	2.80	2.13	2.42	3.60	4.32

Nominal Gross Domestic Product

Percent change from year ago

	01.1	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4
Canada	6.95	4.44	1.01	-0.29	0.73	3.12	5.70	7.67	7.87	4.49	4.45	3.96
Euro Area	4.68	4.14	3.79	3.62	3.13	3.28	3.67	3.40	2.71	2.28	2.44	2.67
France	4.49	3.87	4.24	2.63	2.95	3.43	3.26	3.34	2.44	1.42	1.44	2.03
Germany	2.90	2.14	1.61	2.59	1.74	1.64	2.42	1.45	0.91	0.61	0.94	1.04
Italy	4.86	4.47	3.74	4.07	2.98	2.96	3.93	3.91	3.22	3.51	3.47	3.13
Japan	1.31	-0.64	-1.80	-3.38	-3.67	-2.01	-0.37	0.02	-0.38	0.21	-0.24	0.83
United Kingdom	4.33	4.89	3.93	4.84	4.40	4.35	5.71	5.35	5.42	5.25	5.25	5.57
United States	4.11	2.70	2.37	2.41	3.04	3.37	4.42	4.22	3.94	4.01	5.36	6.01

Consumer Price Index

Percent change from year ago

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	3.58	2.67	1.12	1.53	1.33	2.33	3.80	4.46	2.81	2.11	1.72	.
Euro Area	2.91	2.38	2.09	2.56	2.07	2.13	2.32	2.25	1.97	2.02	2.05	1.71
France	2.25	1.94	1.56	2.27	1.70	1.72	2.05	2.30	1.89	2.09	2.39	1.99
Germany	2.51	2.11	1.49	1.93	1.16	1.09	1.21	1.07	0.87	1.04	1.18	1.02
Italy	2.81	2.20	2.21	2.57	2.34	2.64	2.86	2.83	2.90	2.88	2.68	2.33
Japan	-0.72	-0.79	-0.98	-1.40	-0.91	-0.83	-0.52	-0.24	-0.24	-0.24	-0.30	.
United Kingdom	1.93	1.81	1.04	1.19	1.25	1.54	2.55	3.05	3.03	2.92	2.66	.
United States	3.38	2.70	1.84	1.23	1.30	1.61	2.24	2.88	2.15	2.18	1.87	1.80

Employment

Percent change from year ago

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	1.39	1.10	0.44	1.01	1.79	2.73	3.36	3.14	2.29	1.52	1.73	1.56
Euro Area	1.51	1.17	0.87	0.77	0.61	0.44	0.28	0.14	0.17	0.18	0.22	.
France	2.74	2.05	1.63	0.98	0.66	0.42	0.22	-0.13	-0.18	-0.34	-0.33	.
Germany	0.61	0.21	-0.12	-0.21	-0.47	-0.71	-1.12	-1.46	-1.32	-0.97	-0.62	.
Italy	1.80	1.27	1.13	1.11	1.57	1.40	0.94	0.69	0.52	0.13	0.38	.
Japan	-0.41	-0.81	-1.30	-1.46	-1.57	-1.00	-1.07	-0.80	0.08	-0.05	-0.13	.
United Kingdom	1.00	0.67	0.49	0.41	-0.19	-0.21	-0.28	-0.39	0.03	0.06	0.25	.
United States	0.09	0.04	-0.80	-1.19	-0.54	0.09	0.32	0.95	0.93	0.56	1.23	0.75

Unemployment Rate

Percent

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	7.07	7.15	7.65	7.86	7.63	7.54	7.56	7.45	7.73	7.88	7.49	.
Euro Area	8.00	8.00	8.10	8.20	8.33	8.47	8.57	8.73	8.80	8.80	8.80	.
France	8.49	8.46	8.54	8.60	8.75	8.89	9.01	9.21	9.34	9.43	9.49	.
Germany	7.70	7.90	8.15	8.28	8.50	8.66	8.88	9.18	9.34	9.31	9.24	.
Italy	9.49	9.43	9.21	9.03	9.03	9.00	8.93	8.84	8.65	8.56	8.50	.
Japan	4.91	5.11	5.36	5.29	5.37	5.42	5.44	5.38	5.38	5.17	5.07	.
United Kingdom	4.94	5.05	5.08	5.07	5.13	5.19	5.04	5.05	4.97	4.95	4.85	.
United States	4.41	4.82	5.55	5.68	5.84	5.74	5.88	5.83	6.14	6.13	5.86	5.64

Reserve Money

Percent change from year ago

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	6.76	7.28	4.29	7.31	5.14	7.98	5.75	2.22	3.29	0.94	1.11	.
Japan	7.31	14.15	17.39	32.38	27.01	21.40	19.95	10.69	19.82	20.80	13.50	11.78
United Kingdom	6.90	6.97	7.74	7.79	8.63	8.06	6.96	5.98	7.81	7.94	.	.
United States	4.26	7.56	8.50	9.78	10.08	7.80	7.35	6.84	6.54	5.87	5.81	4.74

Narrow Money

Percent change from year ago

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	11.49	7.94	13.75	14.52	13.88	15.84	9.33	6.76	8.22	8.86	6.55	.
Euro Area	7.35	7.87	9.08	6.40	6.86	8.02	9.63	11.93	11.07	10.73	9.54	.
Japan	7.27	11.02	14.82	23.57	30.76	30.42	25.48	14.98	4.98	5.79	4.21	.
United Kingdom	9.57	10.00	9.76	9.10	8.19	8.24	8.27	8.79	8.82	9.05	9.80	.
United States	14.66	16.90	20.37	18.04	13.82	11.43	8.60	7.75	7.77	8.58	5.24	3.83

Broad Money

Percent change from year ago

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	5.18	4.26	5.73	5.98	6.04	7.17	6.00	5.48	6.12	6.29	5.27	.
Euro Area	6.06	7.00	8.59	7.29	6.68	6.87	6.61	7.64	8.05	7.03	6.37	.
Japan	2.85	3.09	3.39	3.63	3.31	3.20	2.33	1.71	1.76	1.90	1.54	.
United Kingdom	7.60	8.12	6.64	5.56	5.72	5.56	7.01	6.45	6.98	5.59	6.12	.
United States	8.20	9.34	10.26	9.30	7.52	7.04	6.77	6.74	7.90	7.83	5.28	4.28

Short-Term Interest Rates

Percent

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	4.38	3.19	2.08	2.36	2.78	2.90	2.83	3.28	3.11	2.64	2.66	2.10
Euro Area	4.59	4.27	3.44	3.36	3.44	3.36	3.11	2.68	2.37	2.14	2.15	2.06
Japan	0.04	0.04	0.04	0.12	0.04	0.04	0.04	0.04	0.04	0.04	0.03	.
United Kingdom	5.23	4.92	4.09	4.01	4.10	3.95	3.92	3.73	3.57	3.50	3.86	.
United States	4.10	3.34	2.06	1.82	1.83	1.76	1.49	1.26	1.17	1.07	1.10	1.05

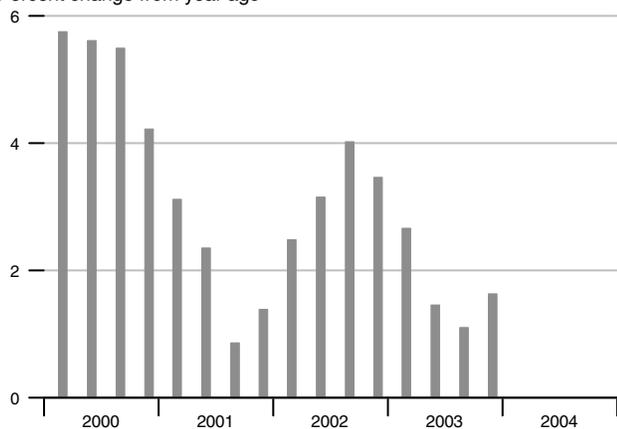
Long-Term Interest Rates

Percent

	01.2	01.3	01.4	02.1	02.2	02.3	02.4	03.1	03.2	03.3	03.4	04.1
Canada	5.78	5.48	5.22	5.51	5.50	5.10	5.07	5.03	4.59	4.79	4.77	4.45
Euro Area	5.19	5.12	4.82	5.14	5.25	4.76	4.54	4.15	3.96	4.16	4.37	.
France	5.55	5.34	5.15	5.46	5.53	5.12	4.91	4.43	4.10	4.20	4.46	.
Germany	4.97	4.87	4.60	5.00	5.13	4.63	4.43	4.07	3.87	4.10	4.30	4.06
Italy	5.37	5.27	4.94	5.25	5.36	4.85	4.68	4.24	4.16	4.33	4.45	4.28
Japan	1.28	1.36	1.35	1.41	1.28	1.11	0.89	0.70	0.53	1.17	1.38	1.31
United Kingdom	5.10	5.05	4.79	5.05	5.22	4.74	4.61	4.32	4.27	4.55	4.94	.
United States	5.81	5.59	5.44	5.70	5.72	5.09	4.92	4.77	4.44	5.01	5.00	4.71

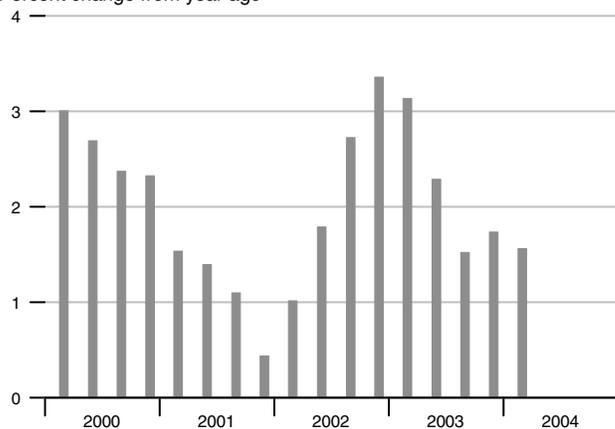
Real GDP

Percent change from year ago



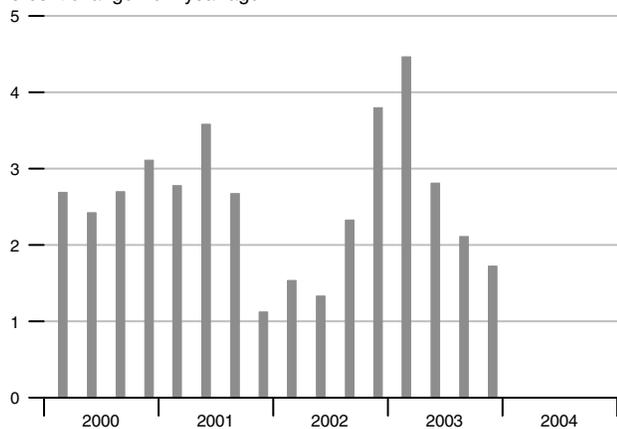
Employment

Percent change from year ago



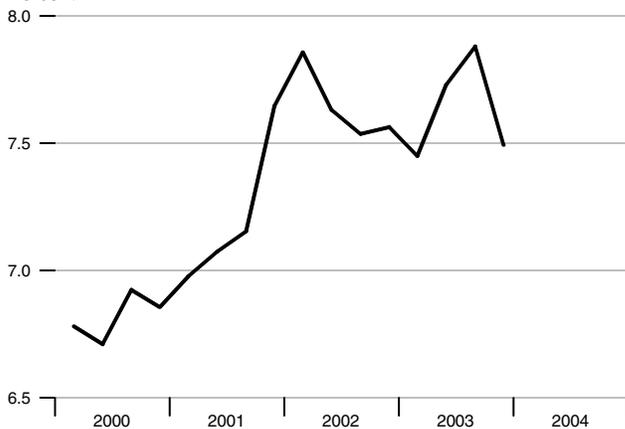
Consumer Price Index

Percent change from year ago



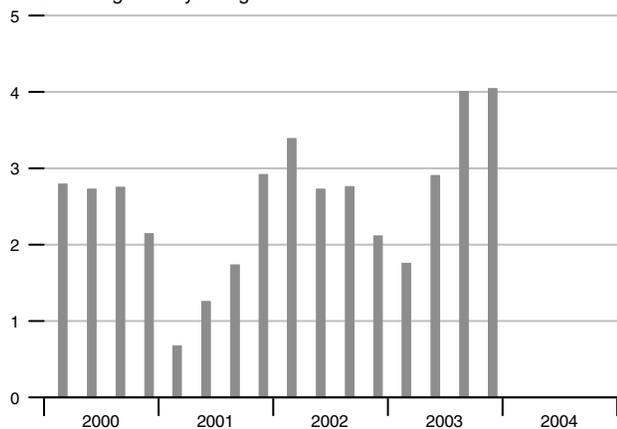
Unemployment Rate

Percent



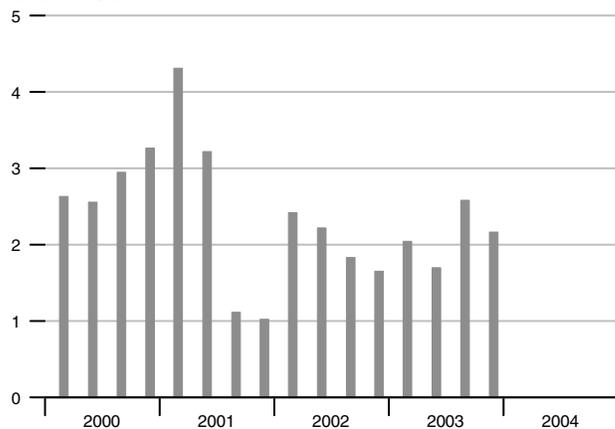
Hourly Earnings

Percent change from year ago



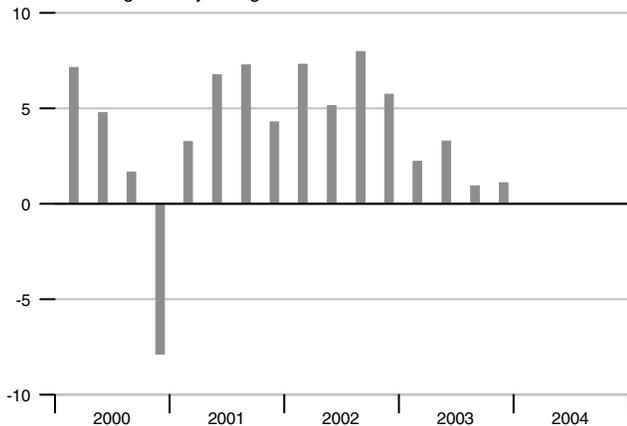
Current Account Balance

Percent of GDP



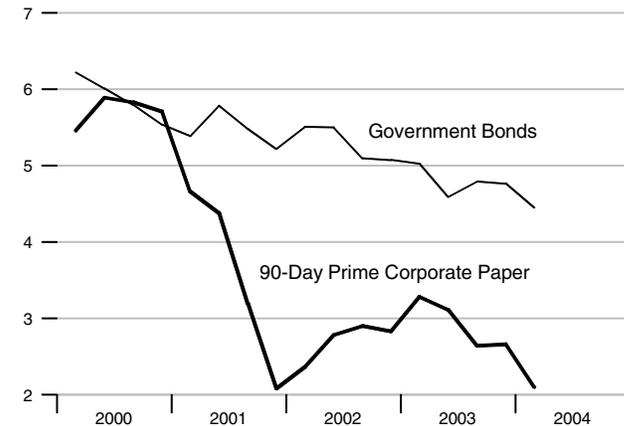
Reserve Money

Percent change from year ago



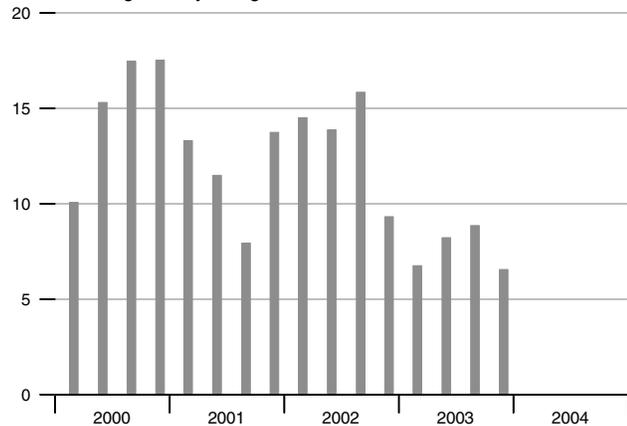
Interest Rates

Percent



M1

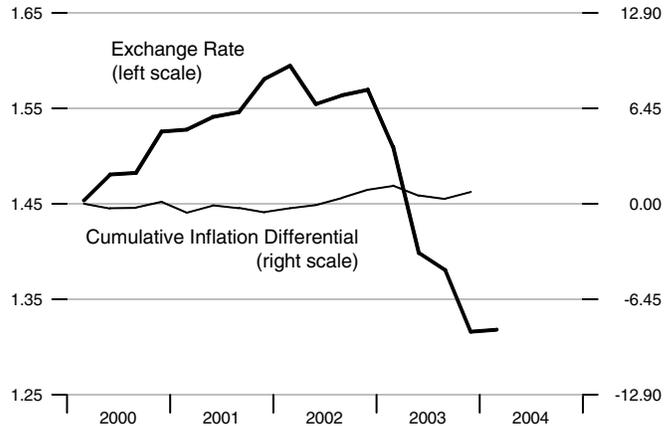
Percent change from year ago



Exchange Rate and Inflation Differential

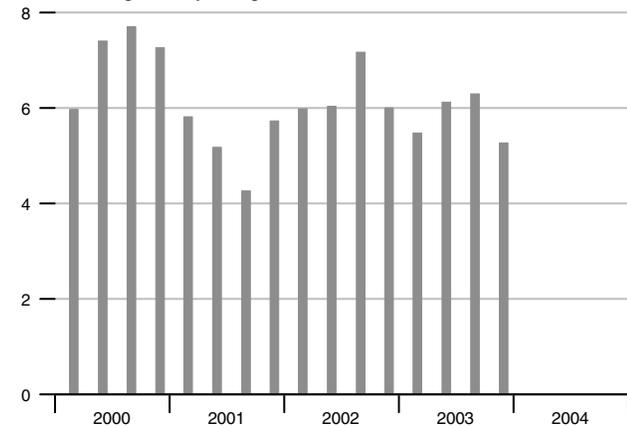
C\$/US\$

Percent



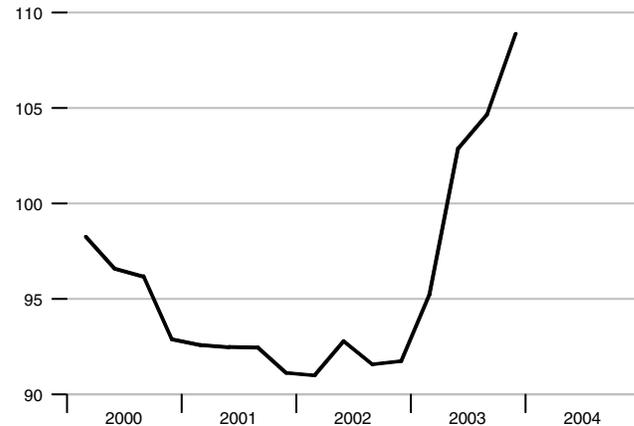
M2

Percent change from year ago



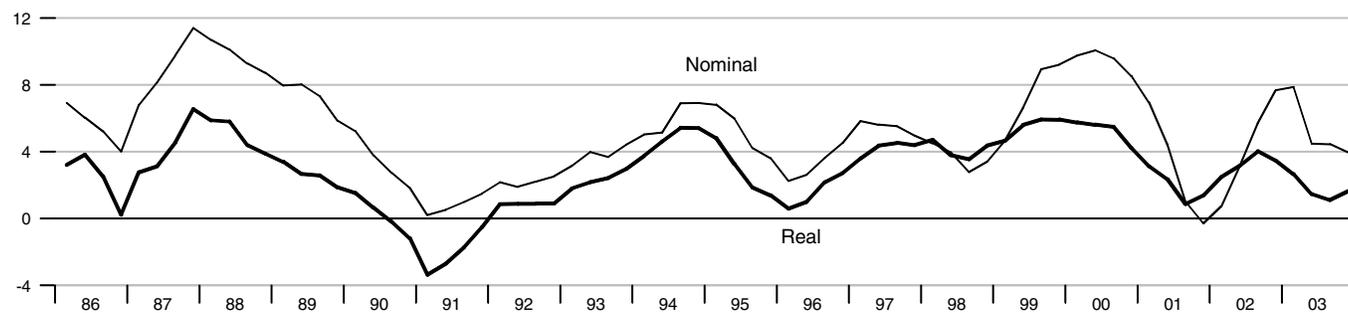
Real Effective Exchange Rate

Index 1995 = 100



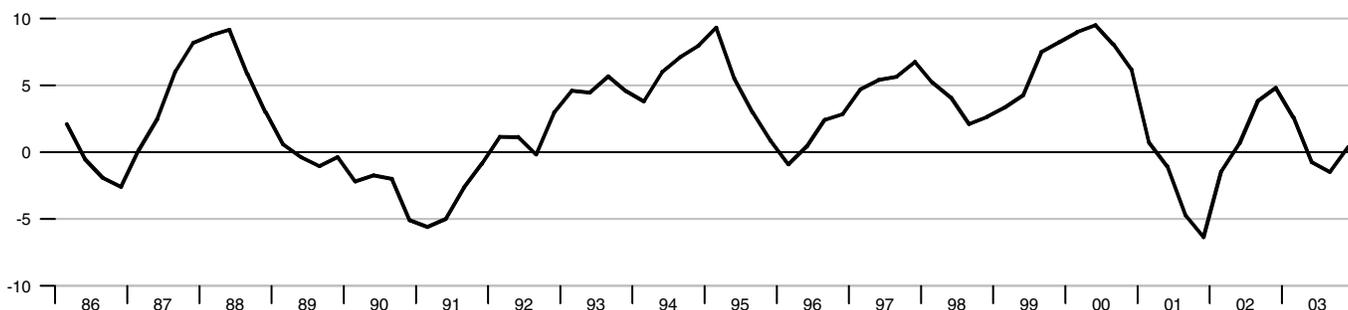
GDP

Percent change from year ago



Industrial Production

Percent change from year ago



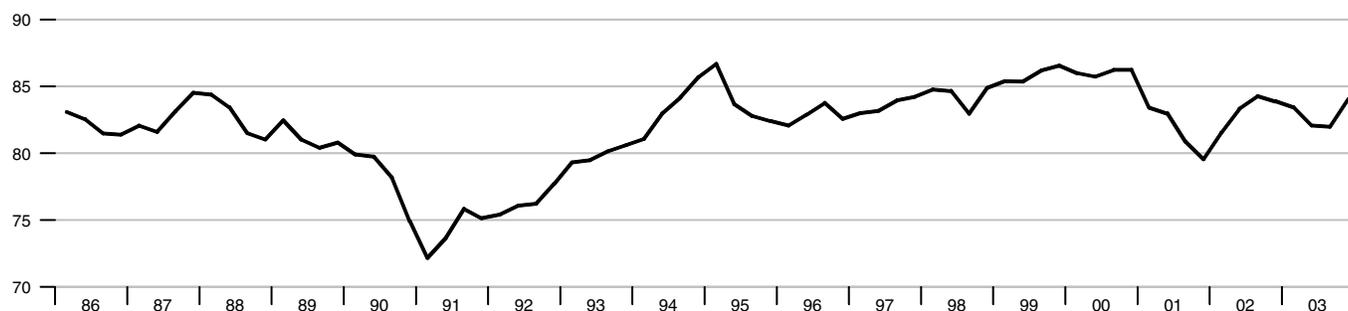
Retail Sales

Percent change from year ago



Capacity Utilization

Percent



Hourly Earnings and Output per Worker

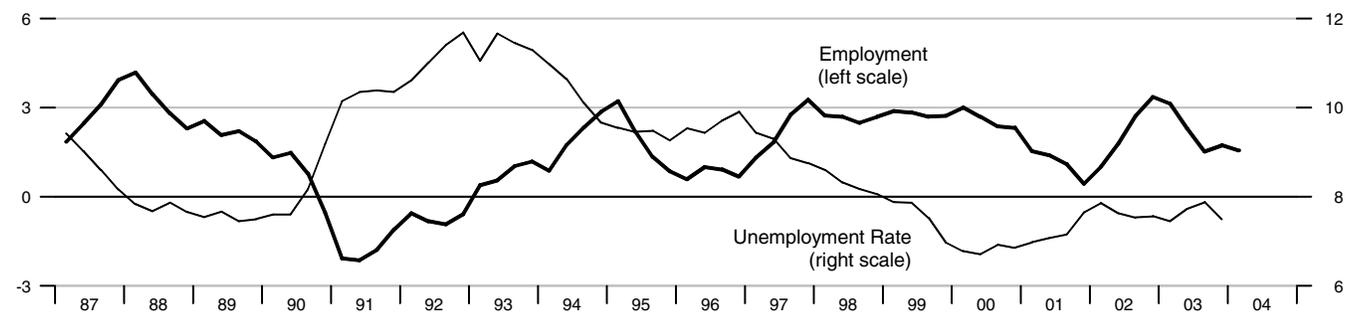
Percent change from year ago



Labor Force Indicators

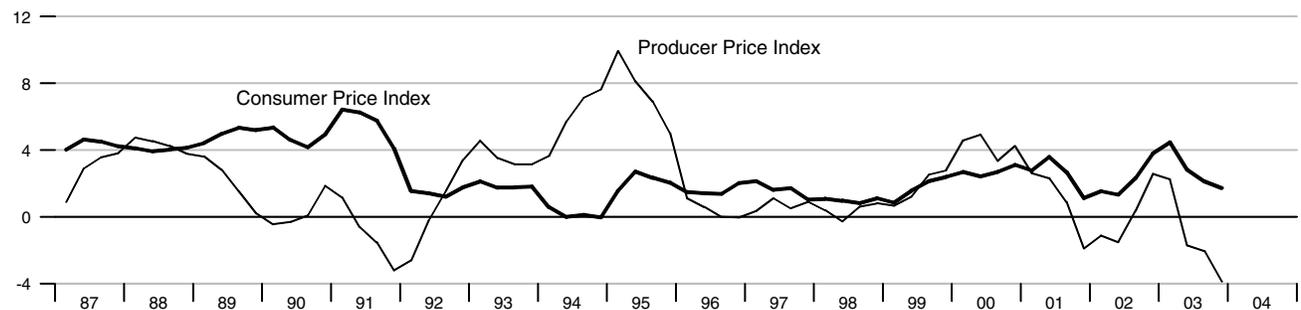
Percent change from year ago

Percent



Inflation

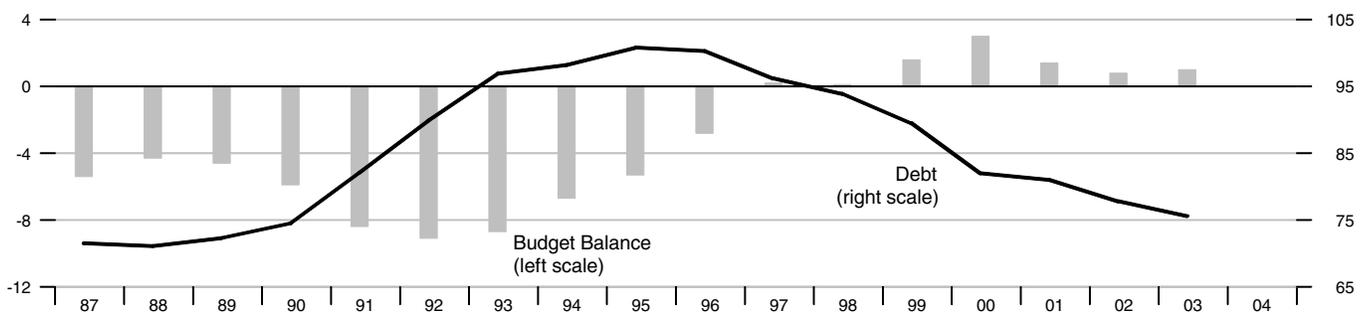
Percent change from year ago



Government Debt and Budget Balance

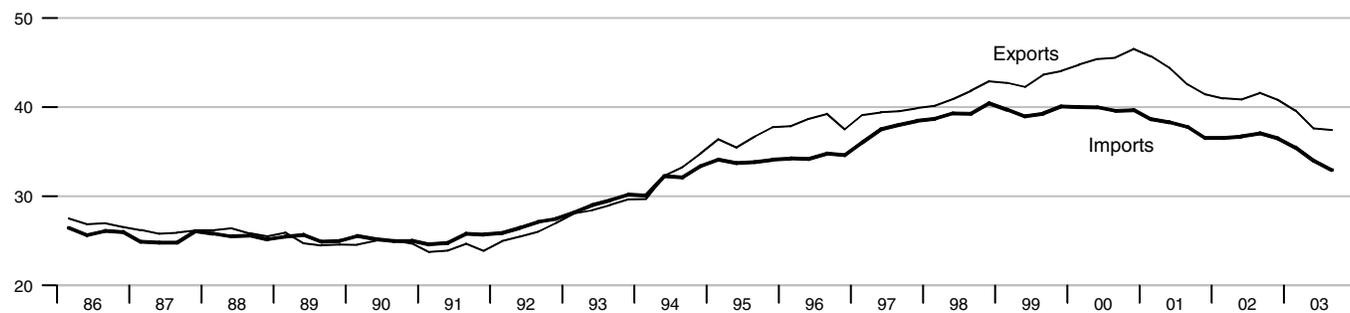
Percent of GDP, annual data

Percent of GDP, annual data



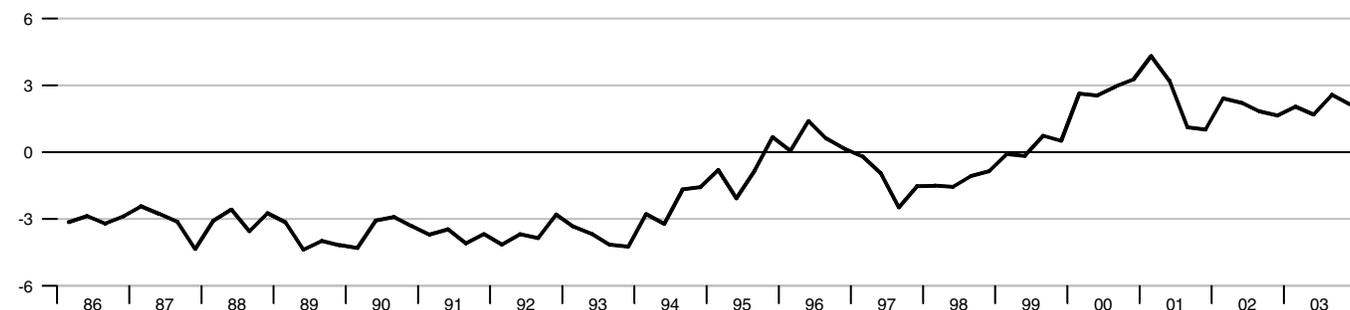
International Trade - Goods and Services

Percent of GDP



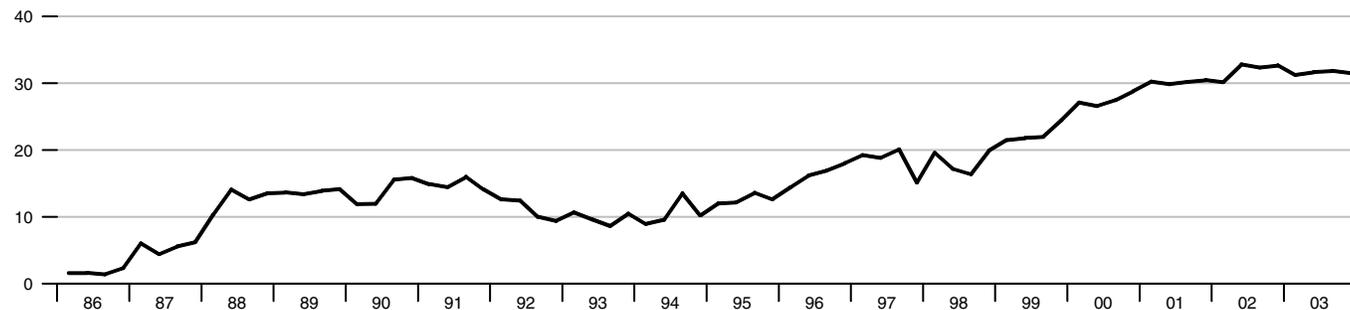
Current Account Balance

Percent of GDP



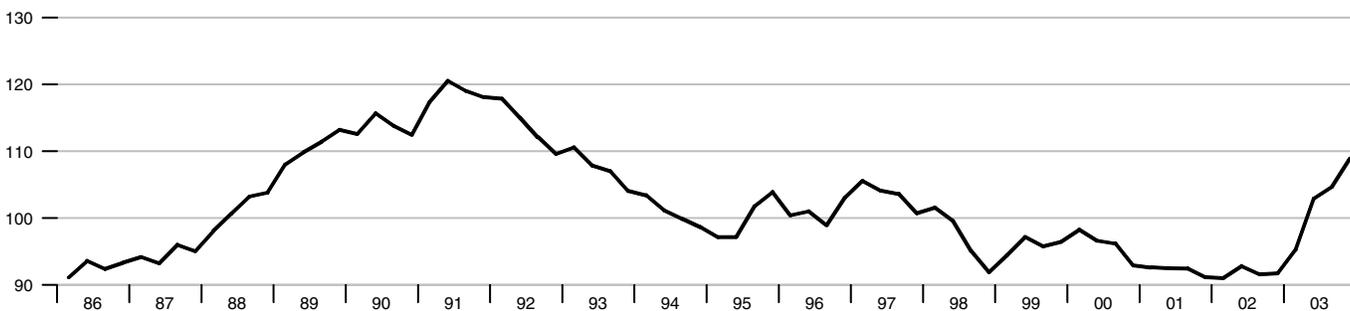
Foreign Exchange Reserves

Billions of US\$



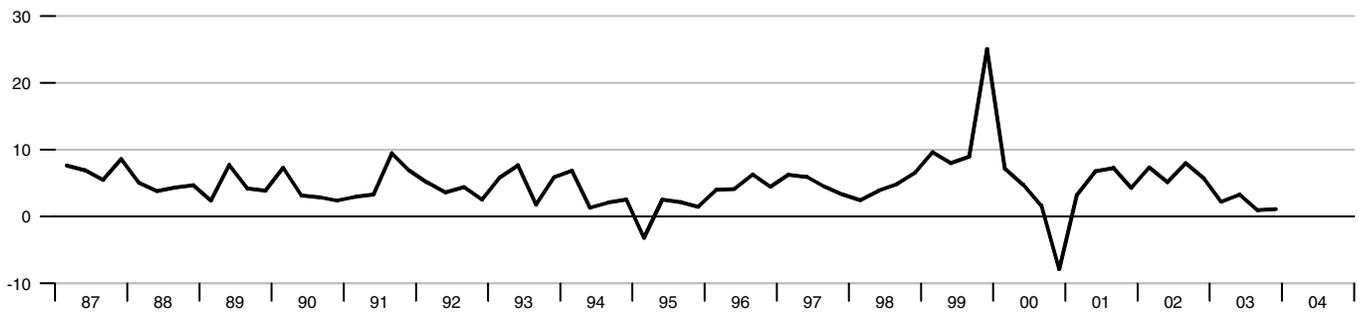
Real Effective Exchange Rate

Index 1995 = 100



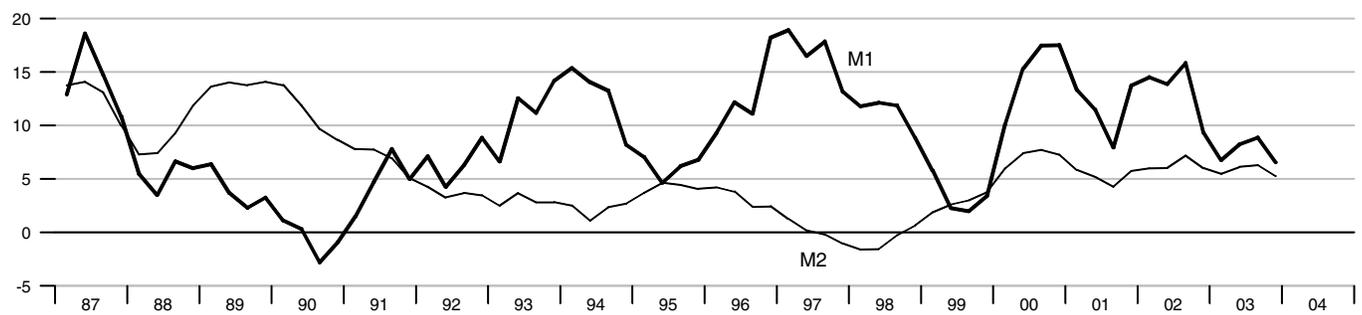
Reserve Money

Percent change from year ago



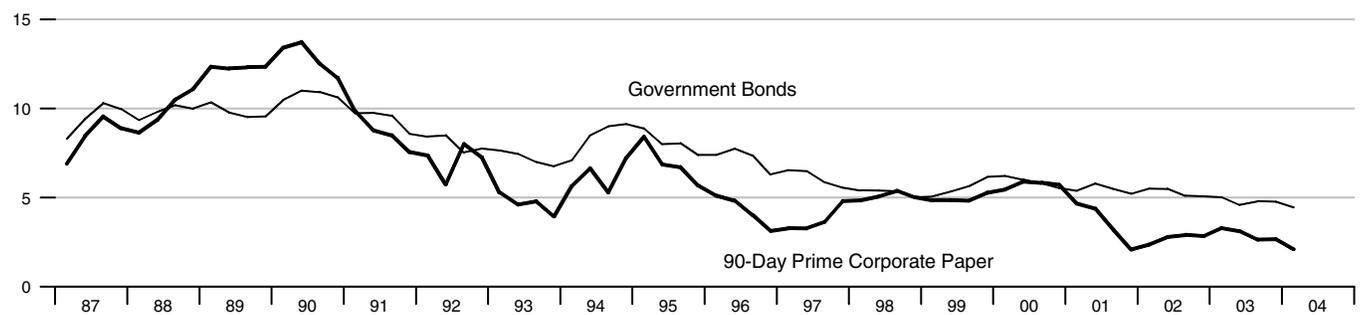
Monetary Aggregates

Percent change from year ago



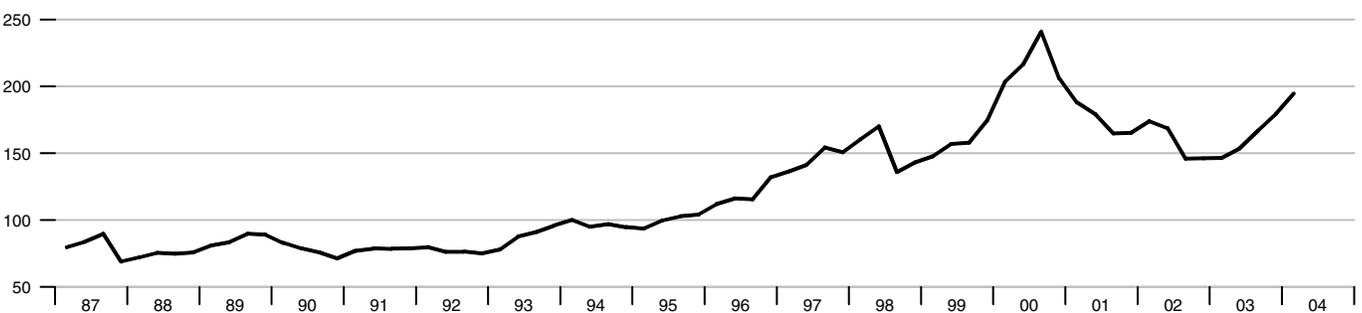
Interest Rates

Percent



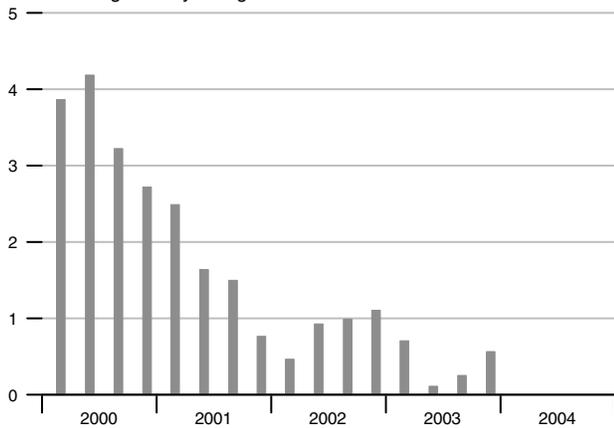
Stock Exchange Index - Toronto Stock Exchange

1995 = 100



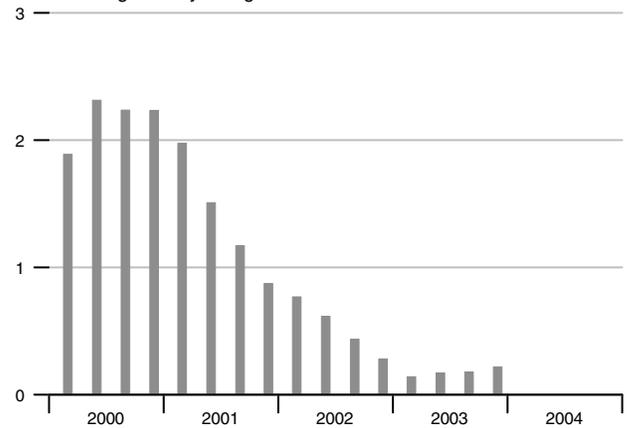
Real GDP

Percent change from year ago



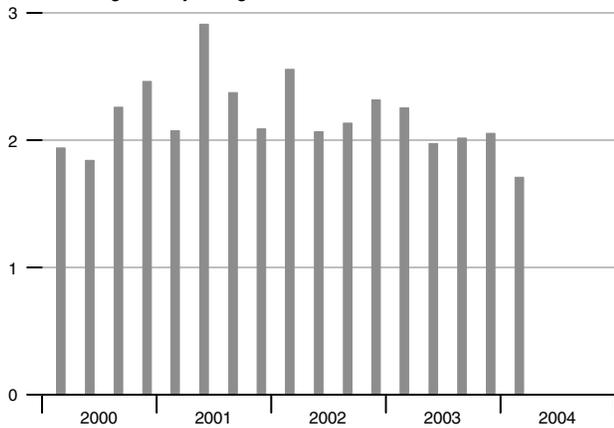
Employment

Percent change from year ago



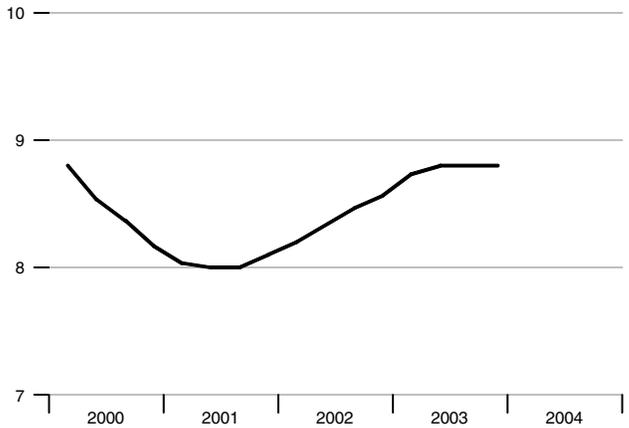
Consumer Price Index

Percent change from year ago



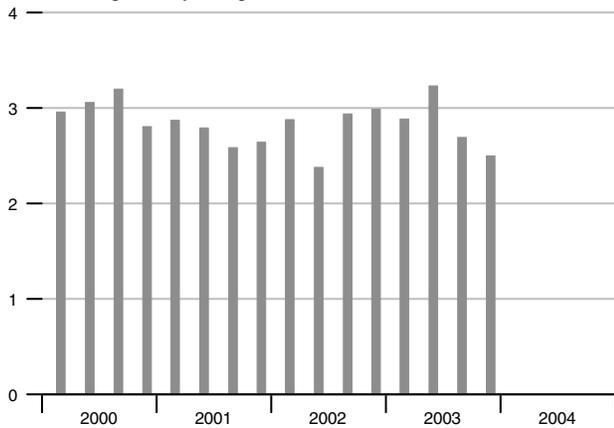
Unemployment Rate

Percent



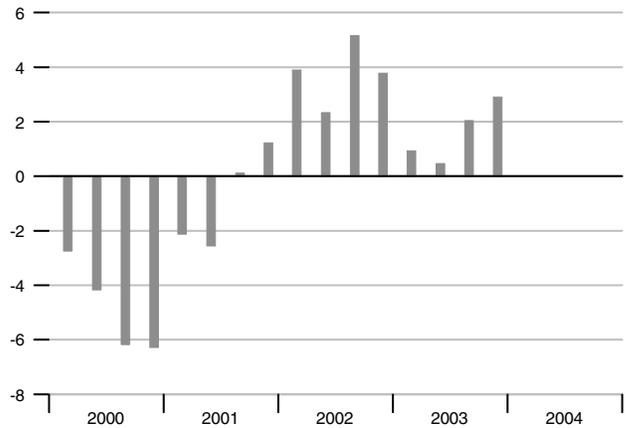
Hourly Earnings

Percent change from year ago



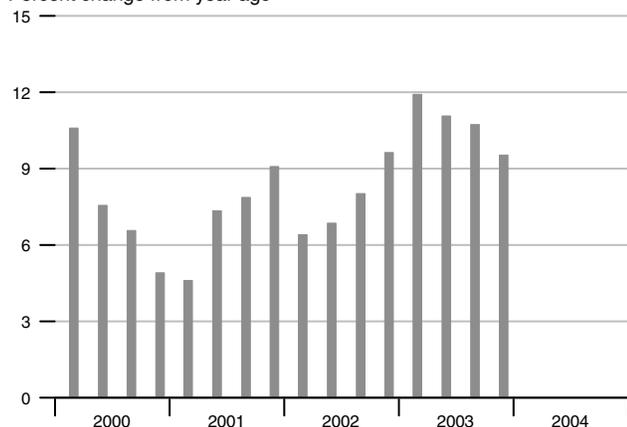
Current Account Balance

Percent of GDP



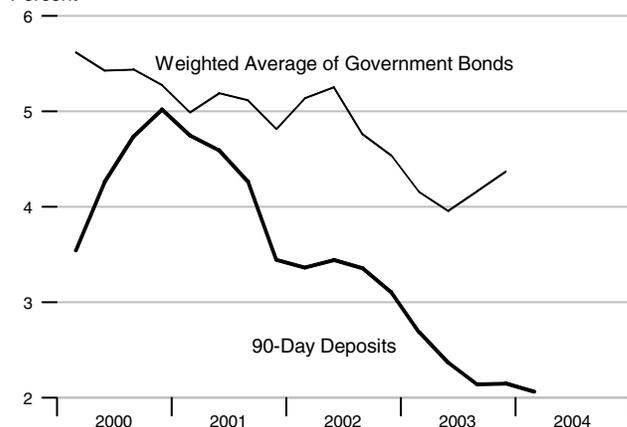
M1

Percent change from year ago



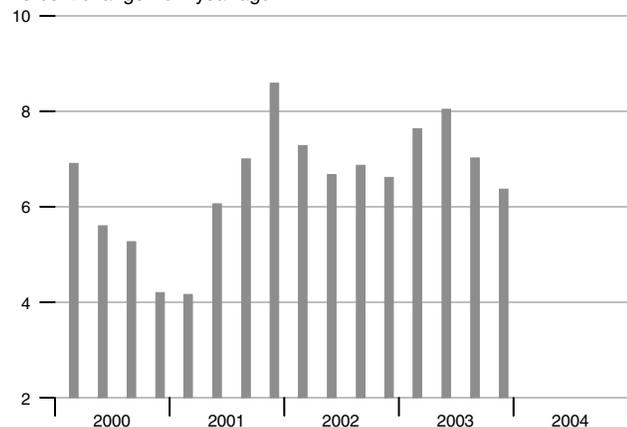
Interest Rates

Percent



M3

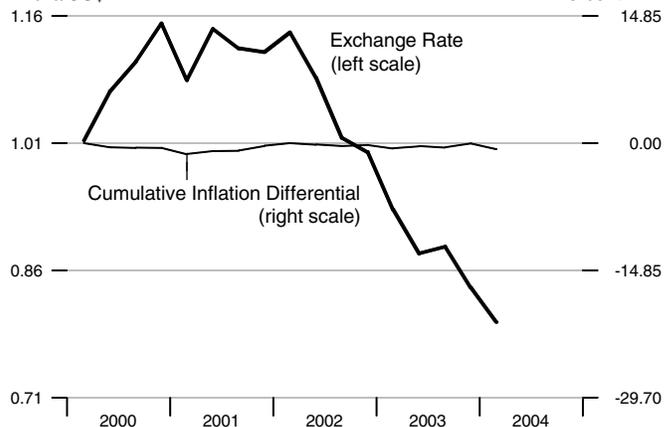
Percent change from year ago



Exchange Rate and Inflation Differential

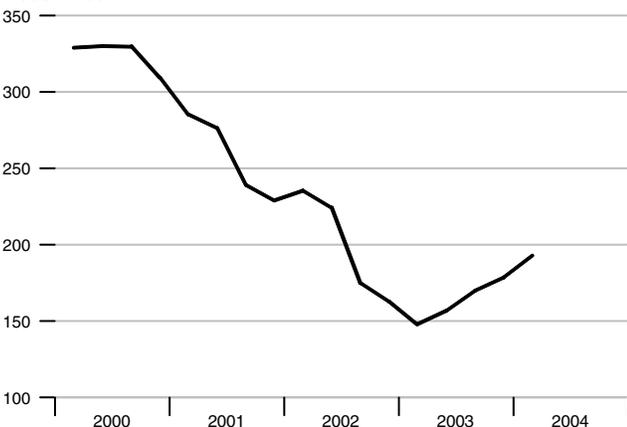
Euro/US\$

Percent



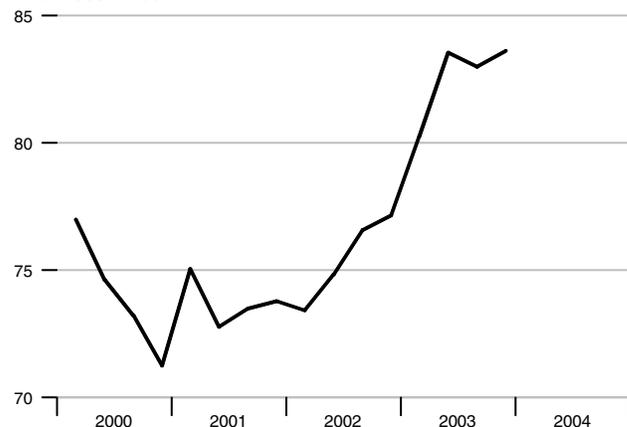
Stock Exchange Index - Dow Jones EURO STOXXSM

1995 = 100



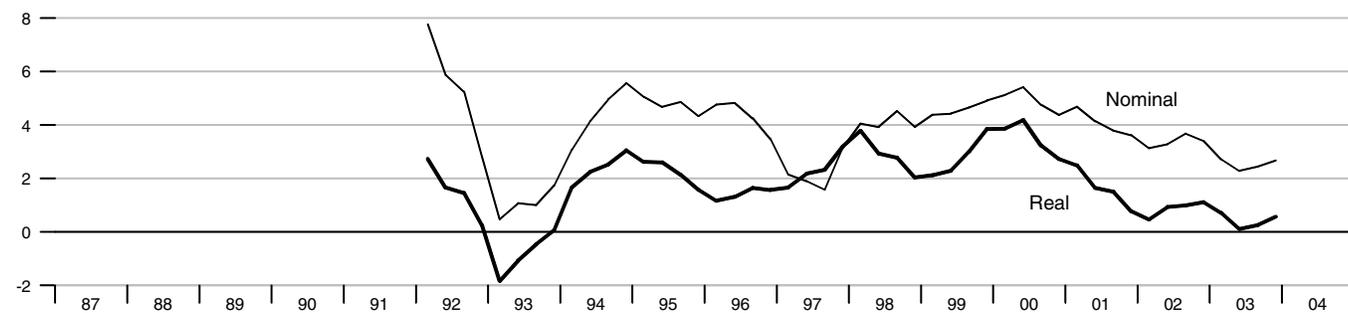
Real Effective Exchange Rate

Index 1995 = 100



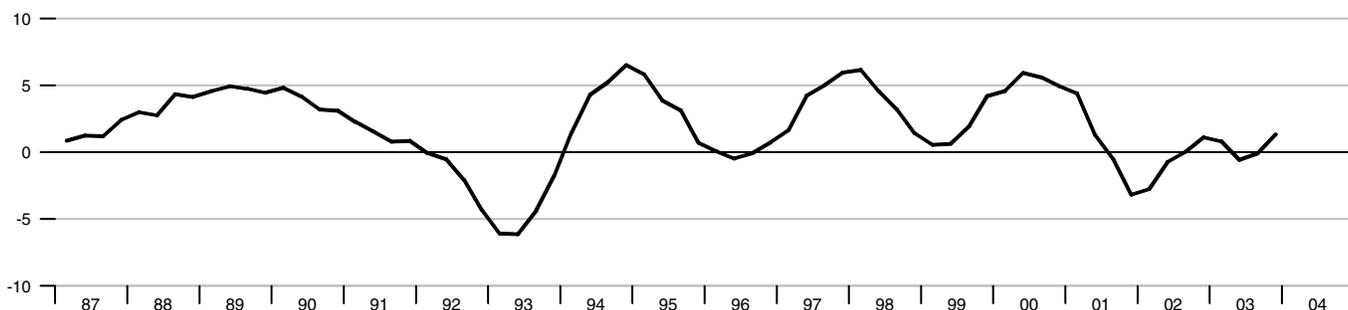
GDP

Percent change from year ago



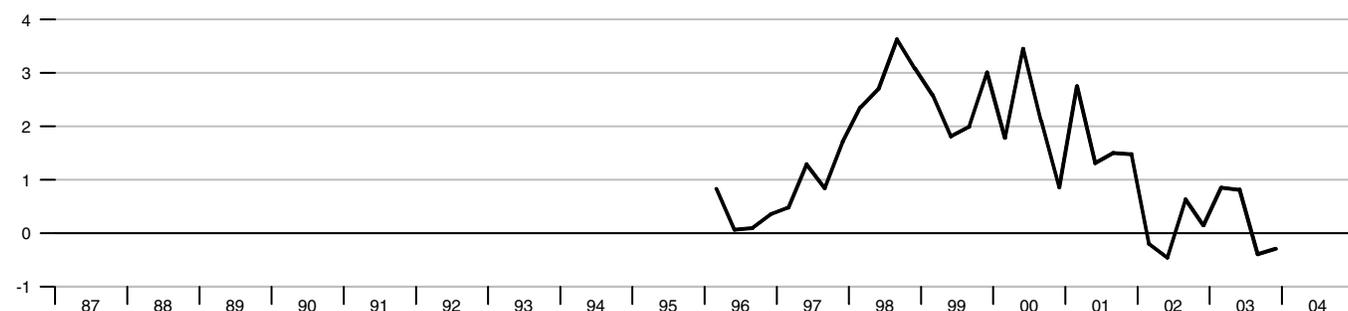
Industrial Production

Percent change from year ago



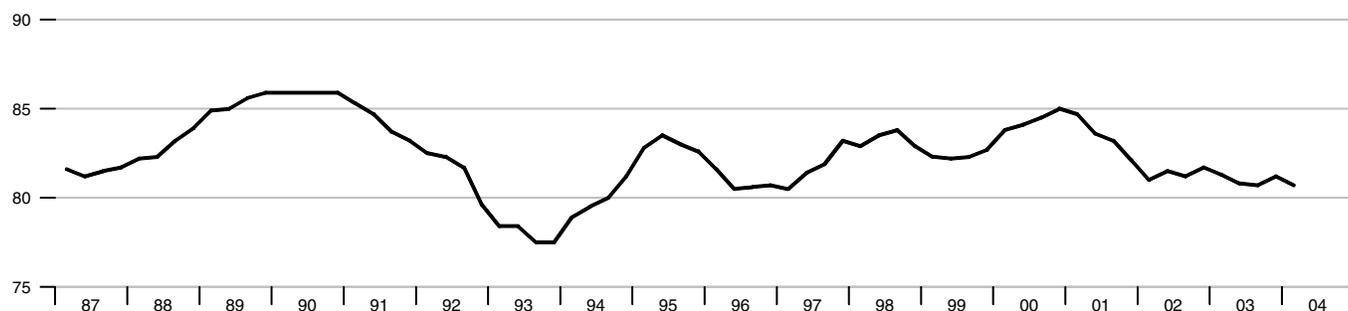
Retail Sales

Percent change from year ago

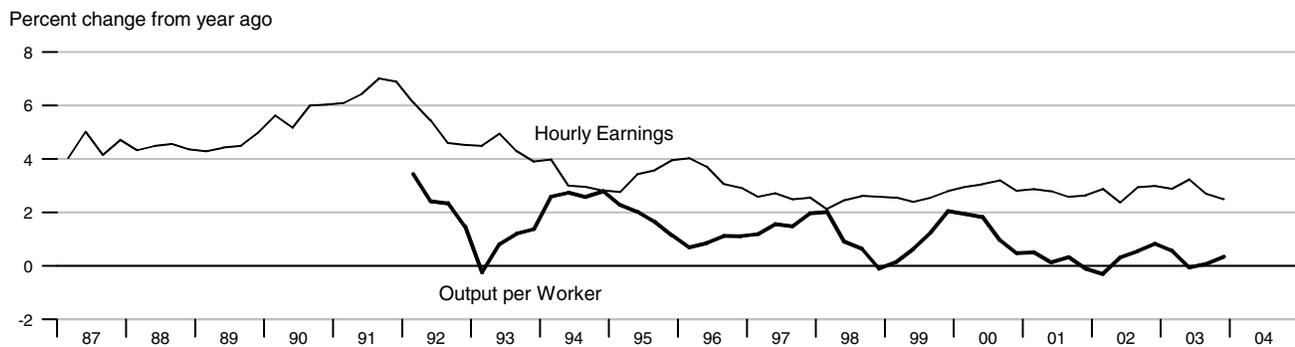


Capacity Utilization

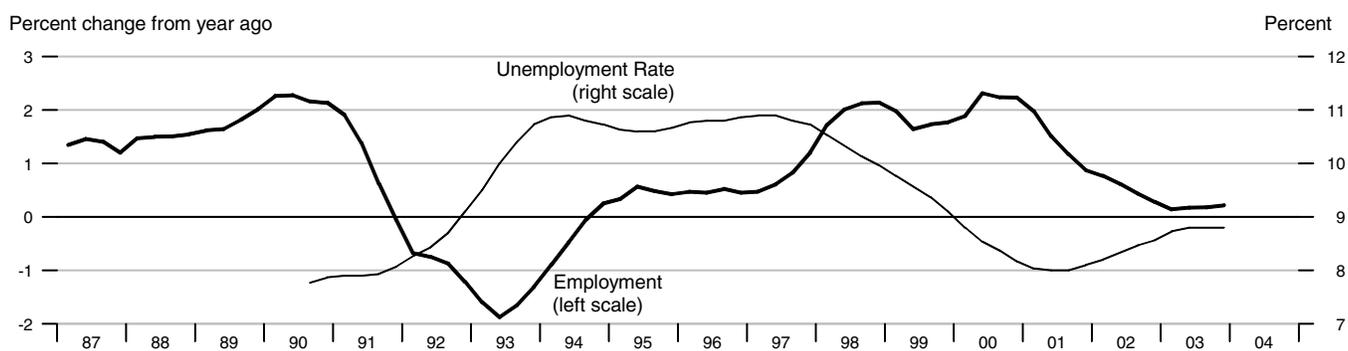
Percent



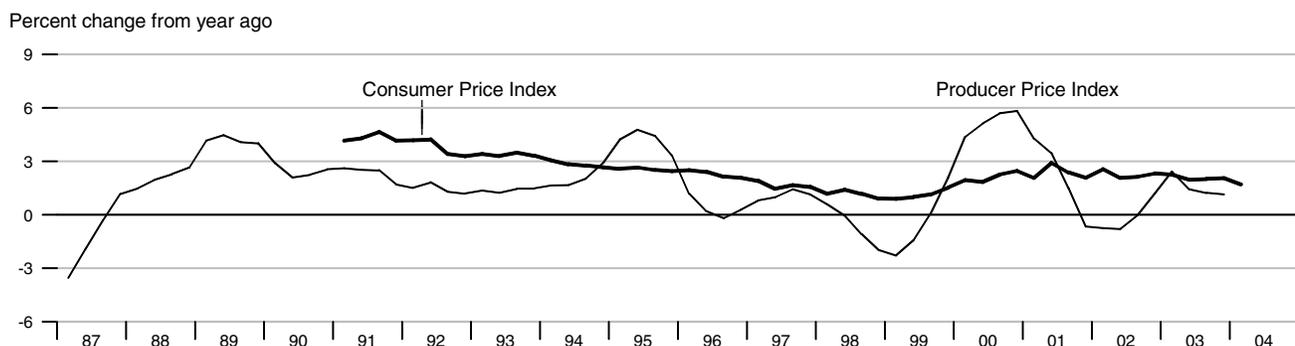
Hourly Earnings and Output per Worker



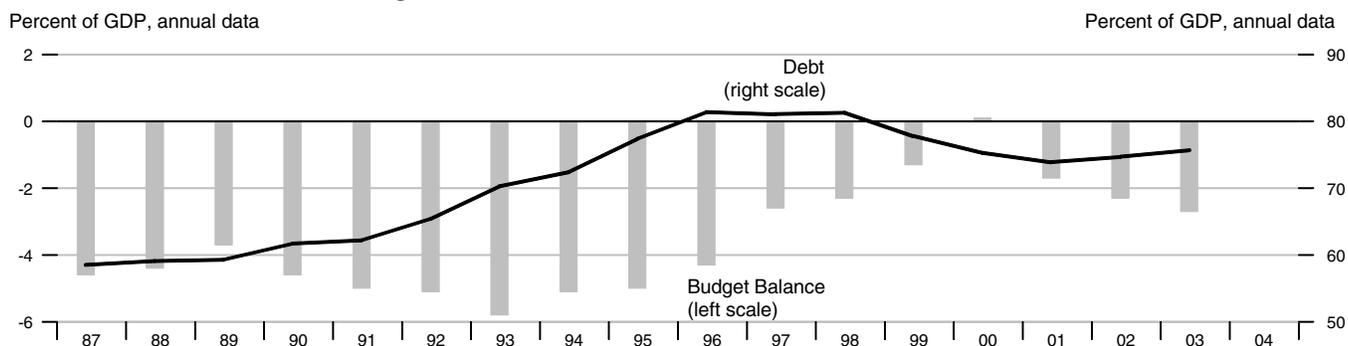
Labor Force Indicators



Inflation

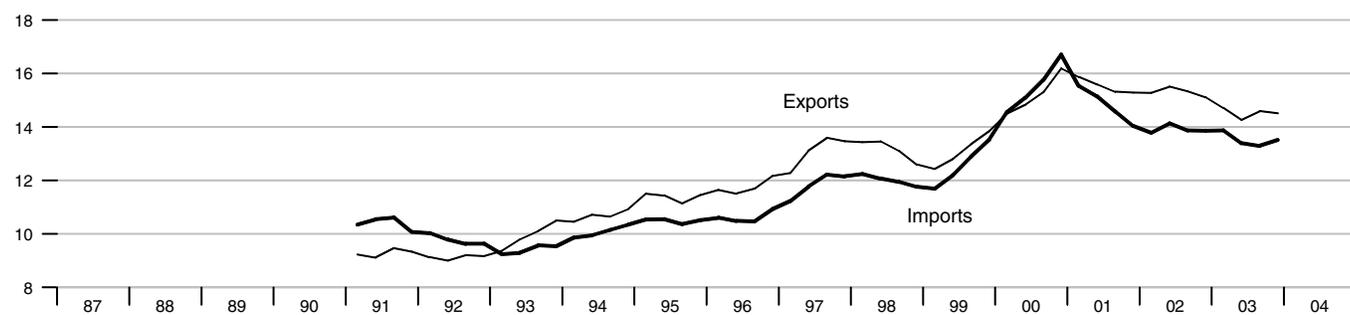


Government Debt and Budget Balance



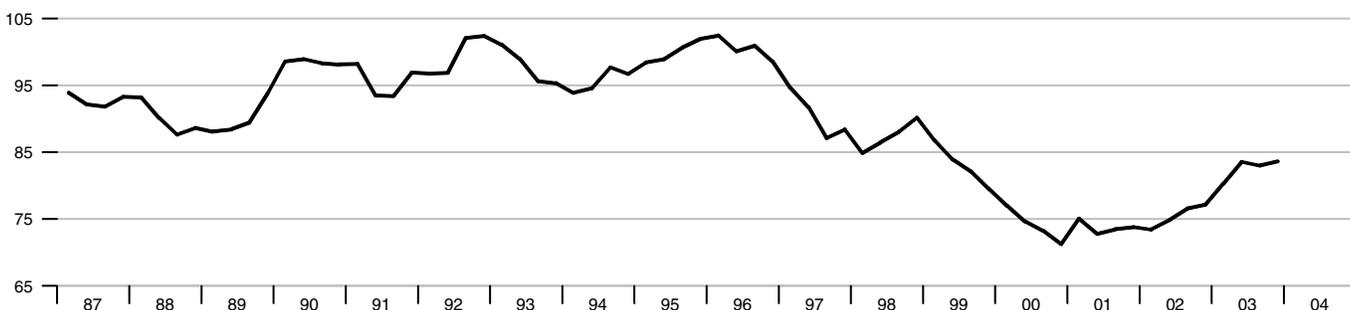
International Trade - Goods

Percent of GDP



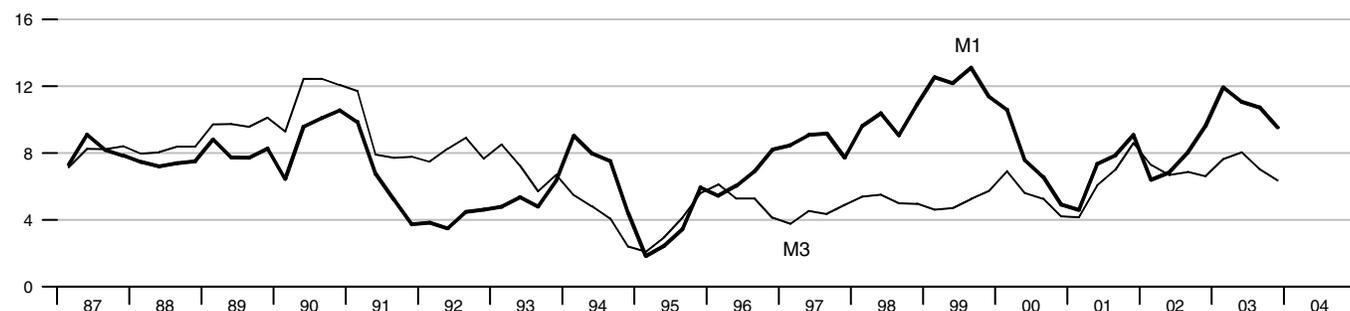
Real Effective Exchange Rate

Index 1995 = 100



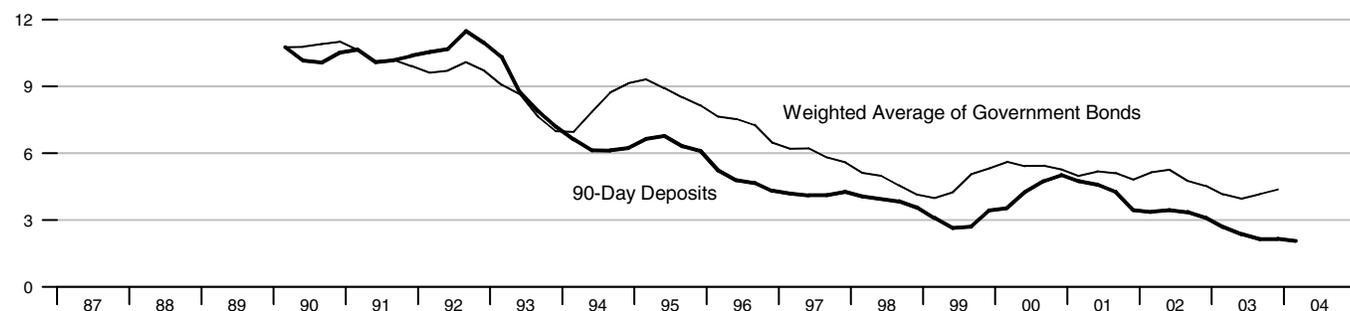
Monetary Aggregates

Percent change from year ago



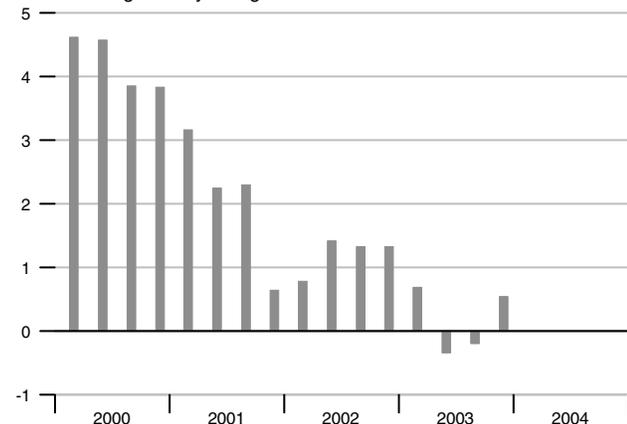
Interest Rates

Percent



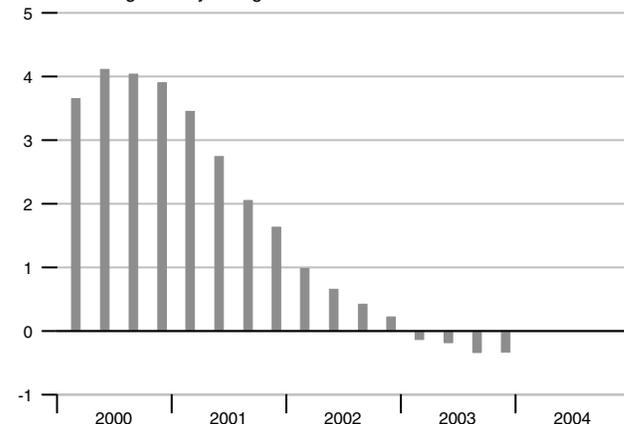
Real GDP

Percent change from year ago



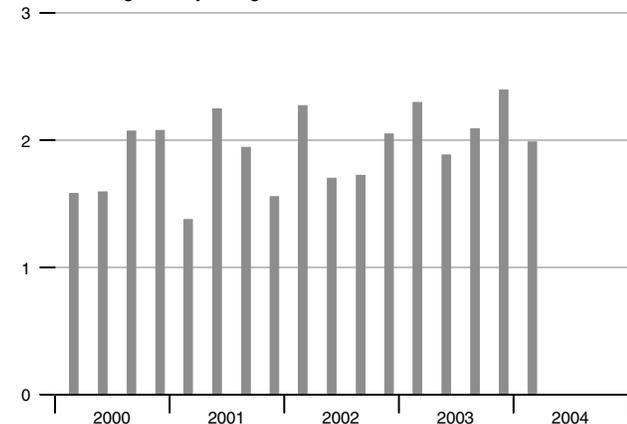
Employment

Percent change from year ago



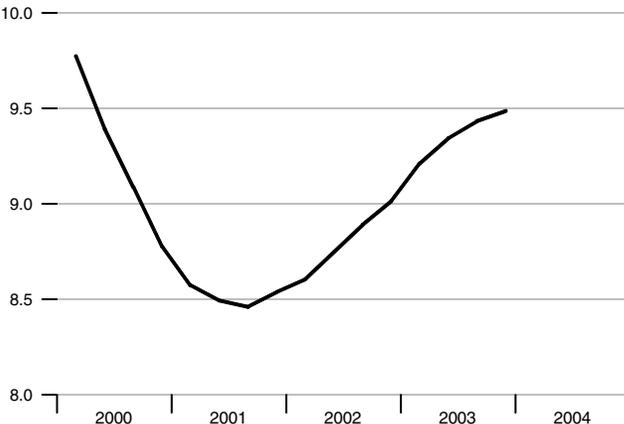
Consumer Price Index

Percent change from year ago



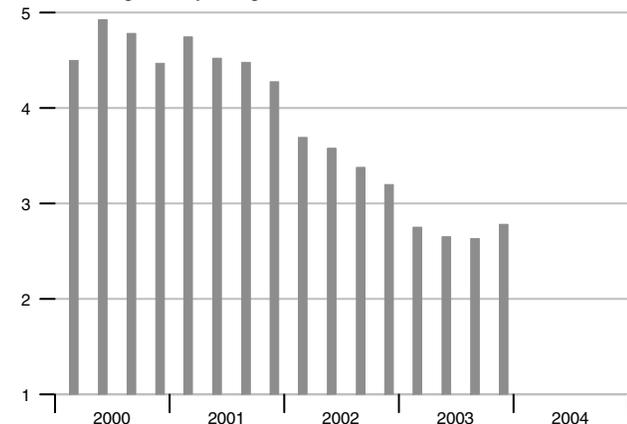
Unemployment Rate

Percent



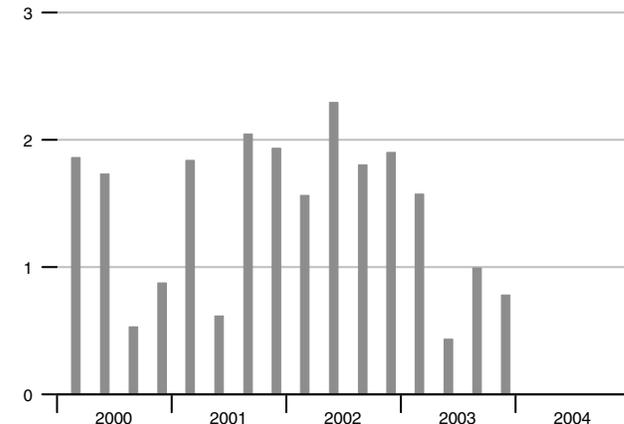
Hourly Earnings

Percent change from year ago



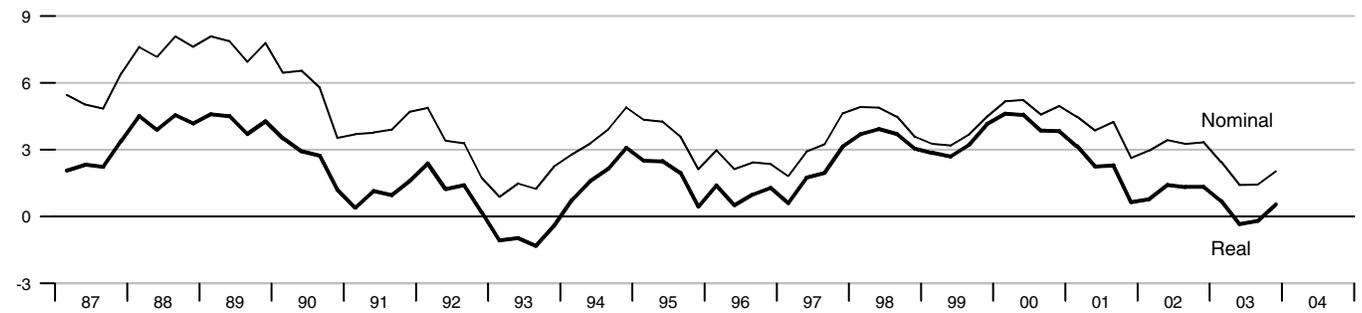
Current Account Balance

Percent of GDP



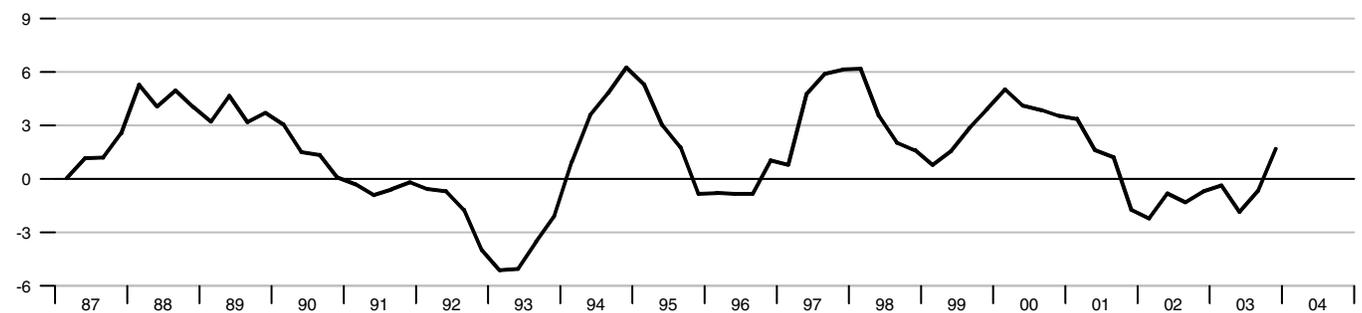
GDP

Percent change from year ago



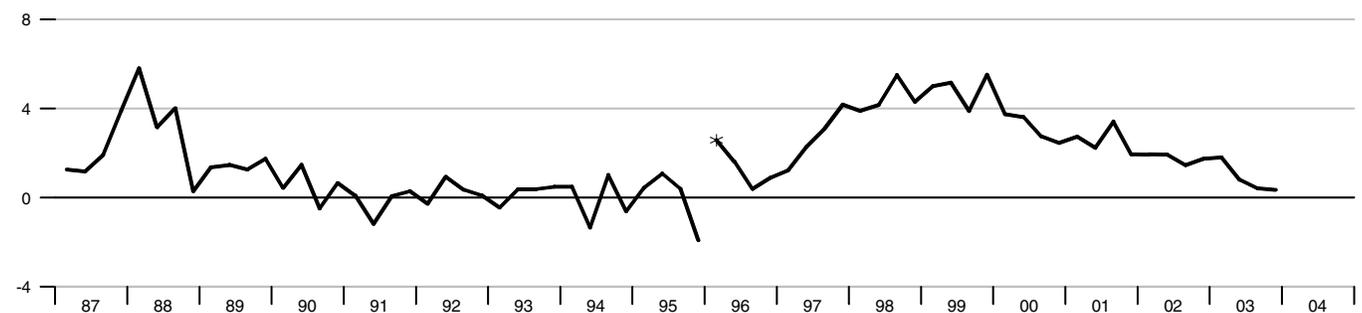
Industrial Production

Percent change from year ago



Retail Sales

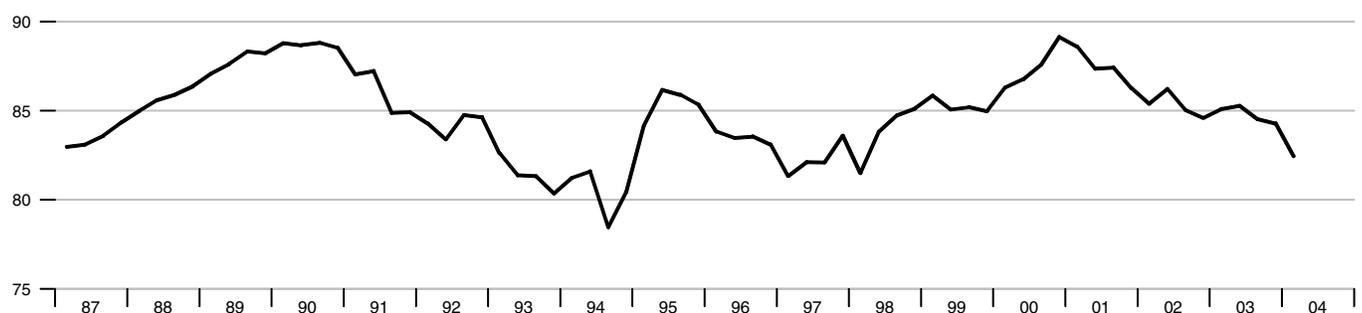
Percent change from year ago



*Data prior to 1996 may not be strictly comparable with later figures (see Sources).

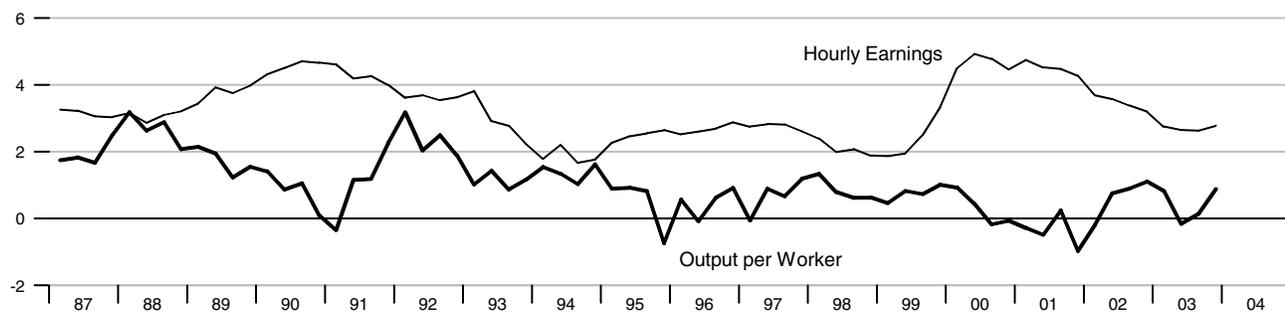
Capacity Utilization

Percent



Hourly Earnings and Output per Worker

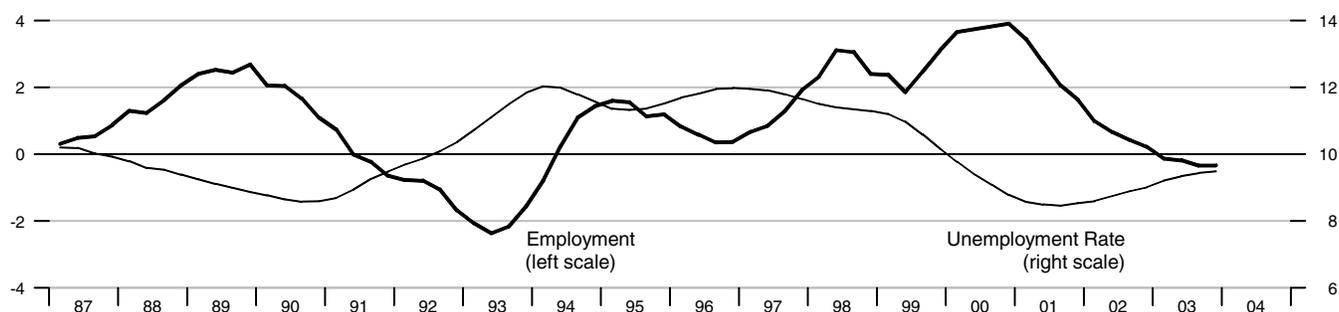
Percent change from year ago



Labor Force Indicators

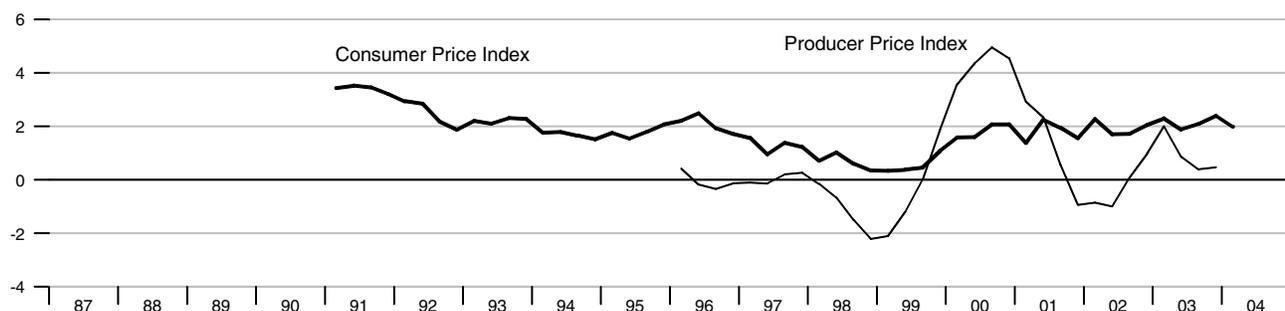
Percent change from year ago

Percent



Inflation

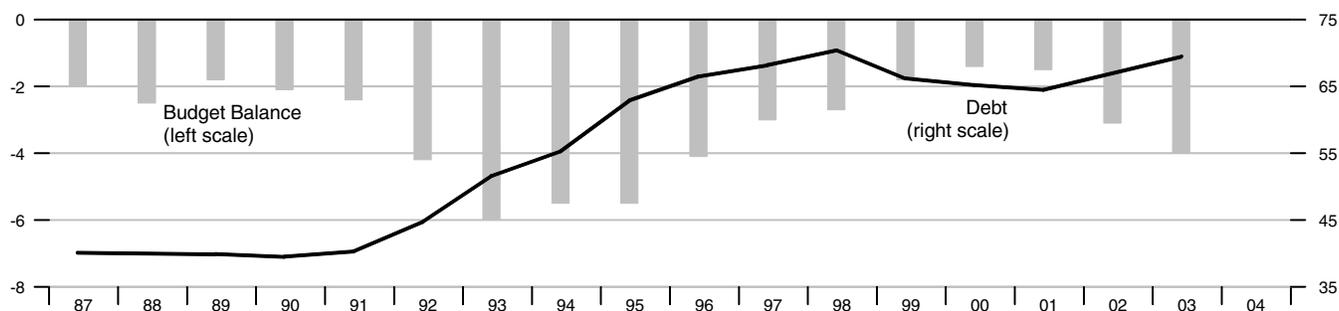
Percent change from year ago



Government Debt and Budget Balance

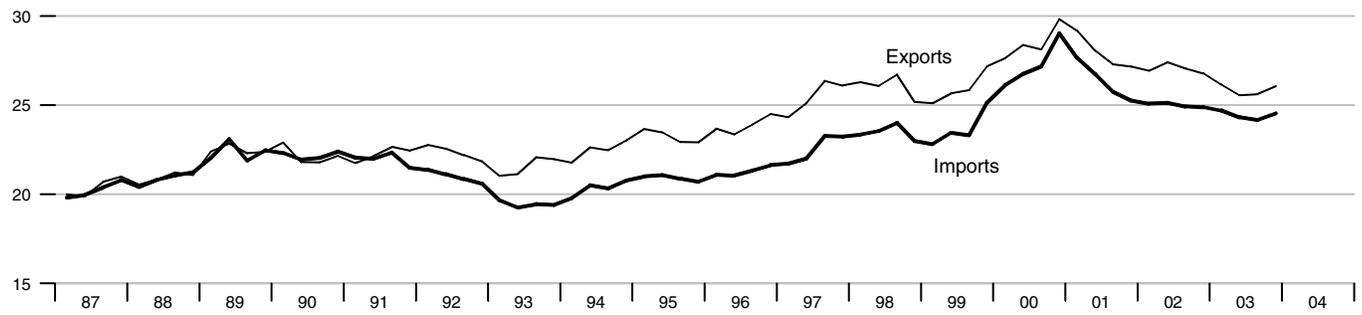
Percent of GDP, annual data

Percent of GDP, annual data



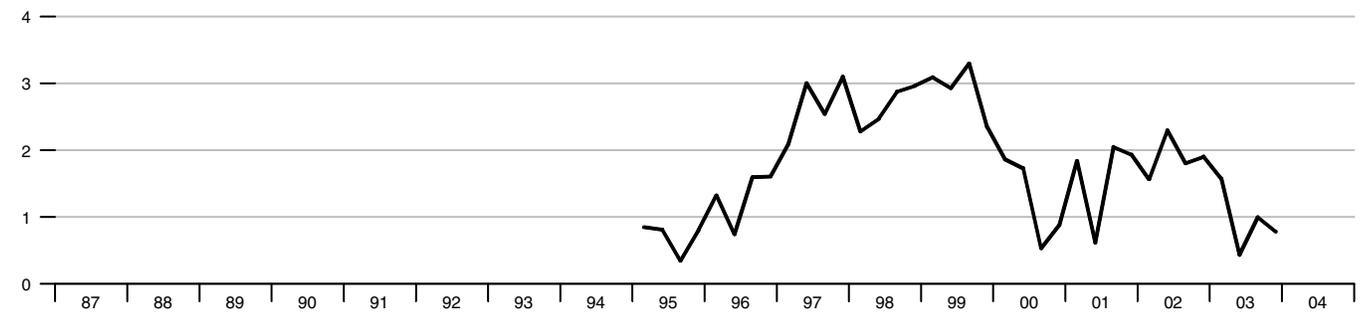
International Trade - Goods and Services

Percent of GDP



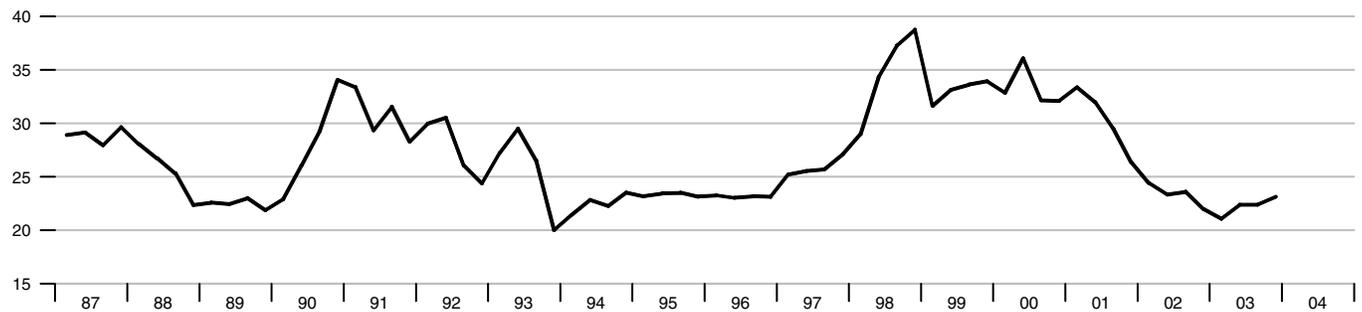
Current Account Balance

Percent of GDP



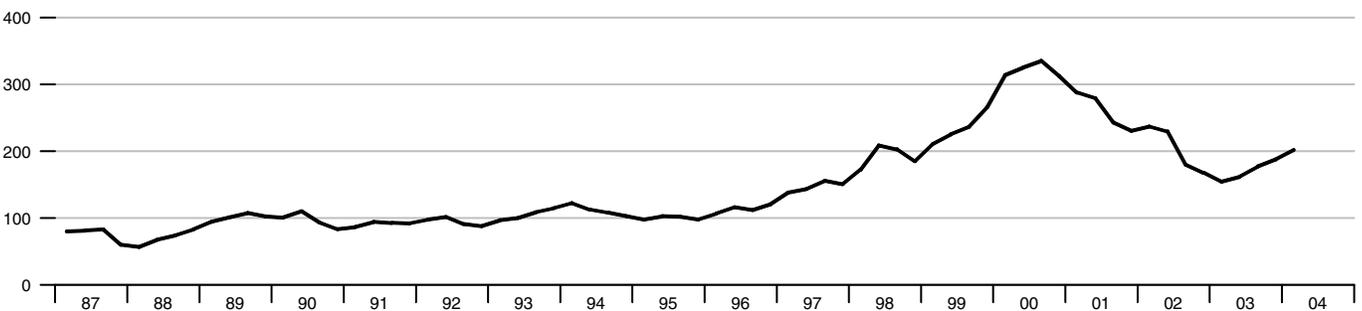
Foreign Exchange Reserves

Billions of US\$



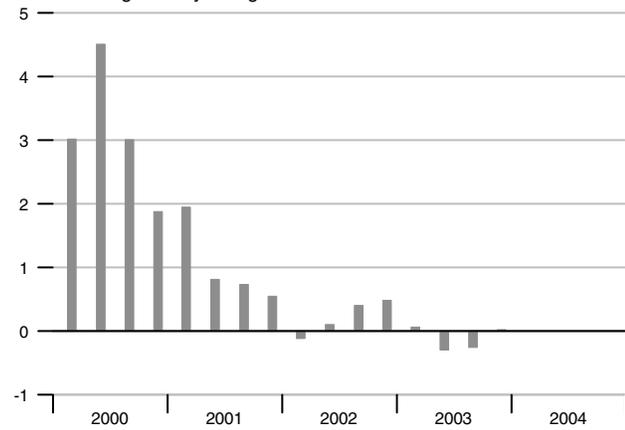
Stock Exchange Index - SBF 250

1995 = 100



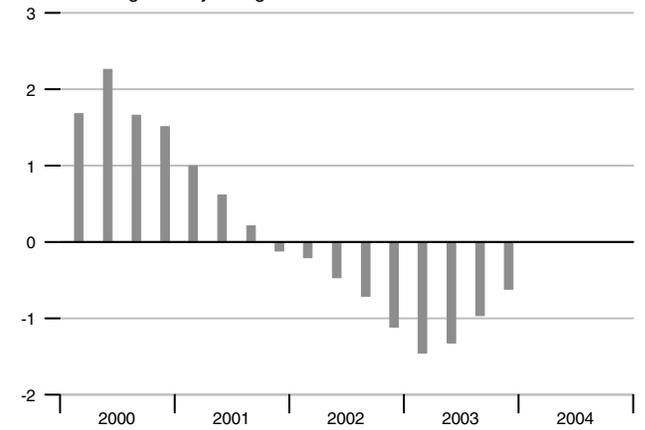
Real GDP

Percent change from year ago



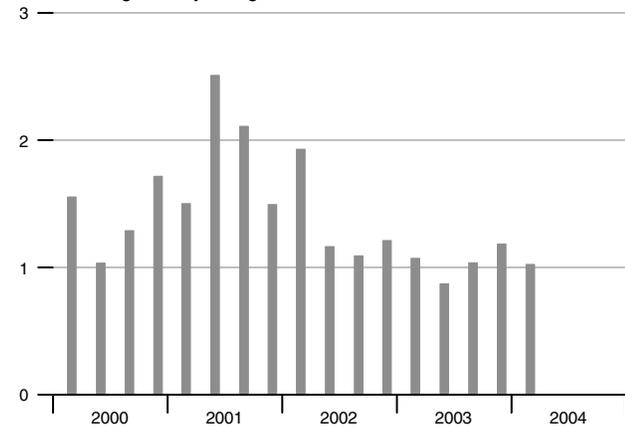
Employment

Percent change from year ago



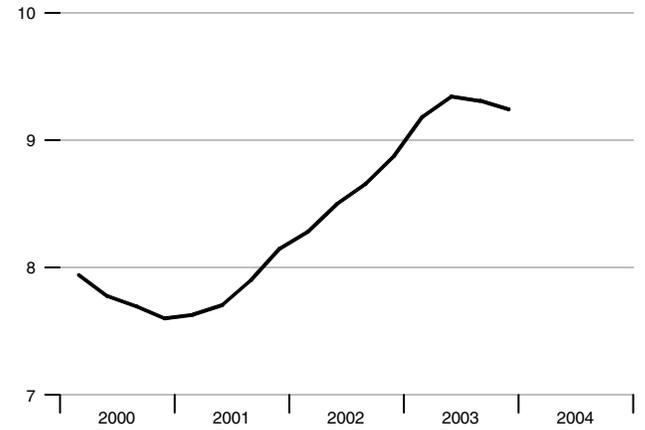
Consumer Price Index

Percent change from year ago



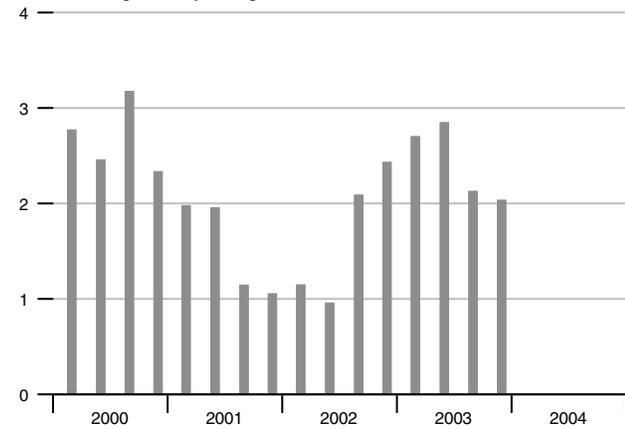
Unemployment Rate

Percent



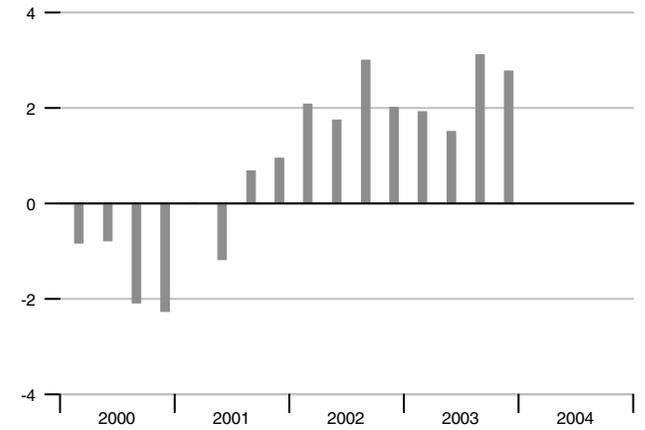
Hourly Earnings

Percent change from year ago



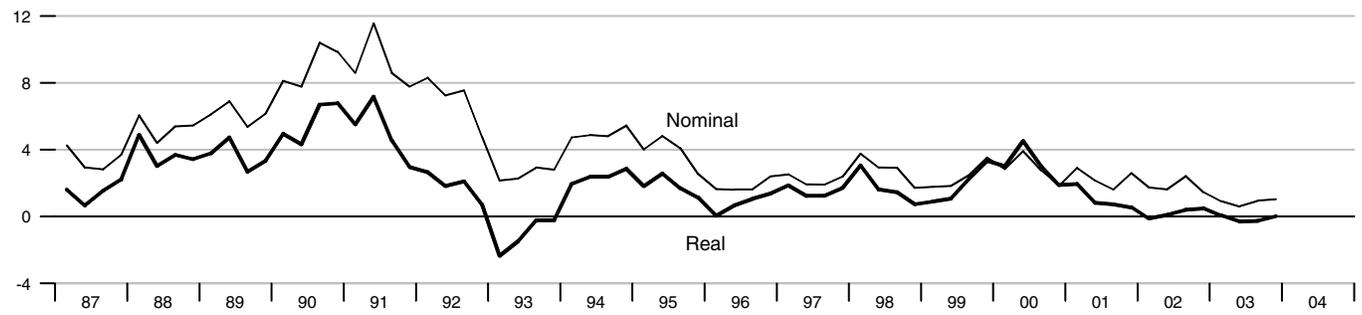
Current Account Balance

Percent of GDP



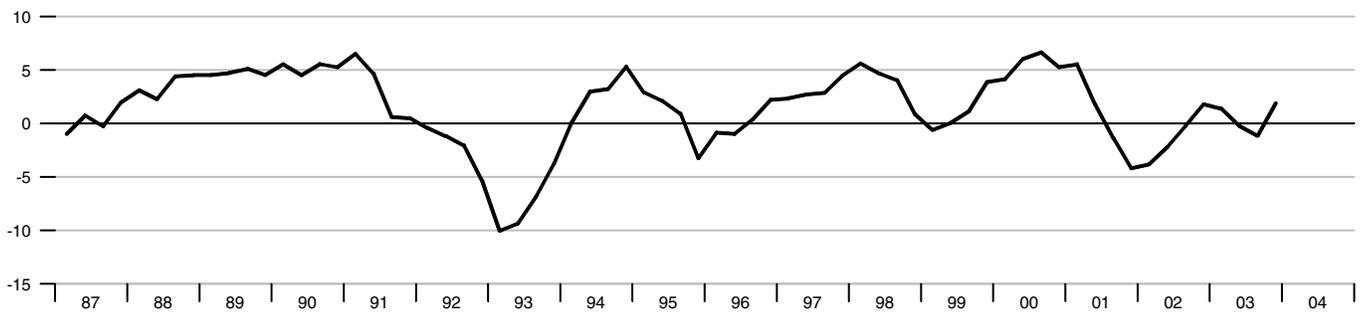
GDP

Percent change from year ago



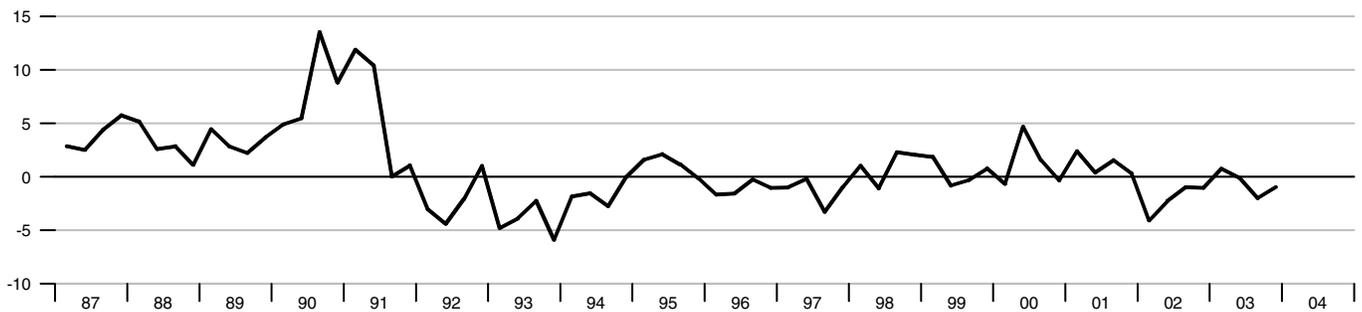
Industrial Production

Percent change from year ago



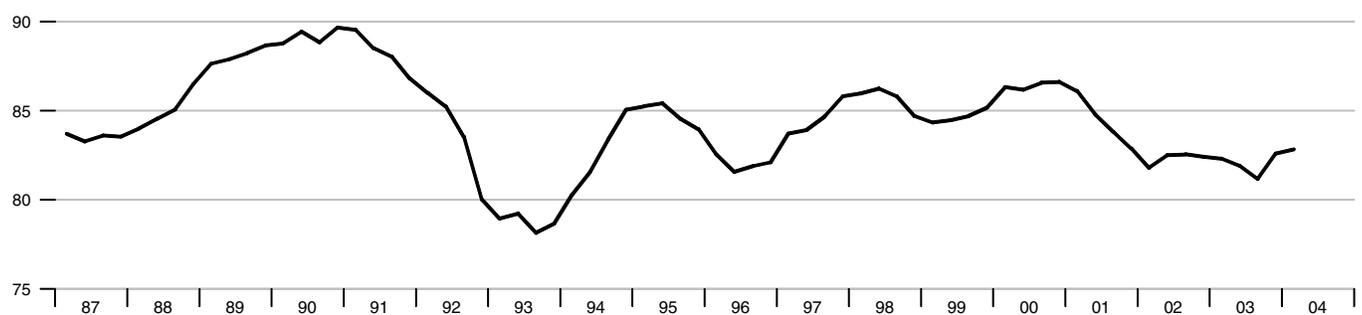
Retail Sales

Percent change from year ago



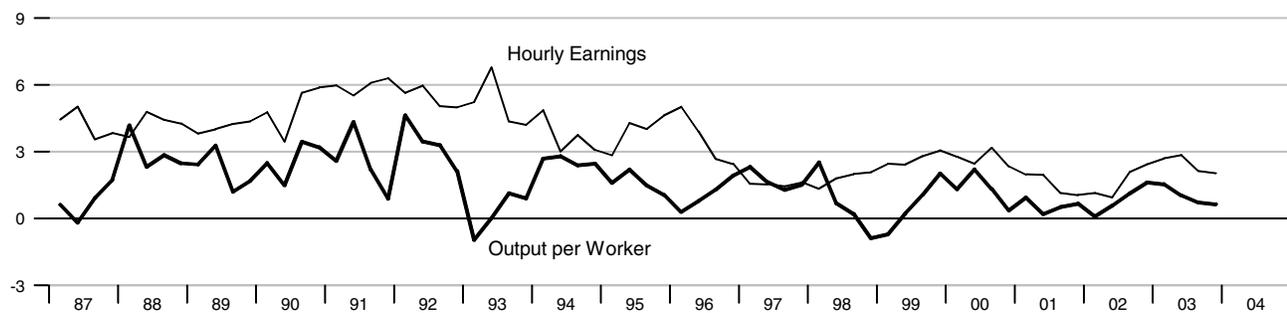
Capacity Utilization

Percent



Hourly Earnings and Output per Worker

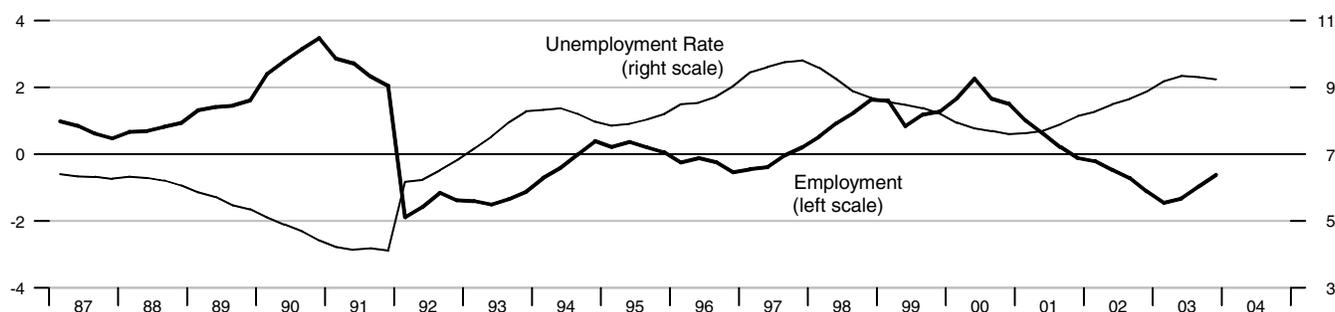
Percent change from year ago



Labor Force Indicators

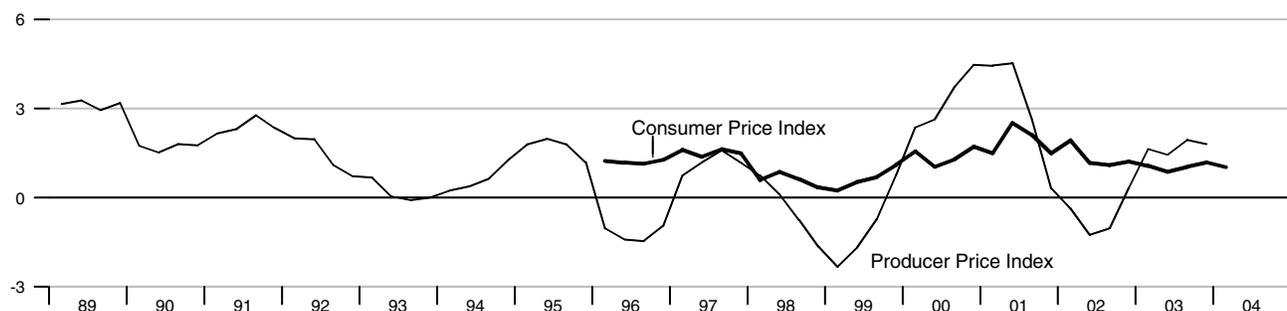
Percent change from year ago

Percent



Inflation

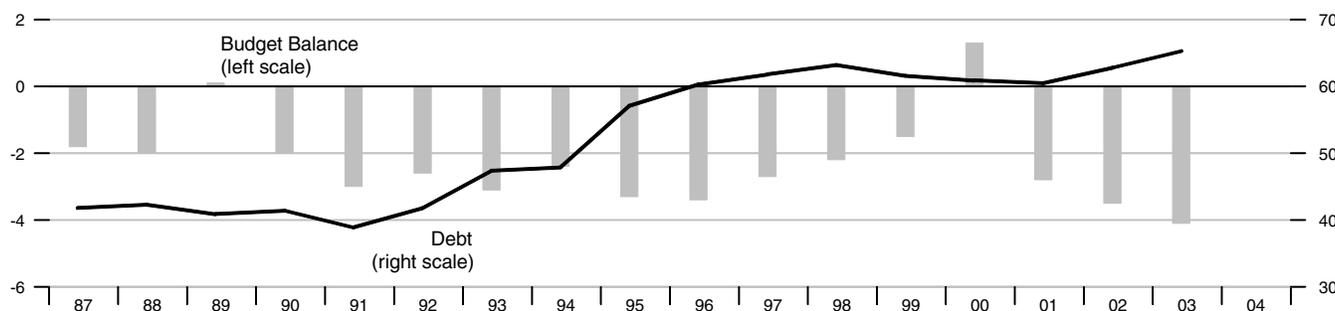
Percent change from year ago



Government Debt and Budget Balance

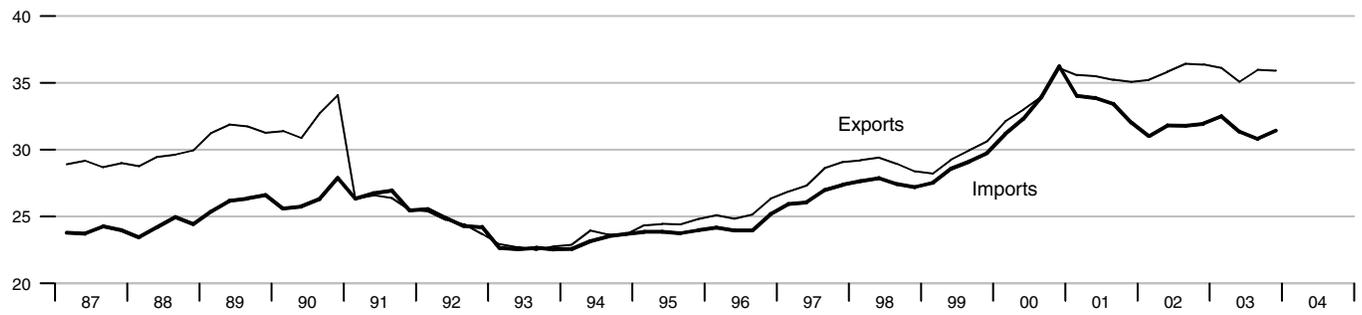
Percent of GDP, annual data

Percent of GDP, annual data



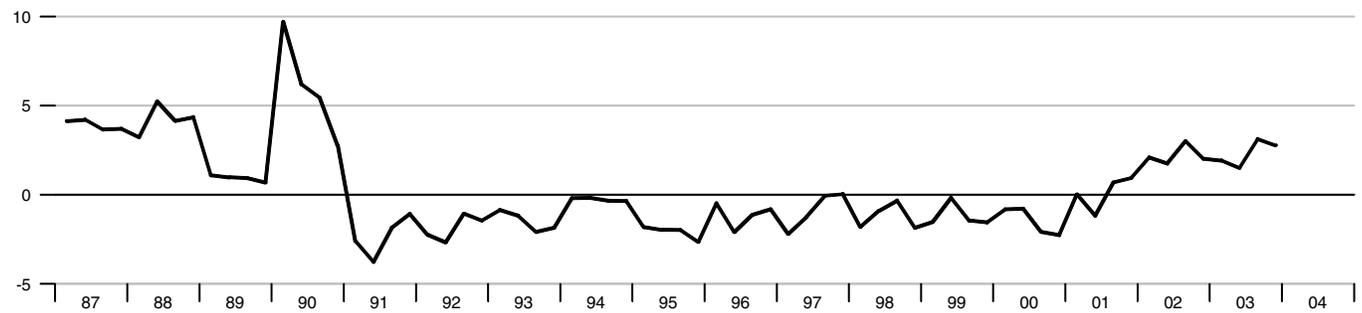
International Trade - Goods and Services

Percent of GDP



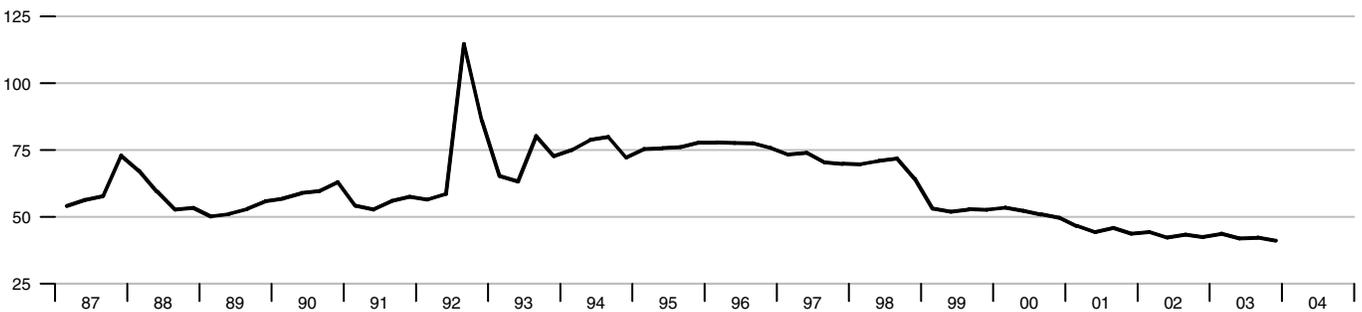
Current Account Balance

Percent of GDP



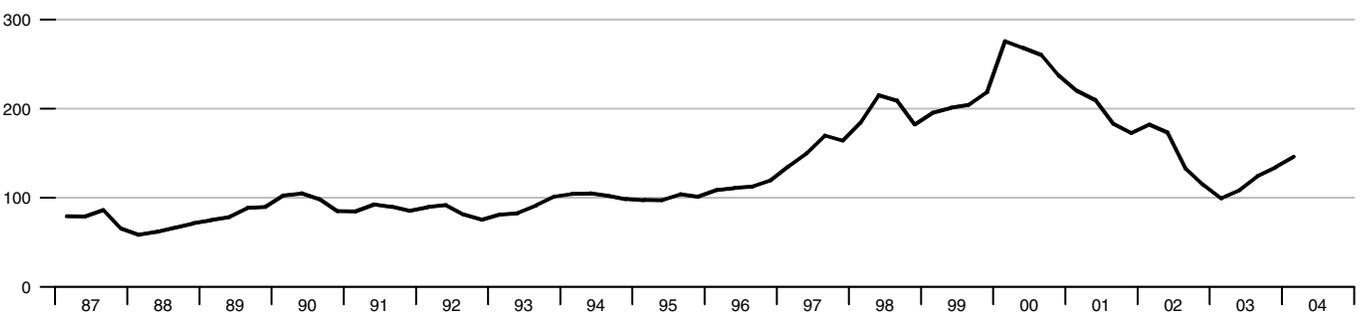
Foreign Exchange Reserves

Billions of US\$



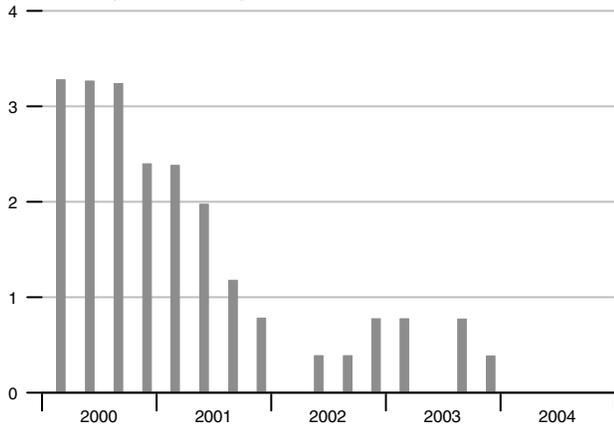
Stock Exchange Index - CDAX

1995 = 100



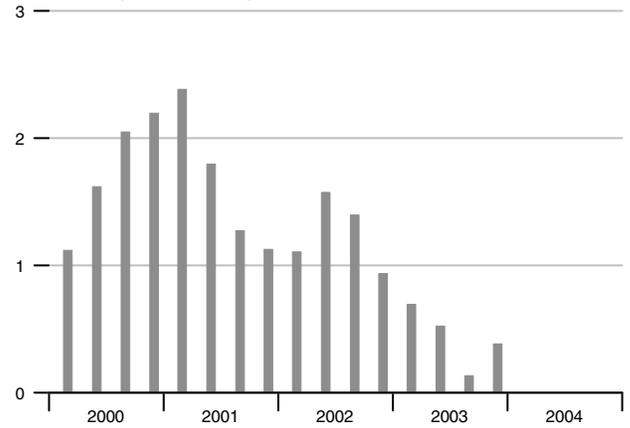
Real GDP

Percent change from year ago



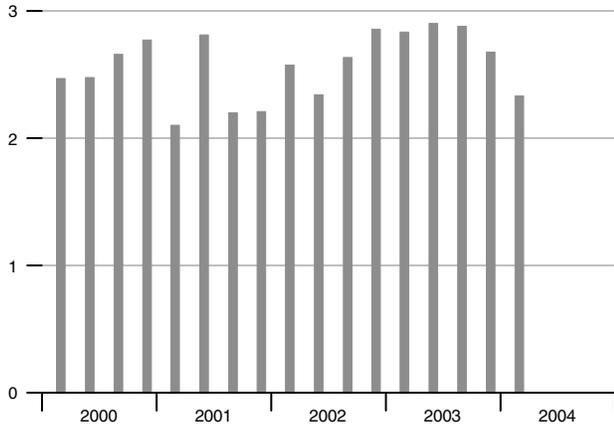
Employment

Percent change from year ago



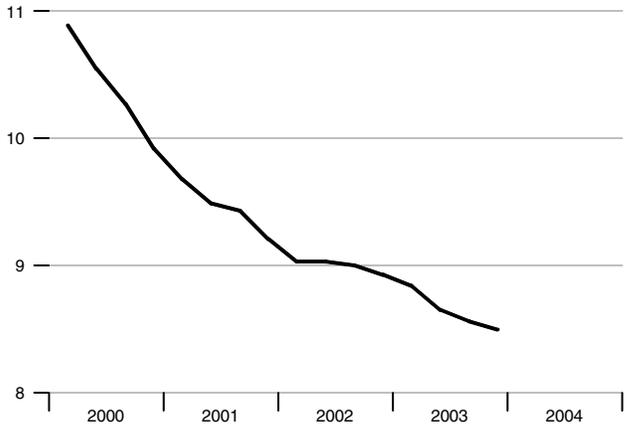
Consumer Price Index

Percent change from year ago



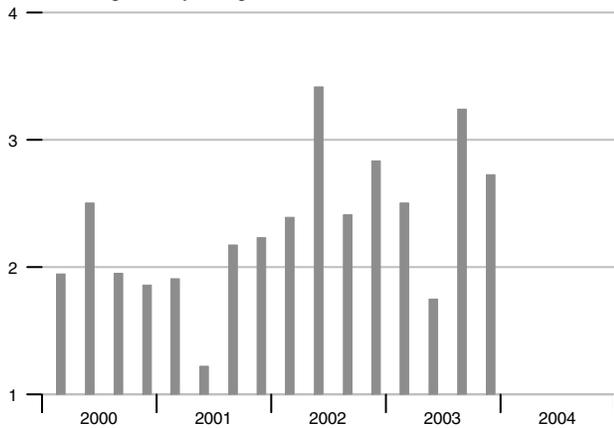
Unemployment Rate

Percent



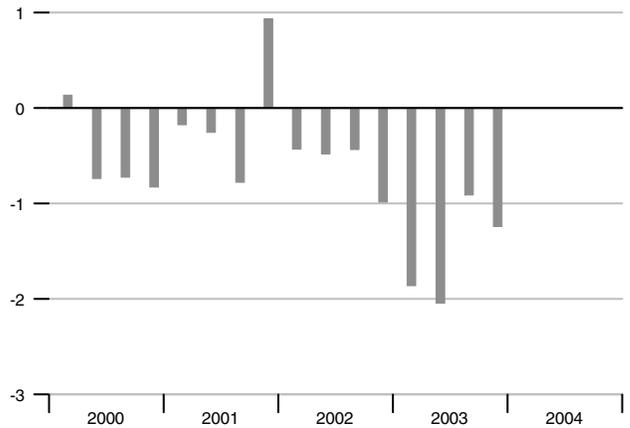
Hourly Earnings

Percent change from year ago



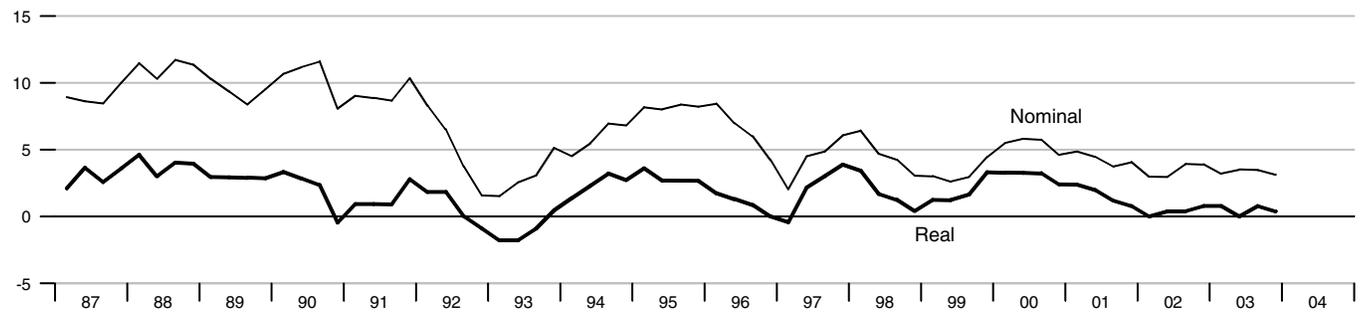
Current Account Balance

Percent of GDP



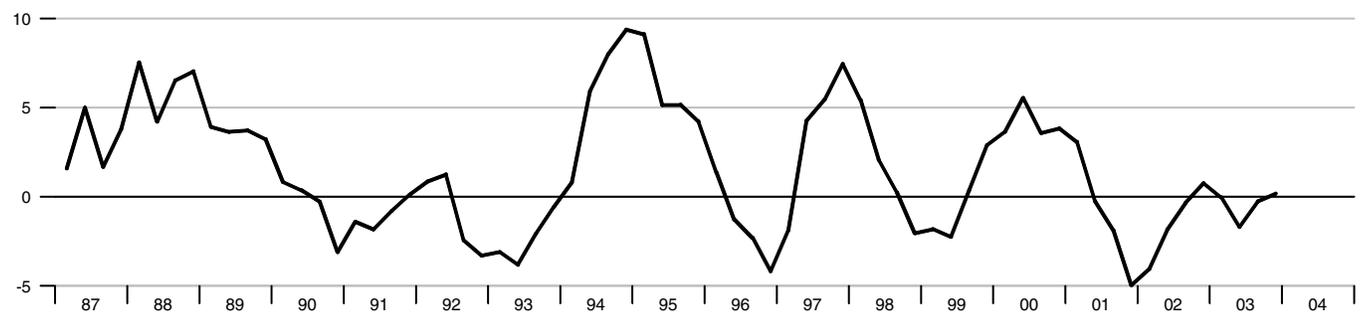
GDP

Percent change from year ago



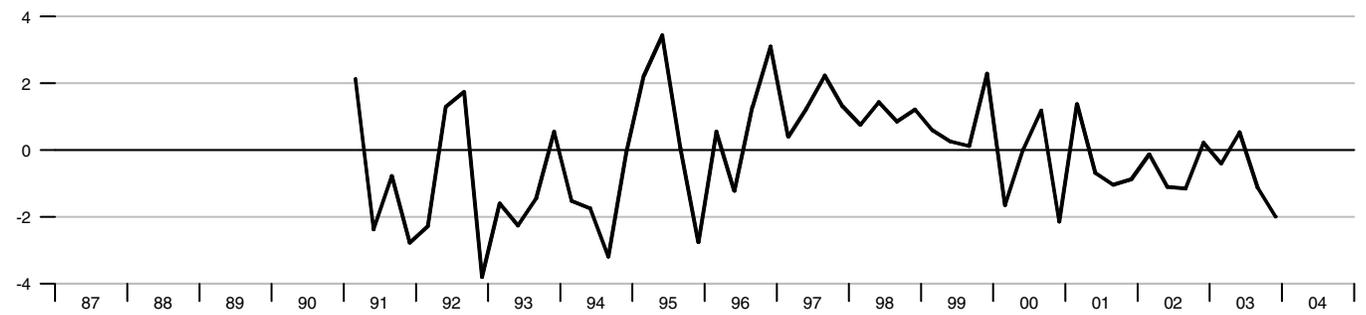
Industrial Production

Percent change from year ago



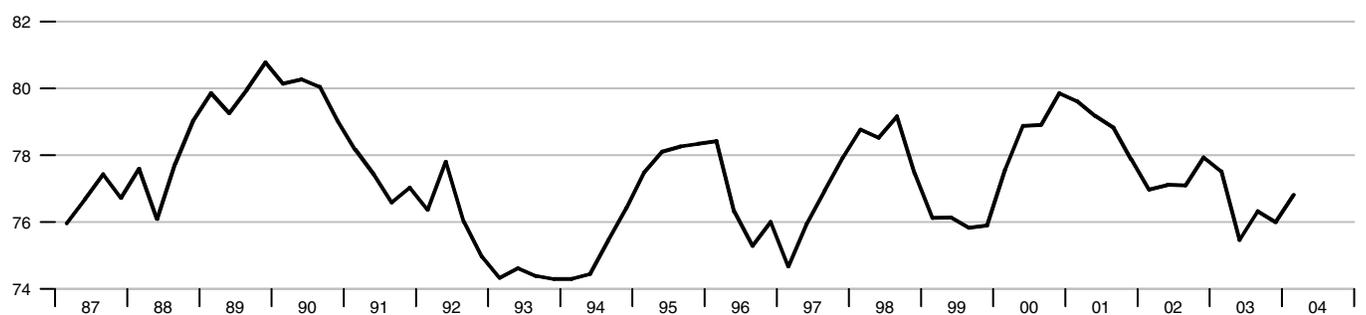
Retail Sales

Percent change from year ago



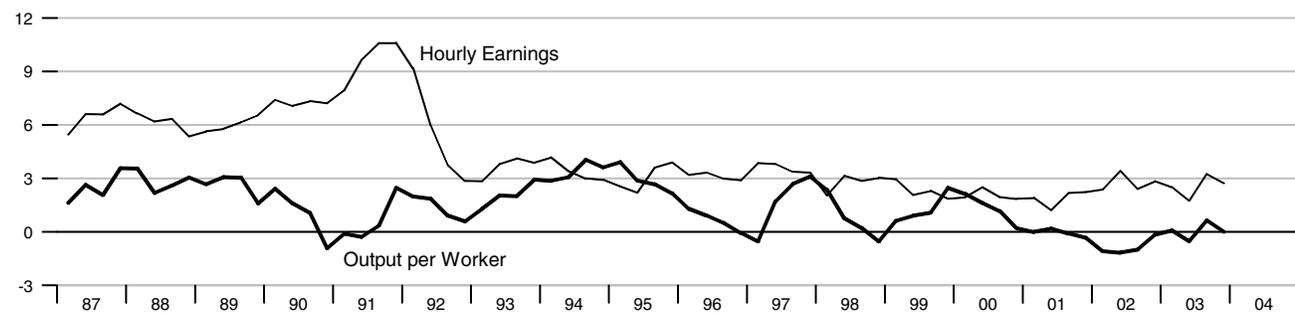
Capacity Utilization

Percent



Hourly Earnings and Output per Worker

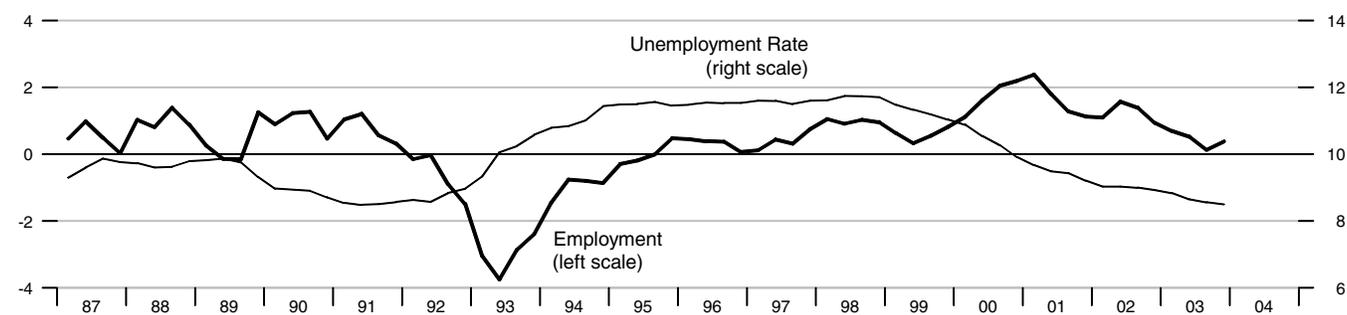
Percent change from year ago



Labor Force Indicators

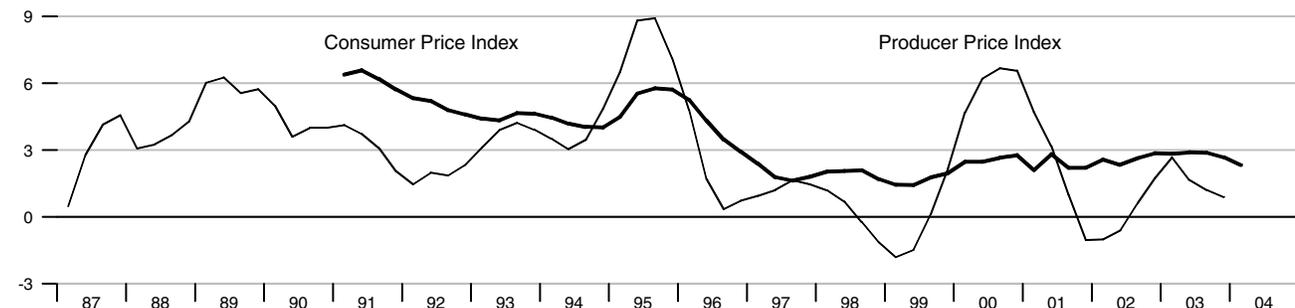
Percent change from year ago

Percent



Inflation

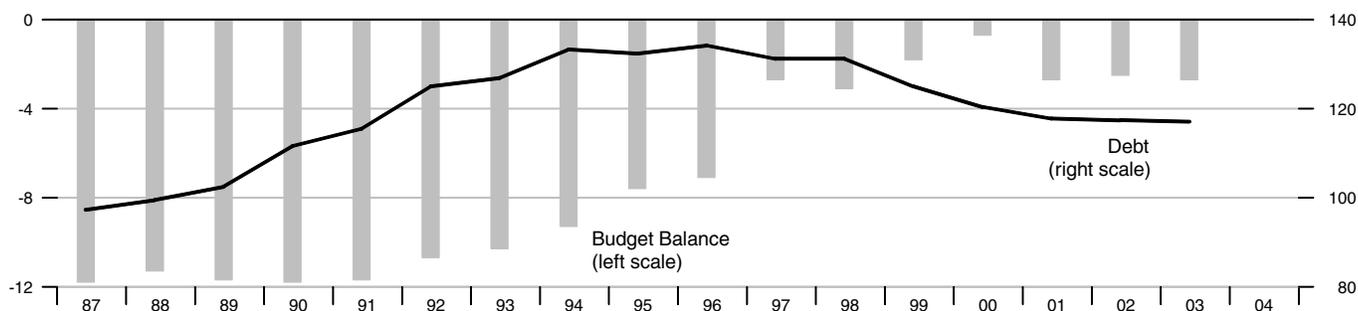
Percent change from year ago



Government Debt and Budget Balance

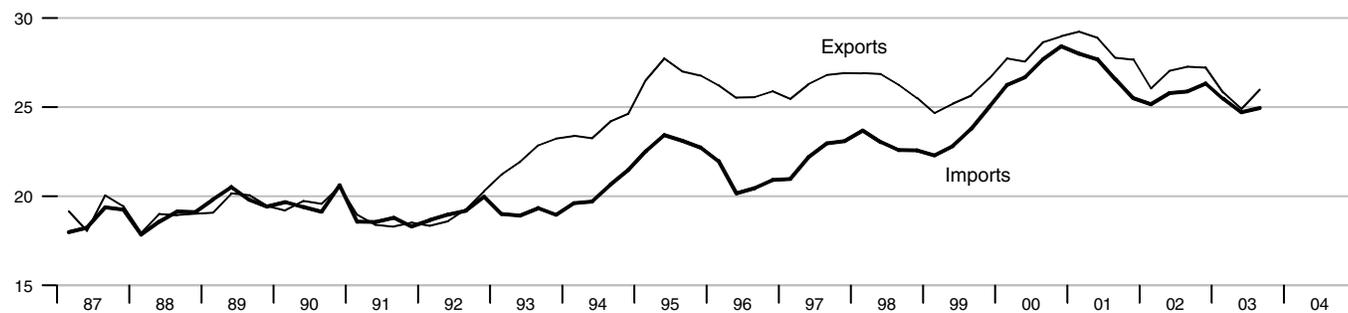
Percent of GDP, annual data

Percent of GDP, annual data



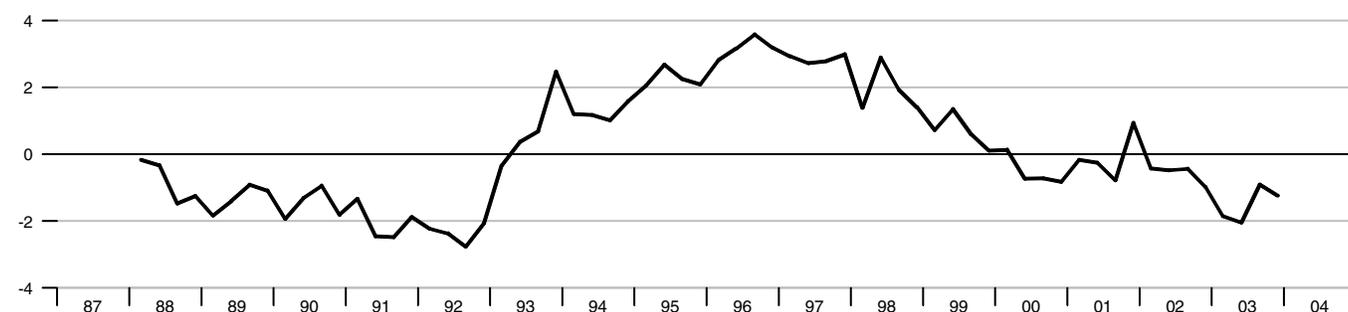
International Trade - Goods and Services

Percent of GDP



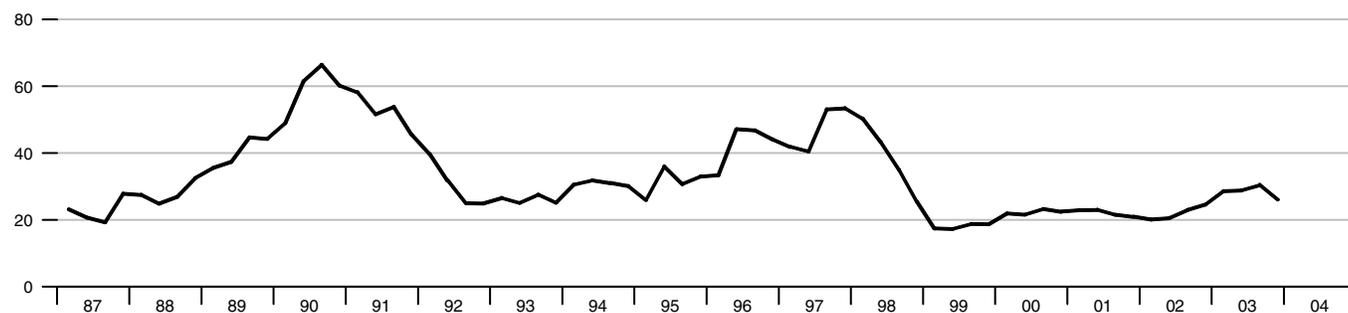
Current Account Balance

Percent of GDP



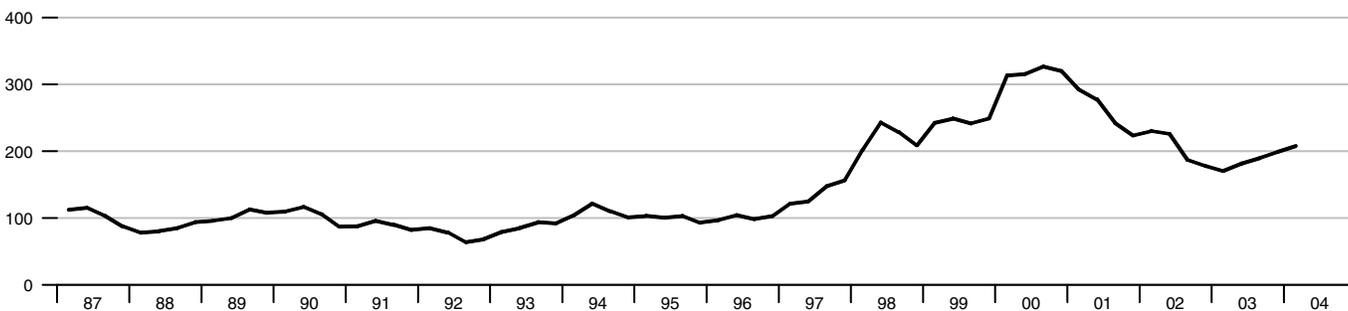
Foreign Exchange Reserves

Billions of US\$



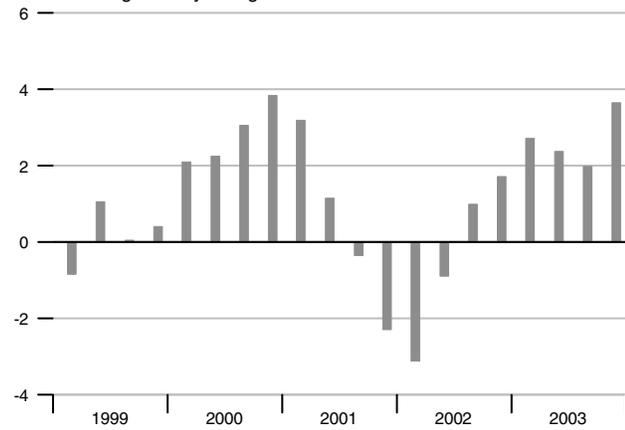
Stock Exchange Index - Milan Stock Exchange

1995 = 100



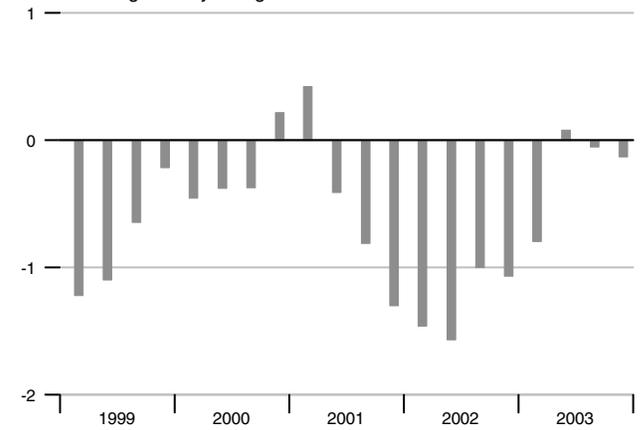
Real GDP

Percent change from year ago



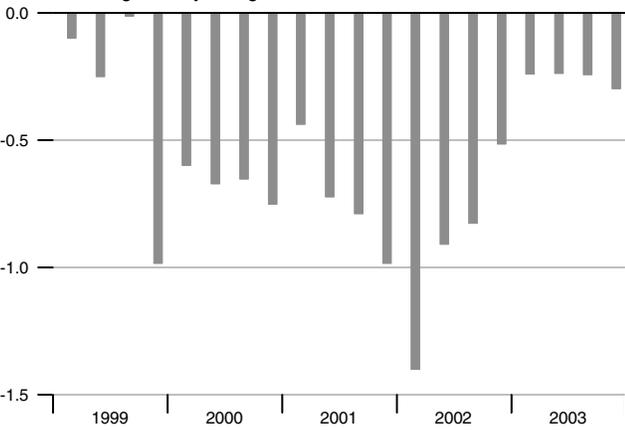
Employment

Percent change from year ago



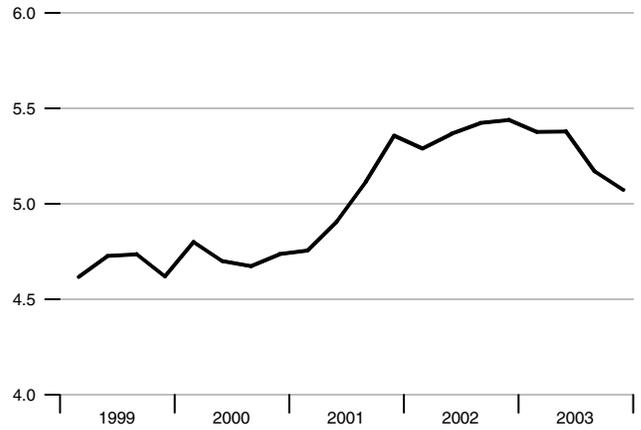
Consumer Price Index

Percent change from year ago



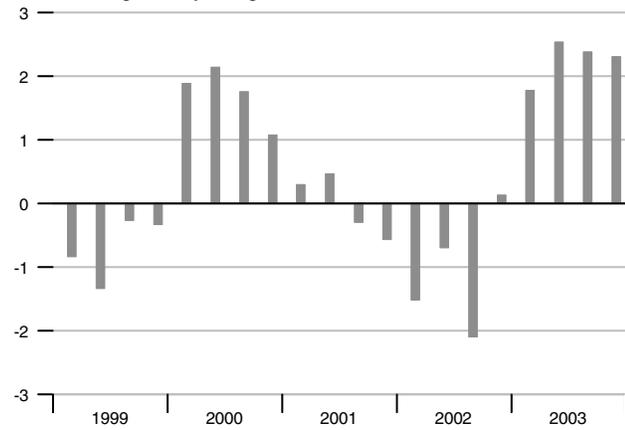
Unemployment Rate

Percent



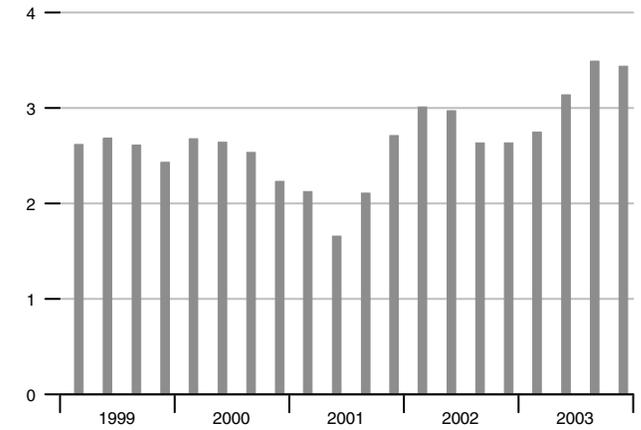
Monthly Earnings

Percent change from year ago

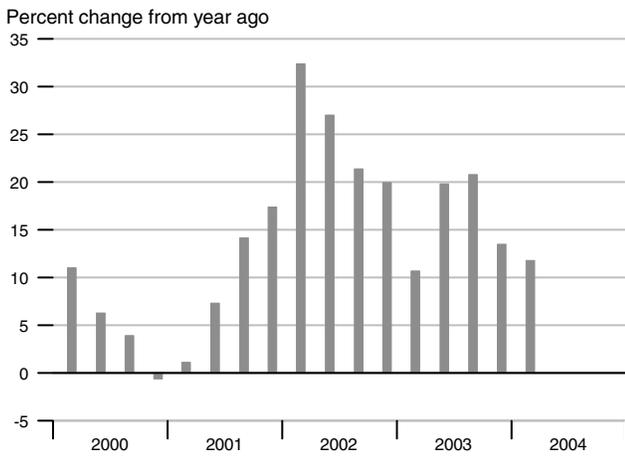


Current Account Balance

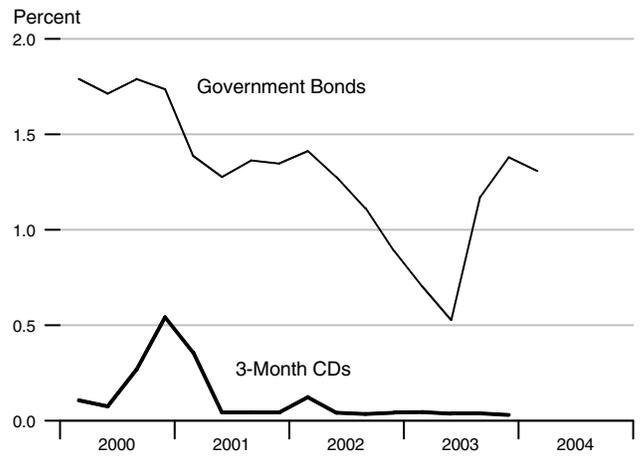
Percent of GDP



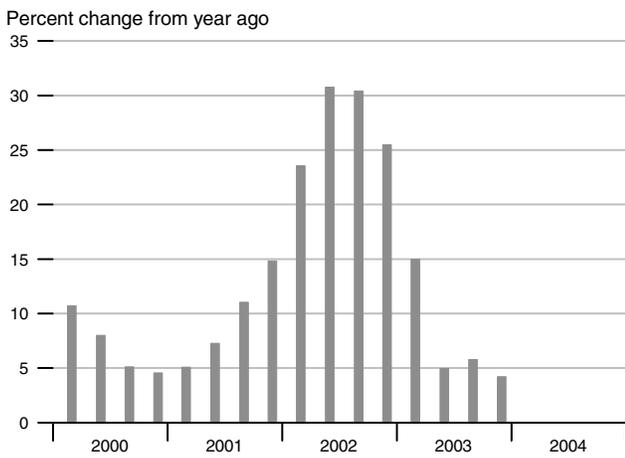
Adjusted Monetary Base



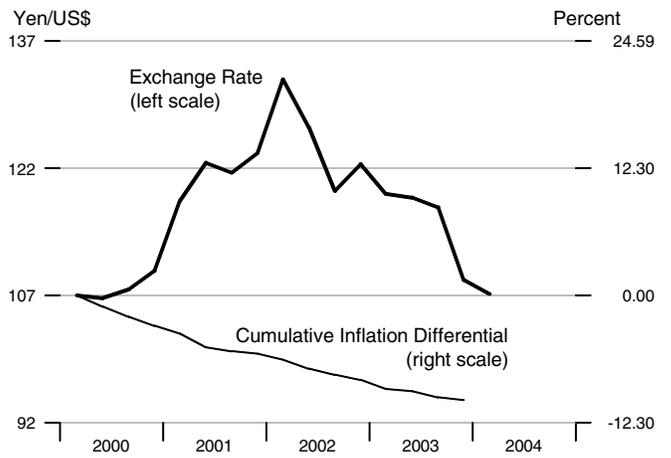
Interest Rates



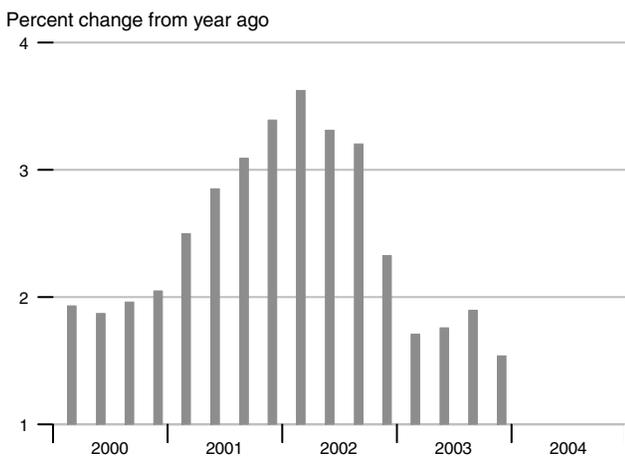
M1



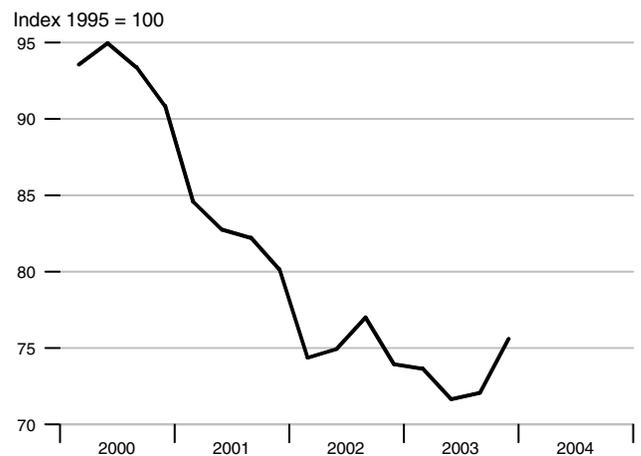
Exchange Rate and Inflation Differential



M2

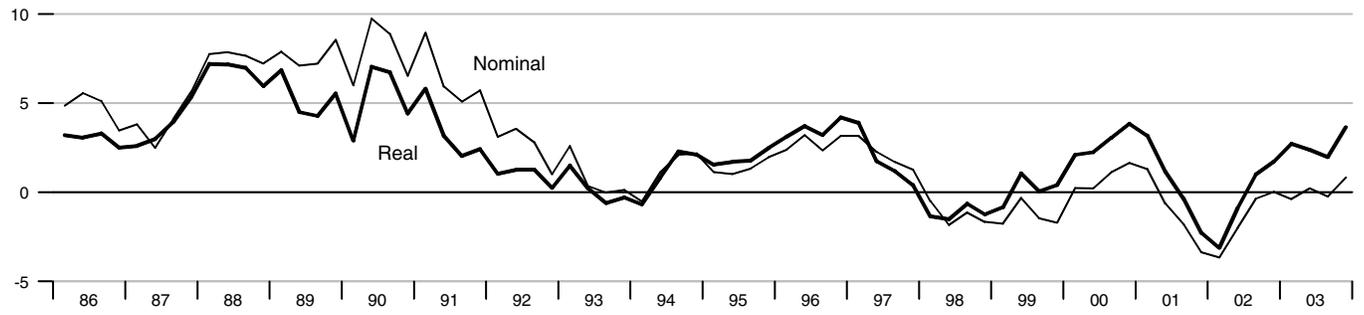


Real Effective Exchange Rate



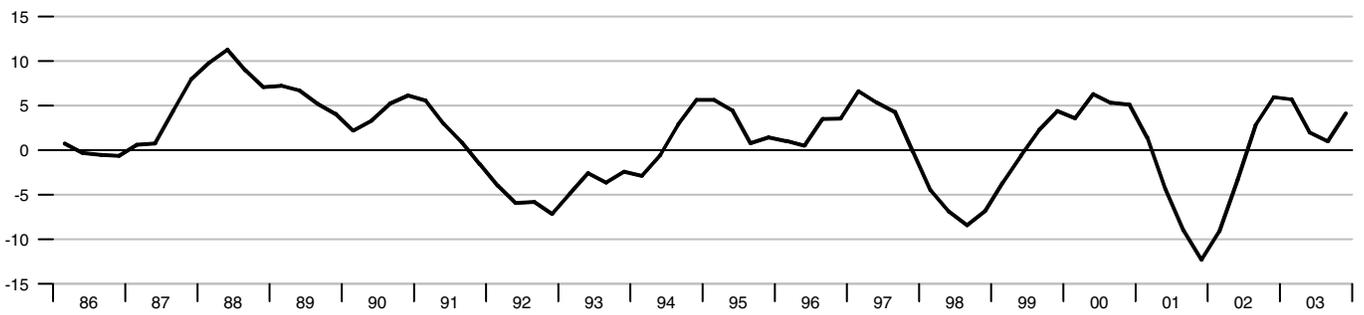
GDP

Percent change from year ago



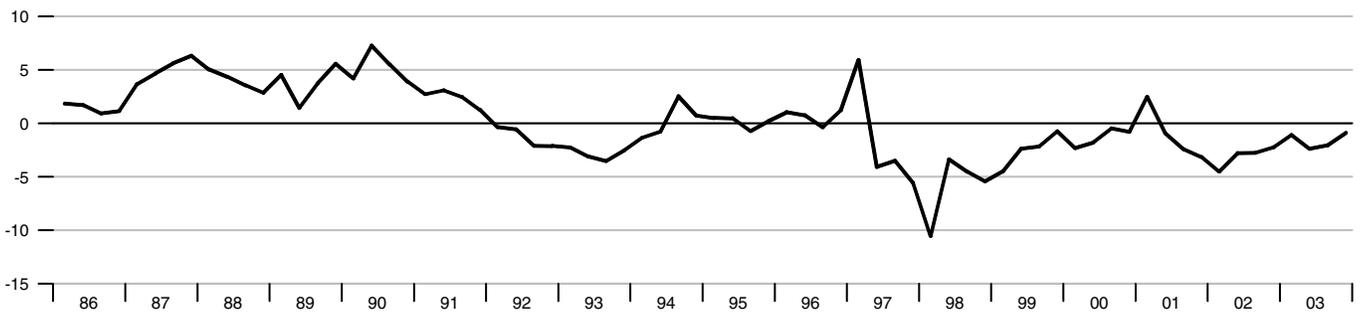
Industrial Production

Percent change from year ago



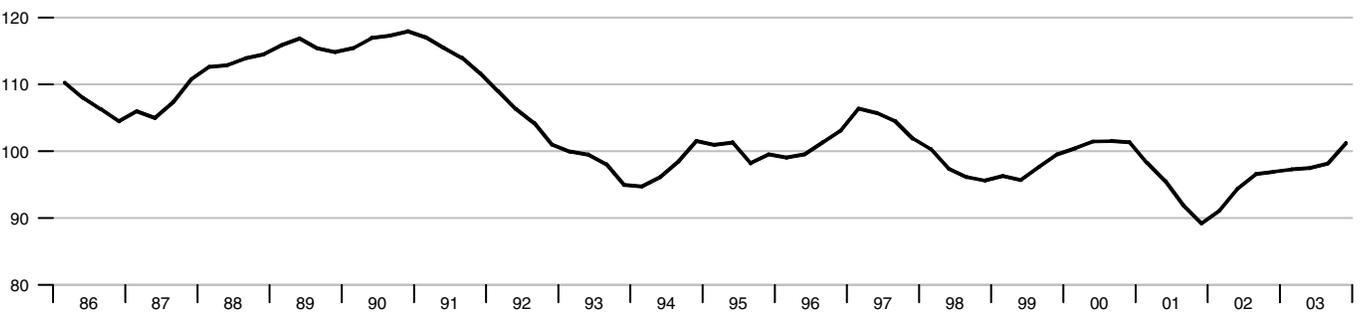
Retail Sales

Percent change from year ago



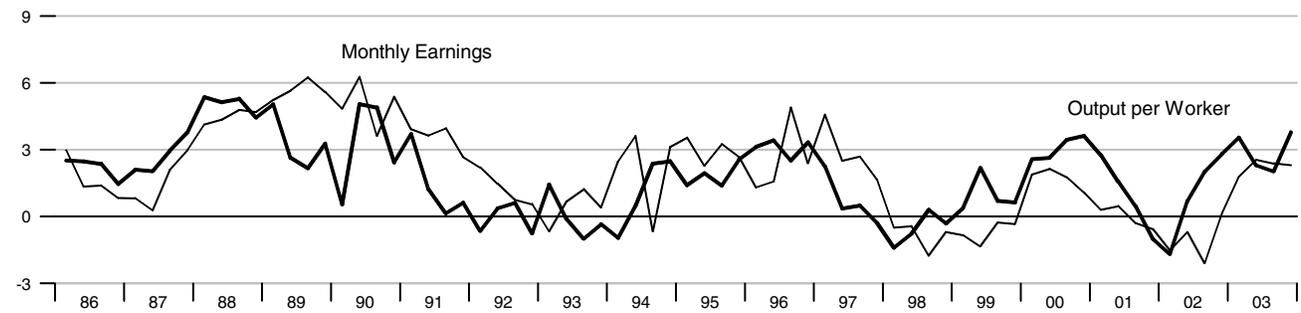
Capacity Utilization

1995 = 100



Monthly Earnings and Output per Worker

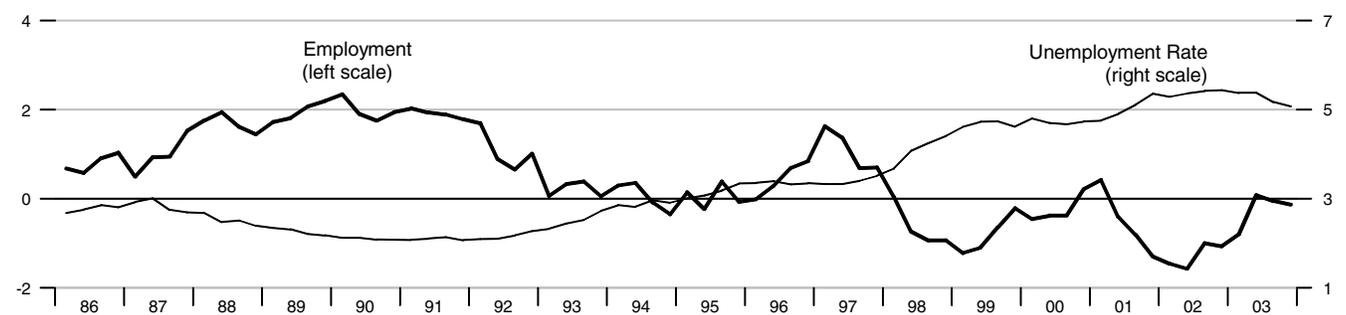
Percent change from year ago



Labor Force Indicators

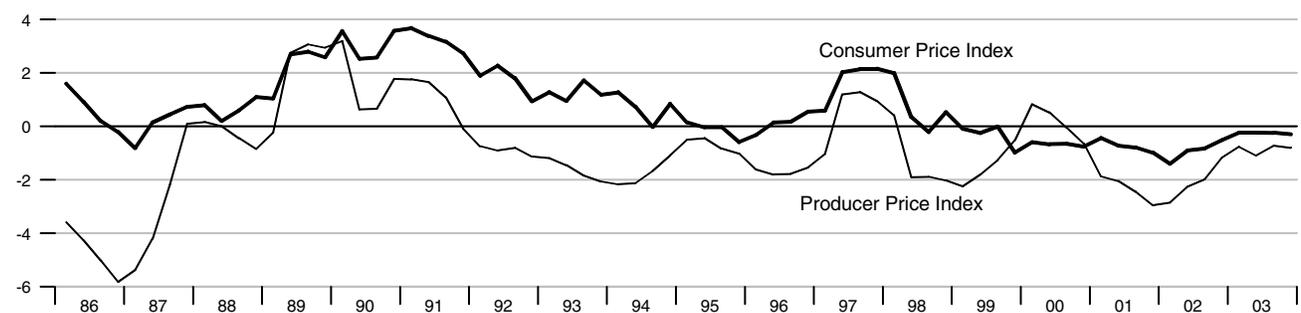
Percent change from year ago

Percent



Inflation

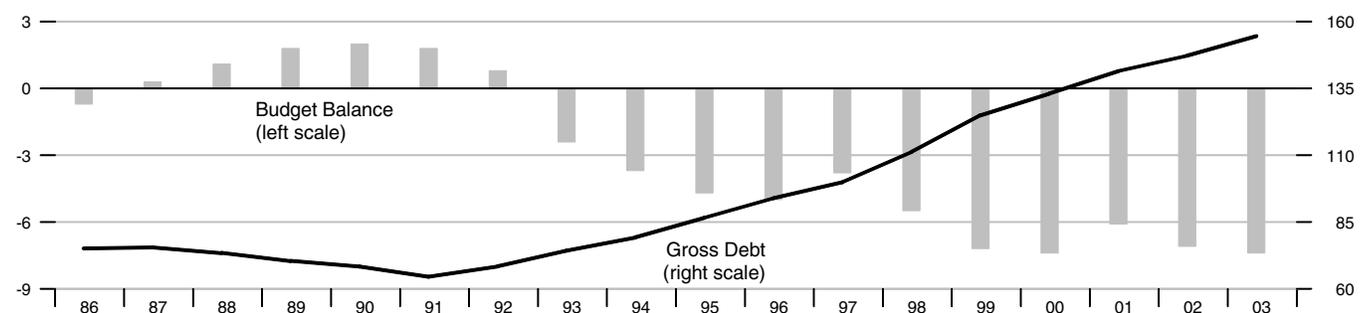
Percent change from year ago



Government Debt and Budget Balance

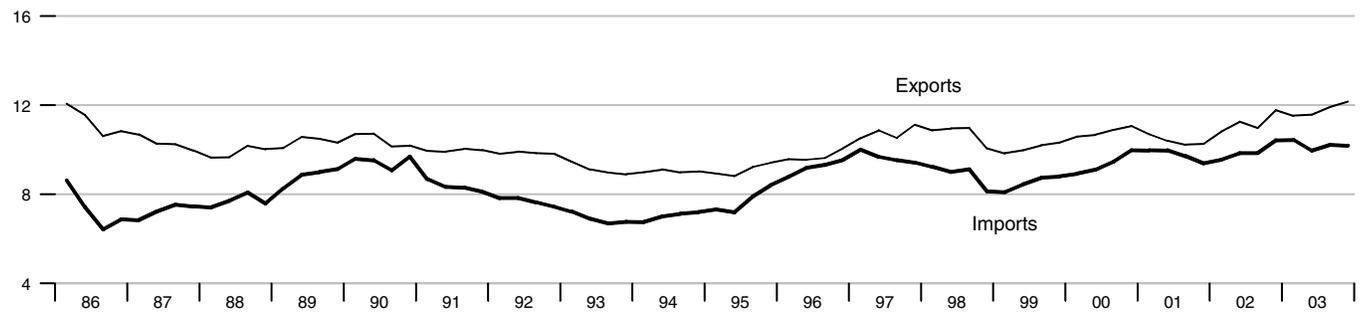
Percent of GDP, annual data

Percent of GDP, annual data



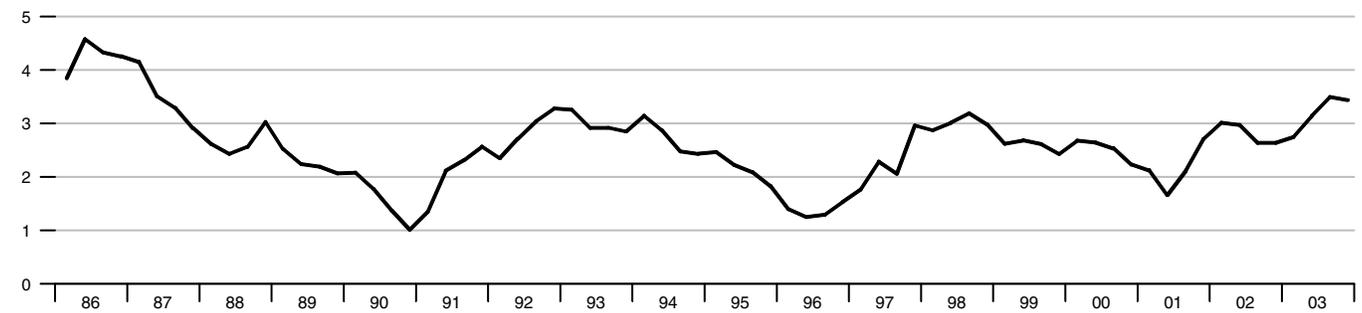
International Trade - Goods and Services

Percent of GDP



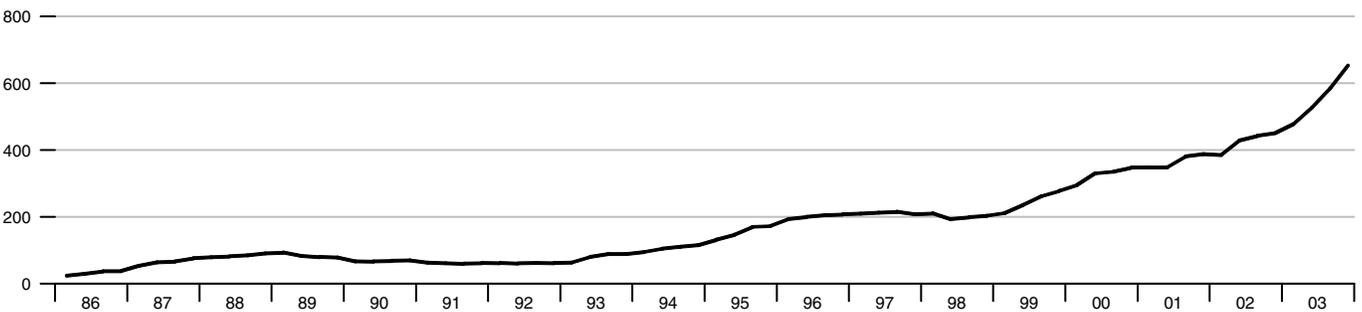
Current Account Balance

Percent of GDP



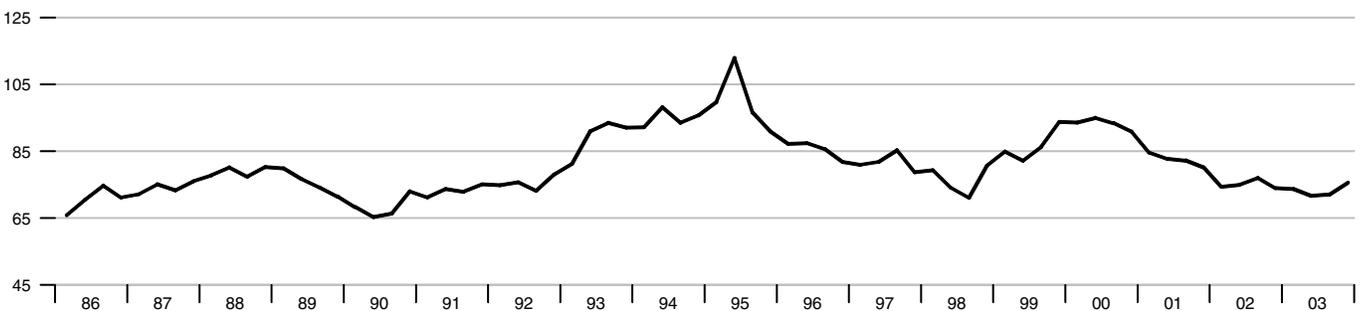
Foreign Exchange Reserves

Billions of US\$



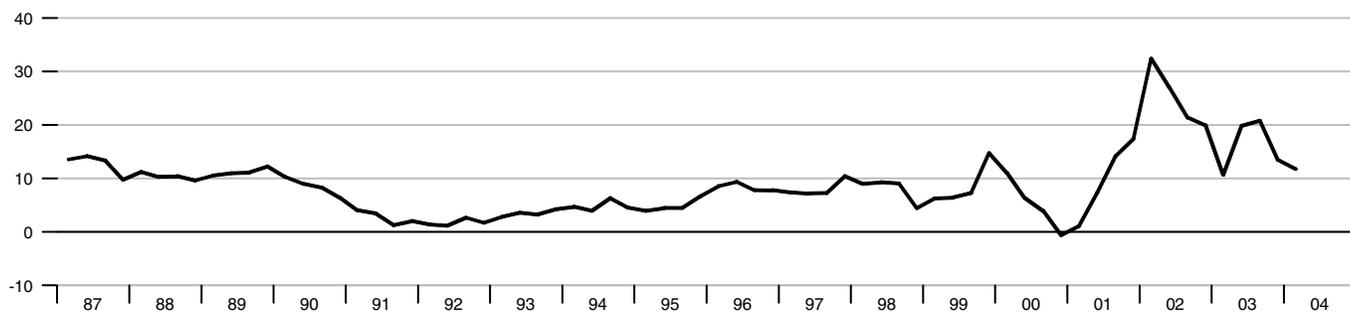
Real Effective Exchange Rate

Index 1995 = 100



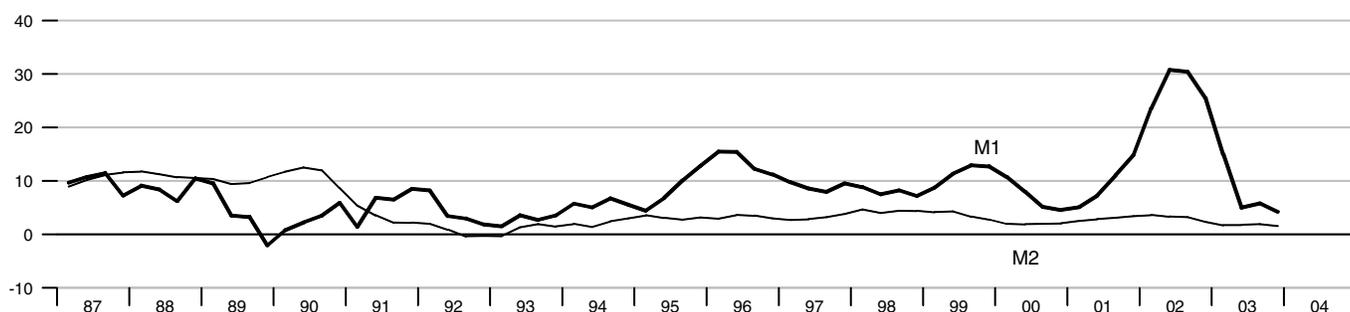
Adjusted Monetary Base

Percent change from year ago



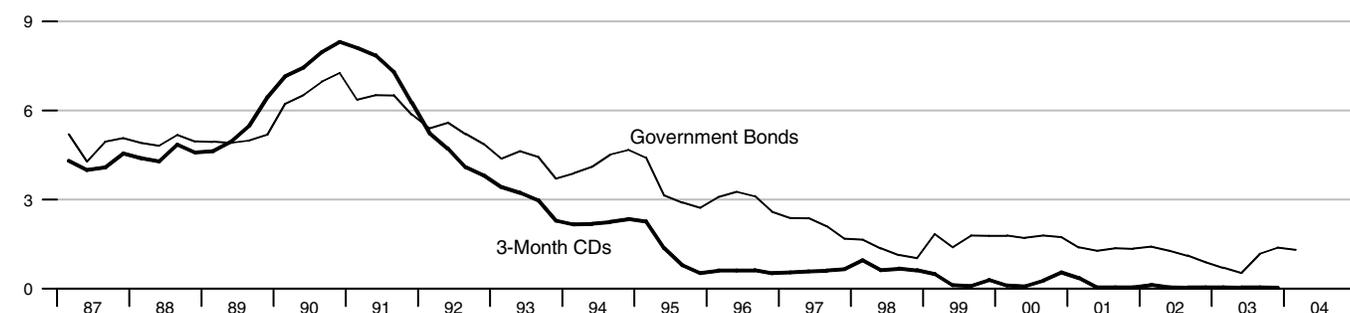
Monetary Aggregates

Percent change from year ago



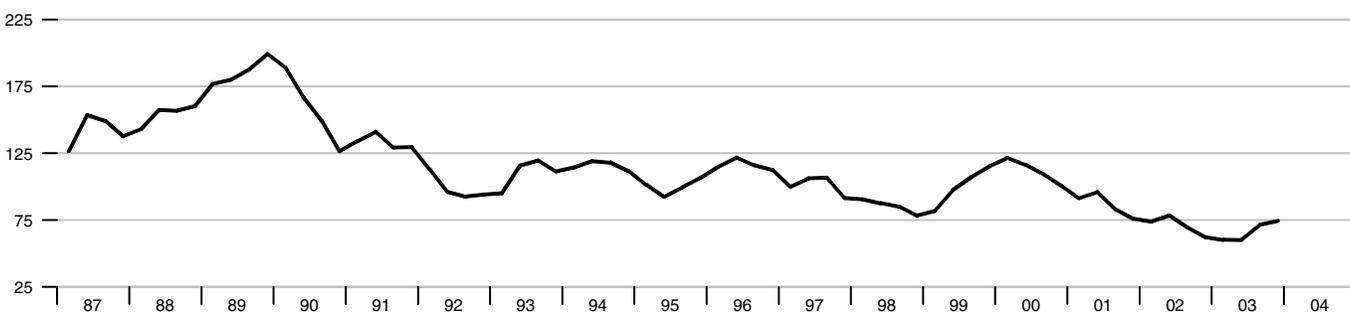
Interest Rates

Percent



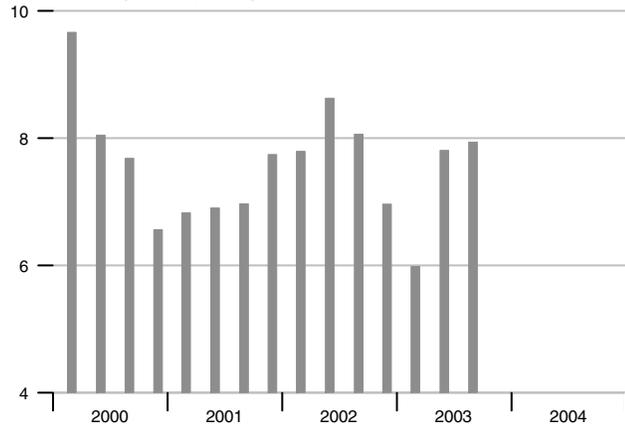
Stock Exchange Index - Tokyo Stock Exchange

1995 = 100



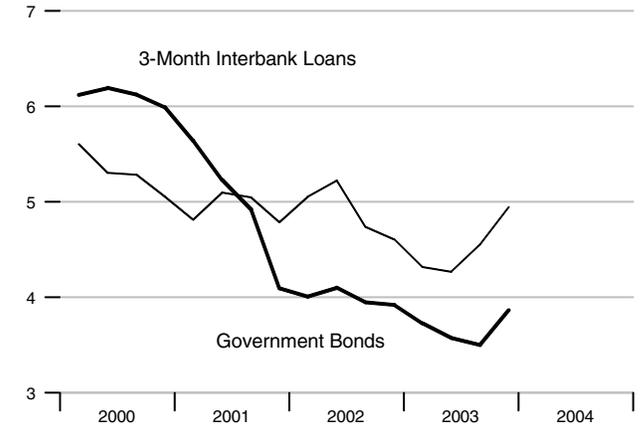
M0

Percent change from year ago



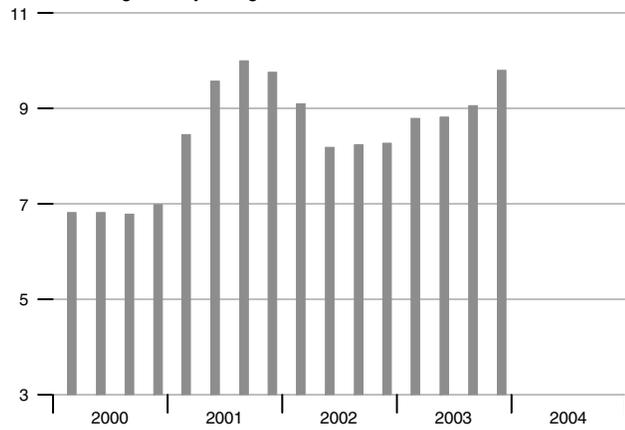
Interest Rates

Percent



M2

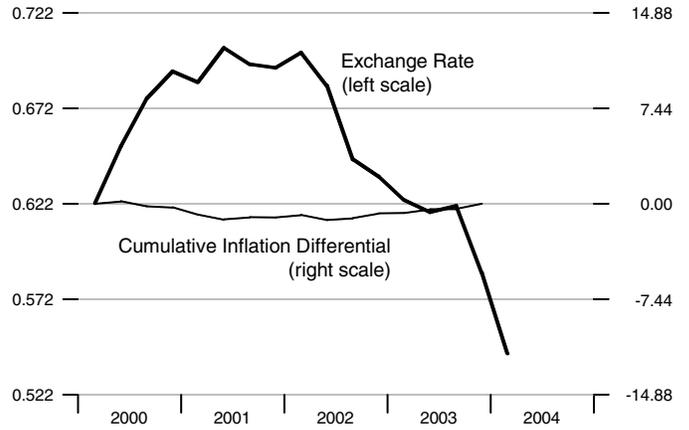
Percent change from year ago



Exchange Rate and Inflation Differential

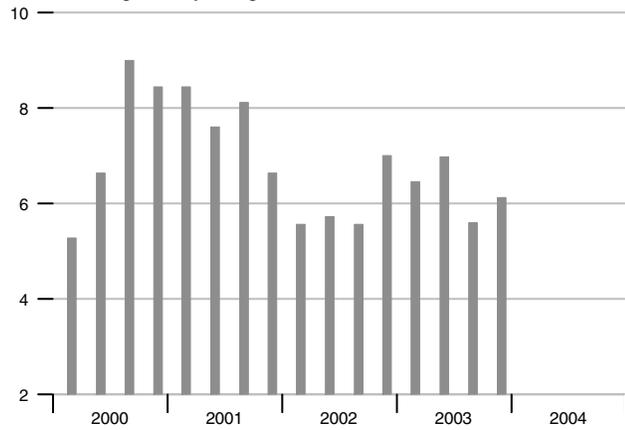
Pounds/US\$

Percent



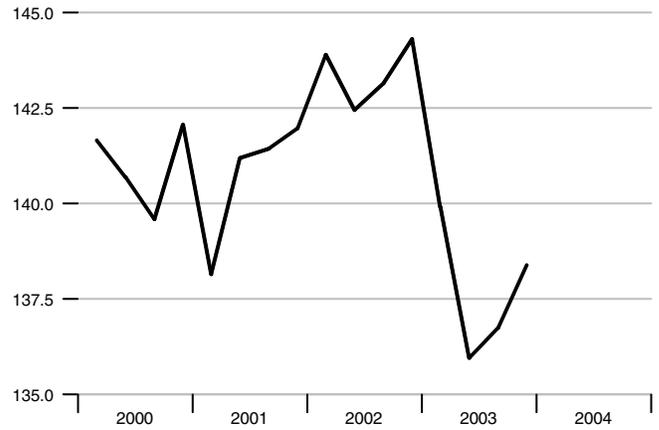
M4

Percent change from year ago



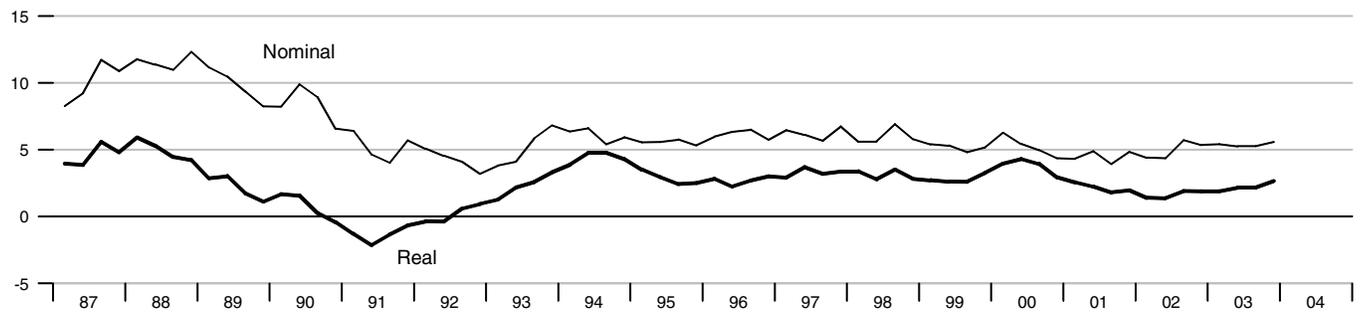
Real Effective Exchange Rate

Index 1995 = 100



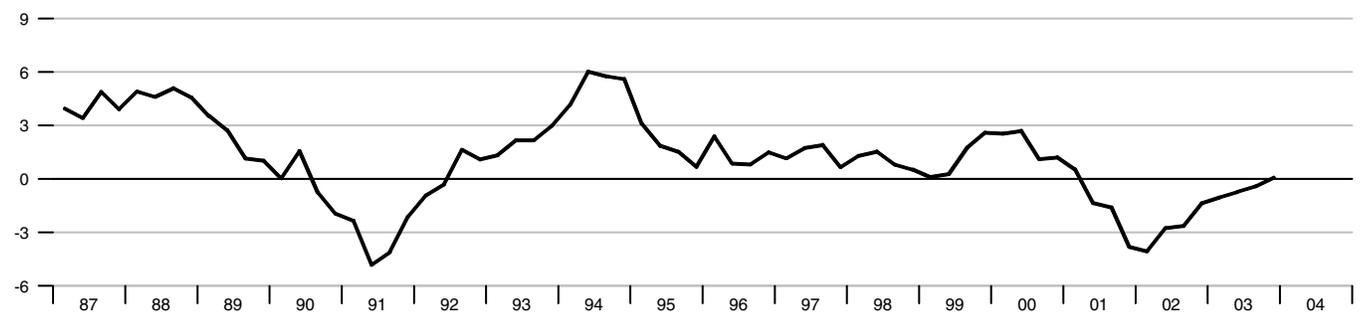
GDP

Percent change from year ago



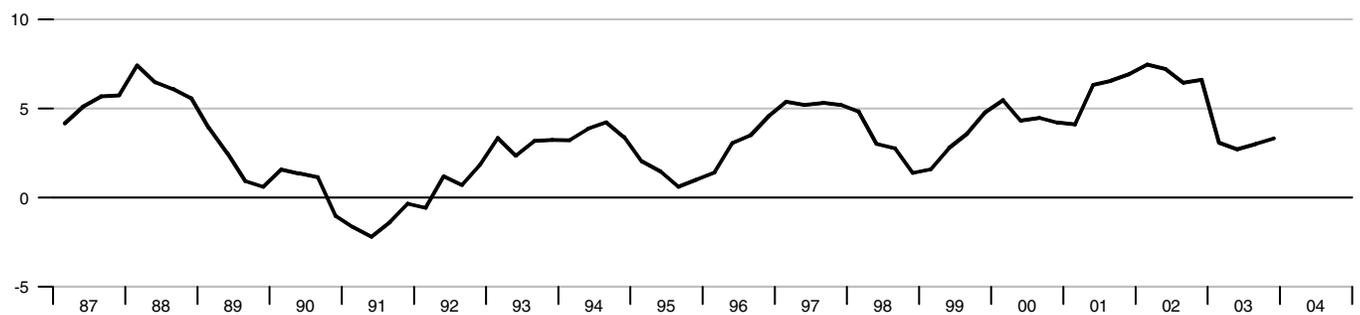
Industrial Production

Percent change from year ago



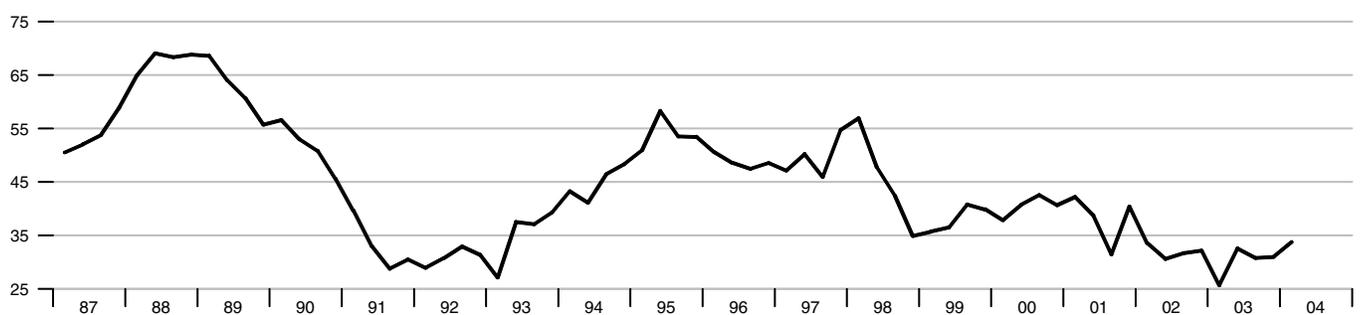
Retail Sales

Percent change from year ago



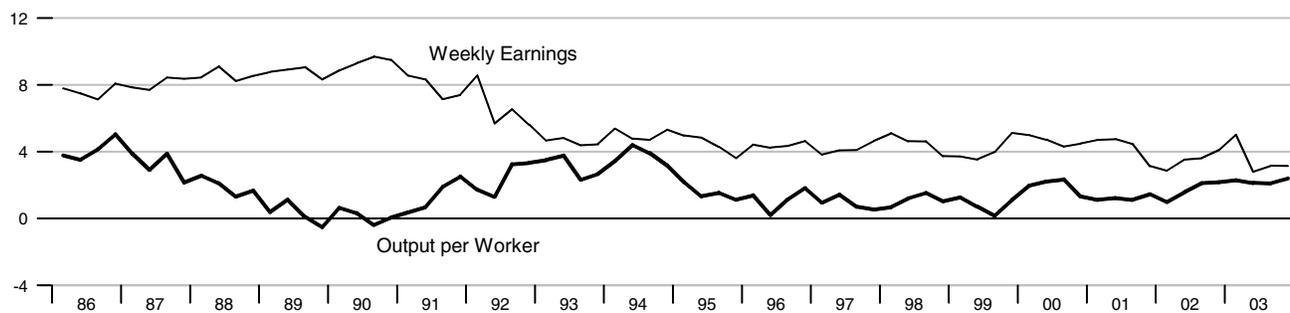
Firms Operating at Capacity

Percent



Weekly Earnings and Output per Worker

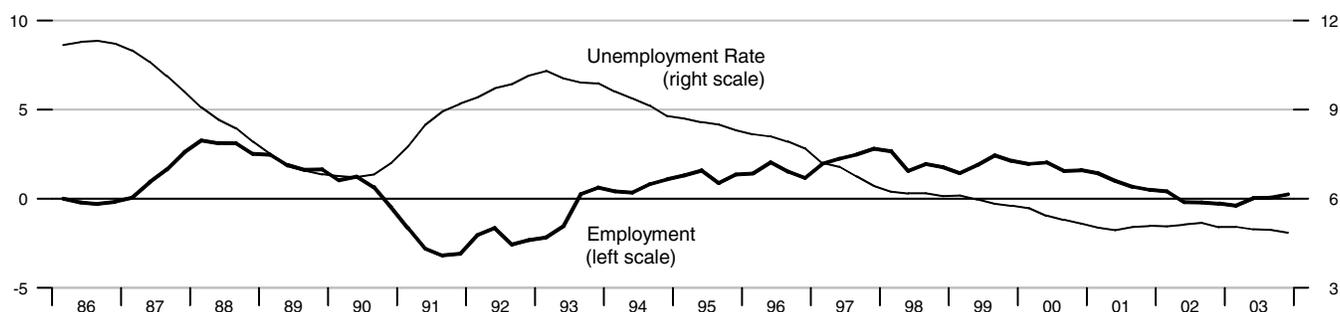
Percent change from year ago



Labor Force Indicators

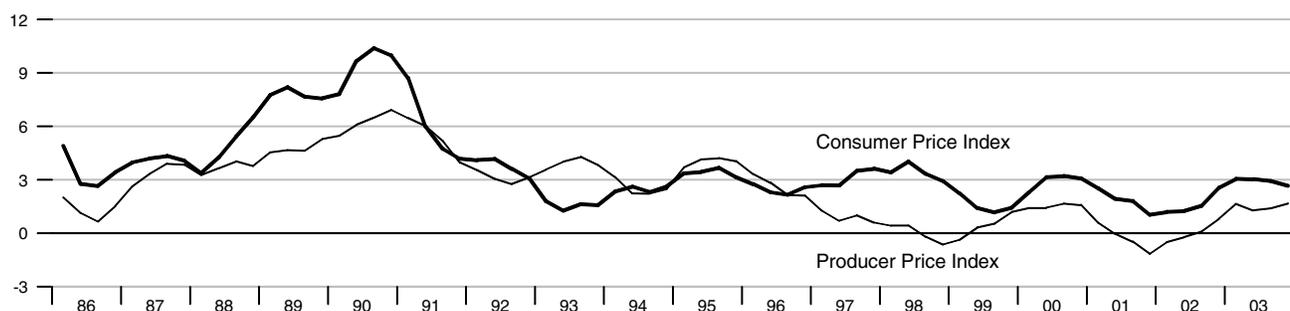
Percent change from year ago

Percent



Inflation

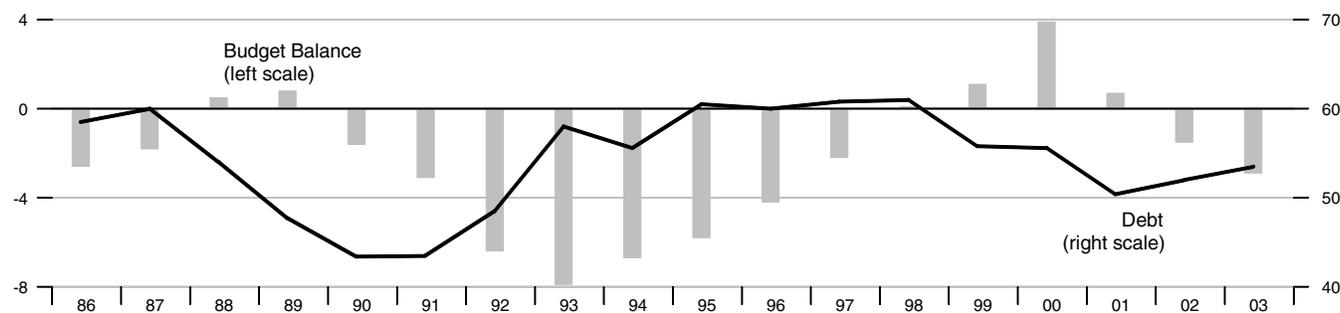
Percent change from year ago



Government Debt and Budget Balance

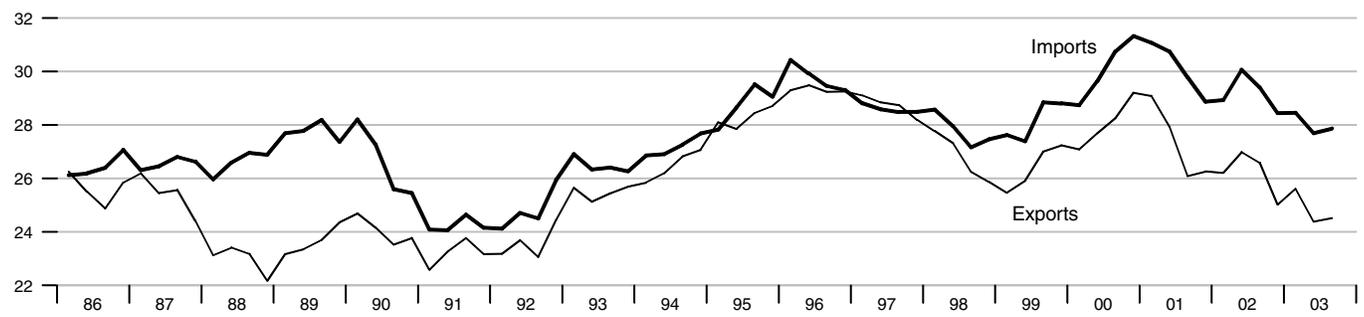
Percent of GDP, annual data

Percent of GDP, annual data



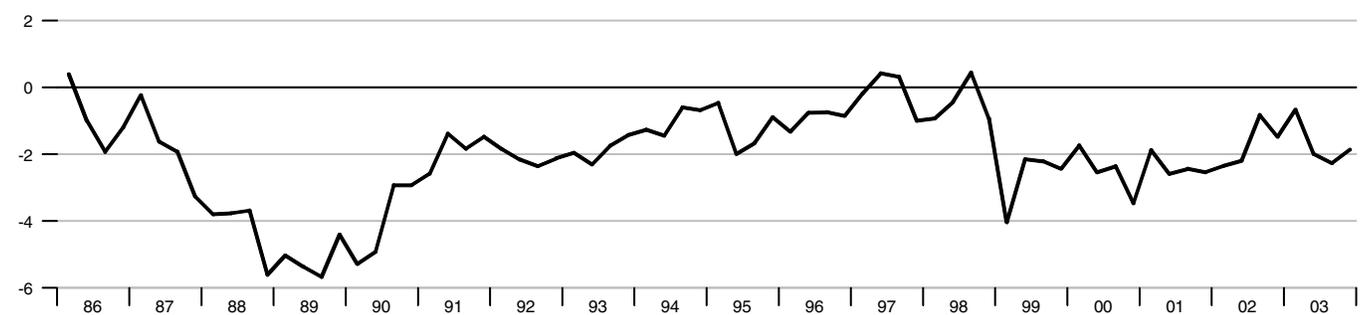
International Trade - Goods and Services

Percent of GDP



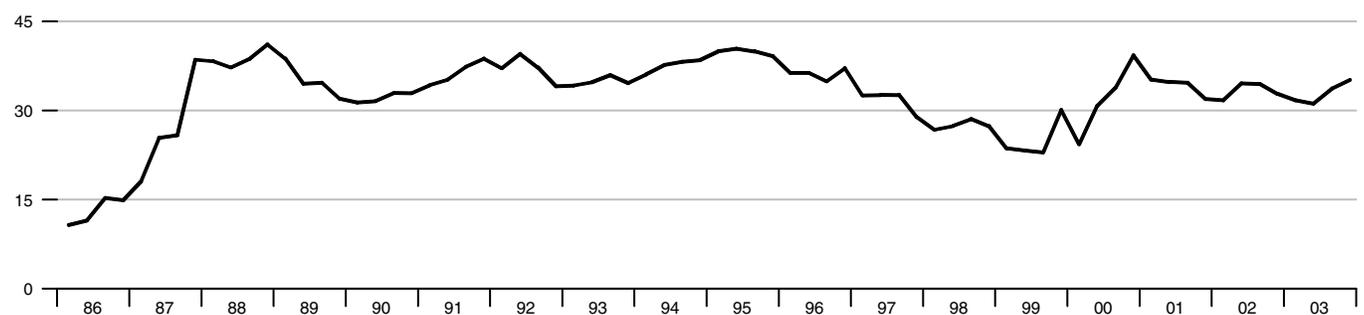
Current Account Balance

Percent of GDP



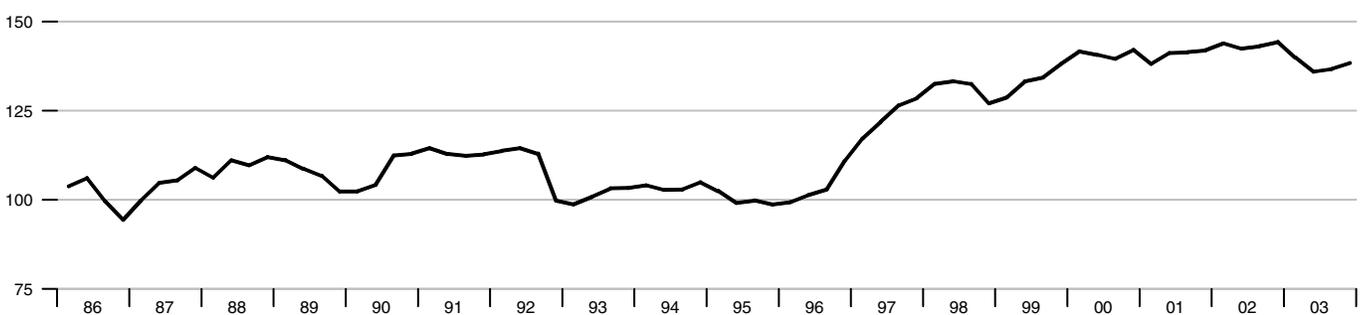
Foreign Exchange Reserves

Billions of US\$



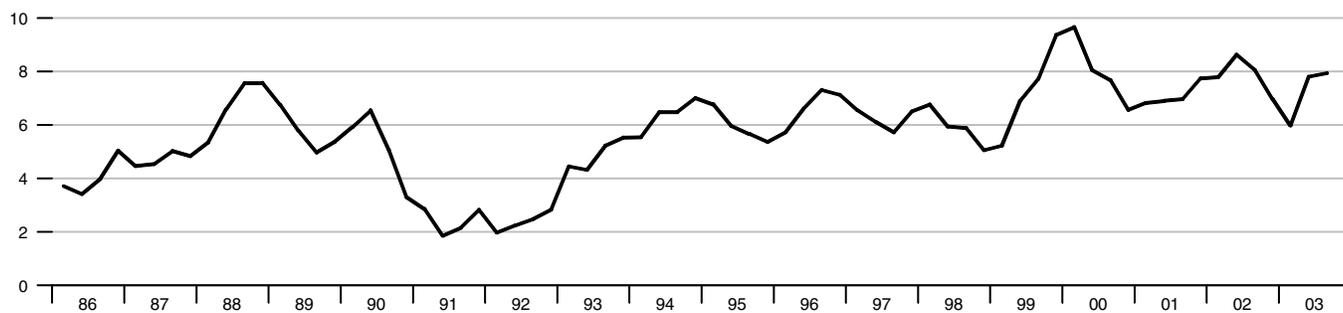
Real Effective Exchange Rate

Index 1995 = 100



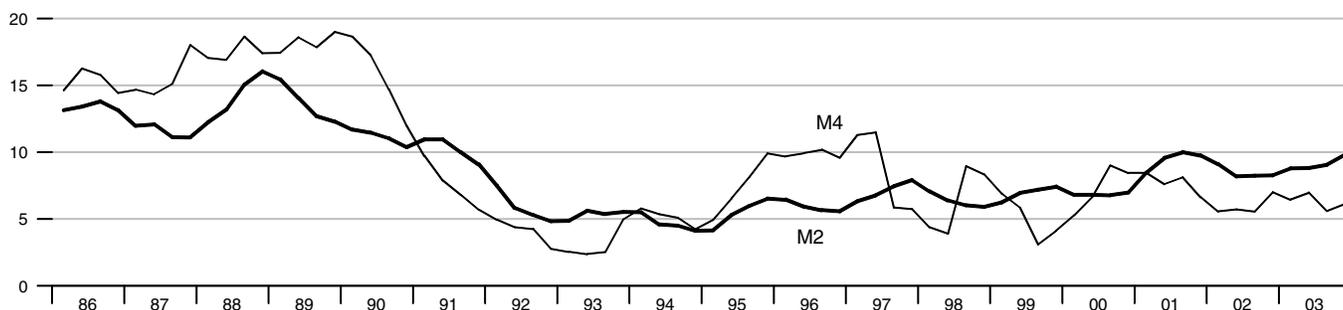
M0

Percent change from year ago



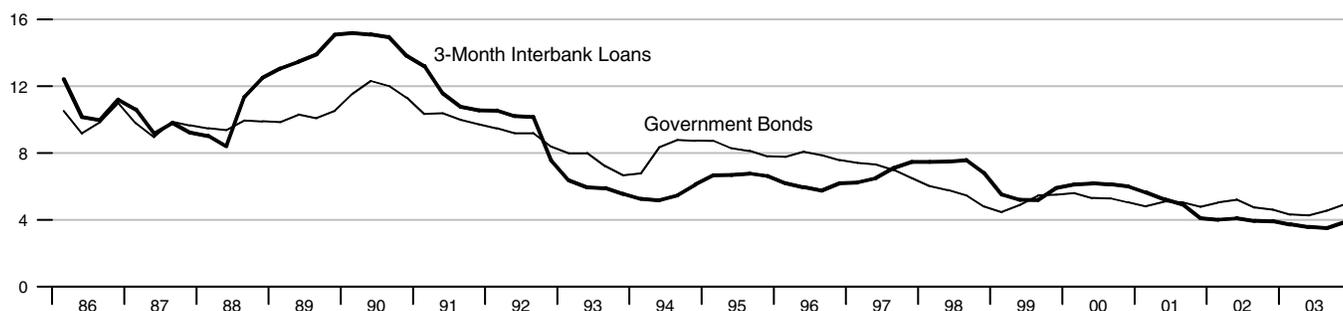
Monetary Aggregates

Percent change from year ago



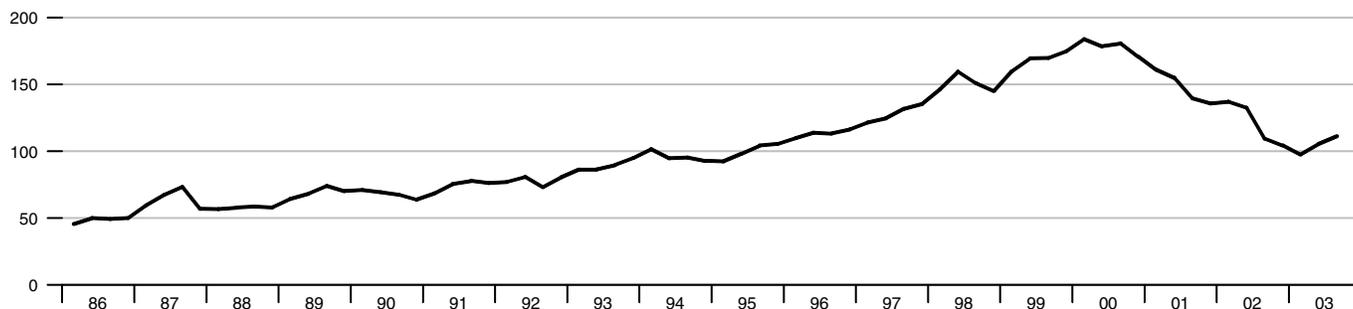
Interest Rates

Percent

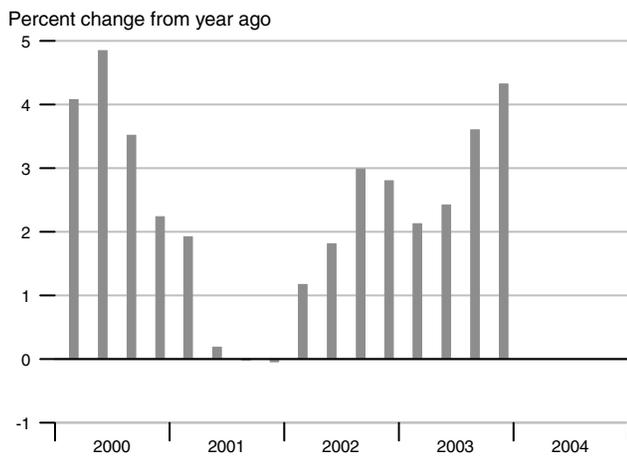


Stock Exchange Index - Financial Times Stock Exchange

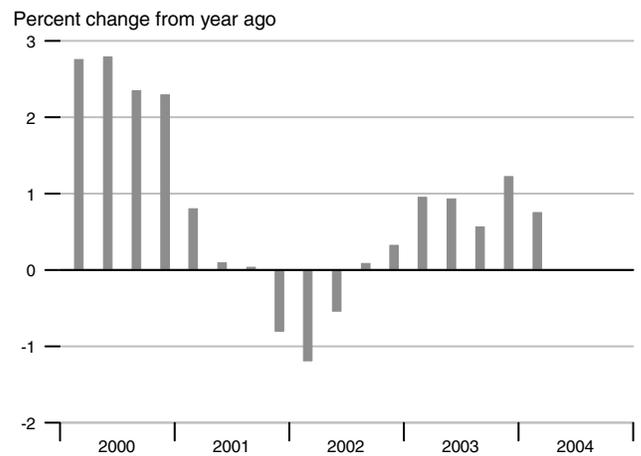
1995 = 100



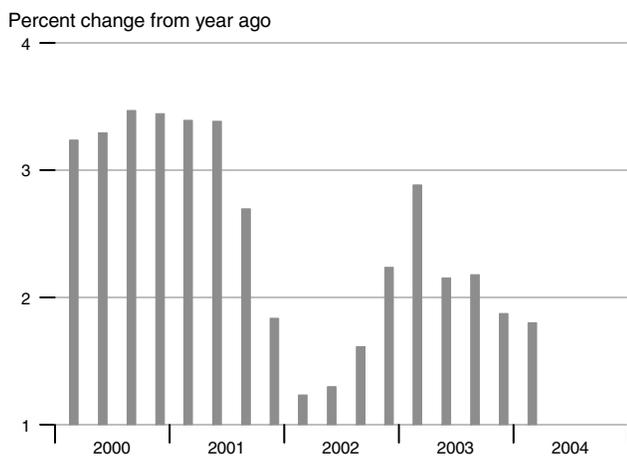
Real GDP



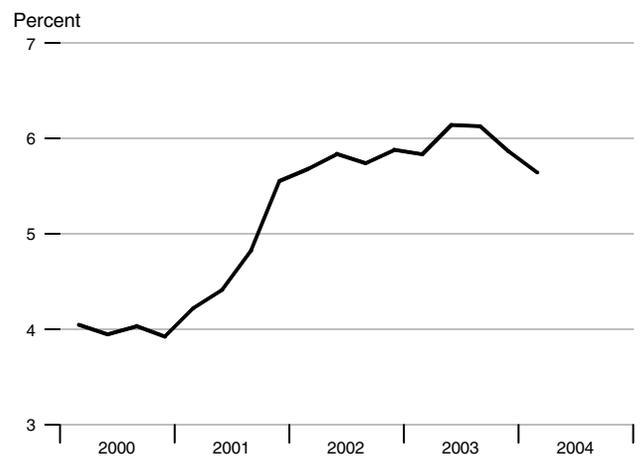
Employment



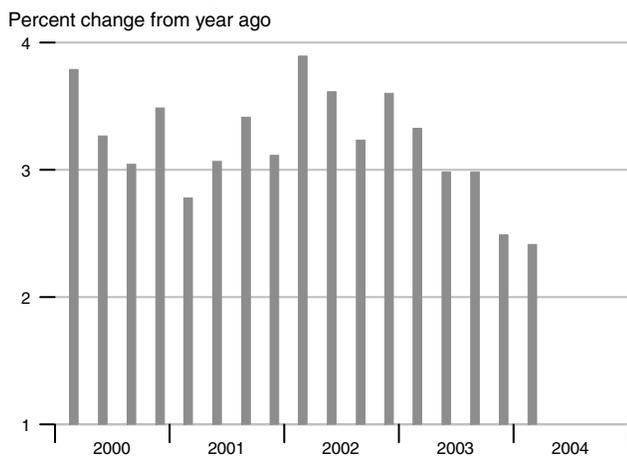
Consumer Price Index



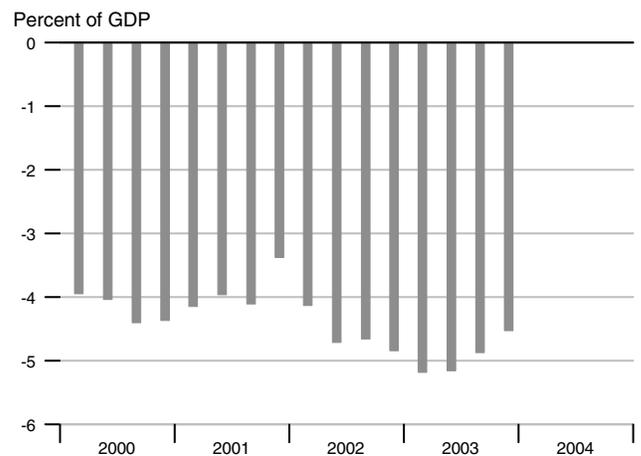
Unemployment Rate



Hourly Earnings

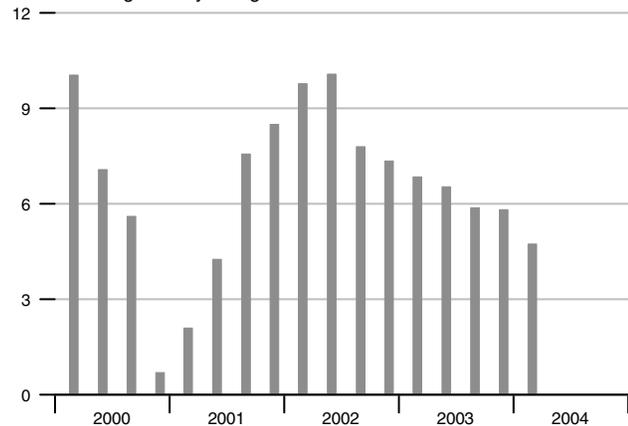


Current Account Balance



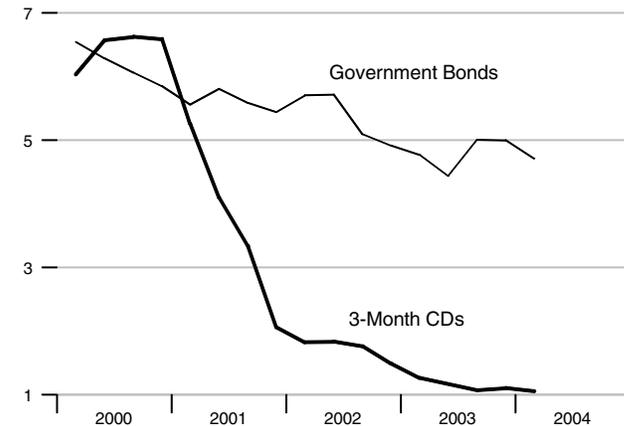
Adjusted Monetary Base

Percent change from year ago



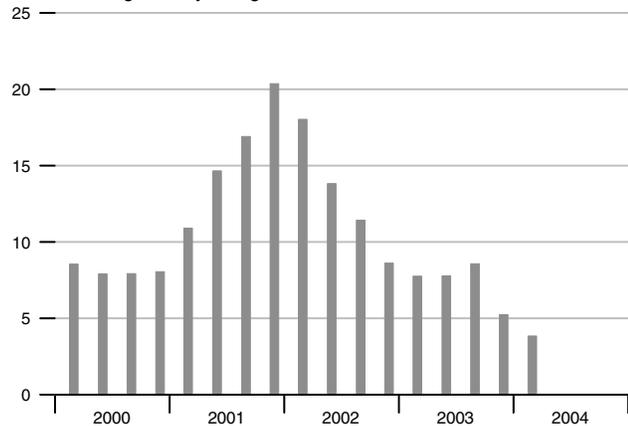
Interest Rates

Percent

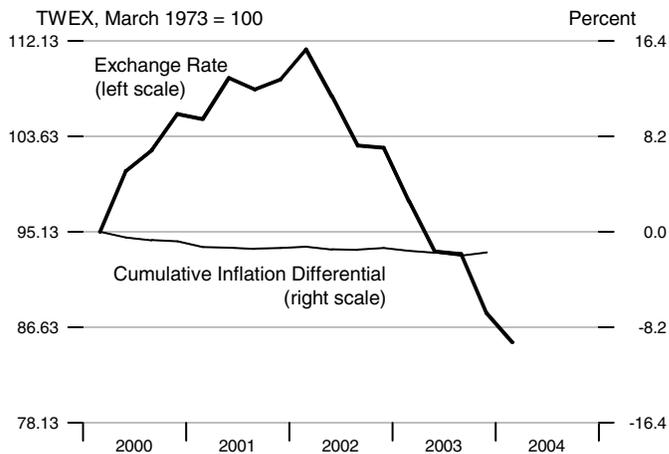


MZM

Percent change from year ago

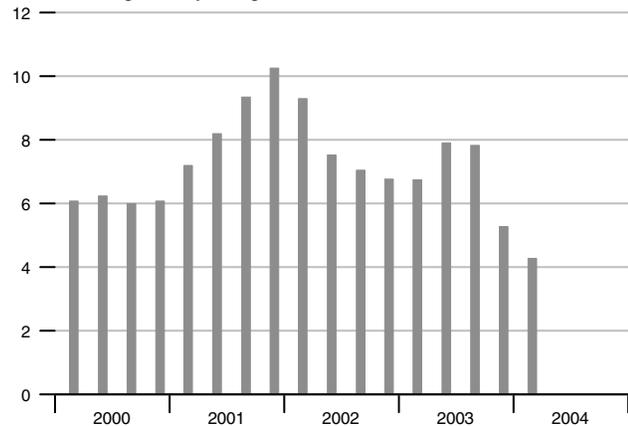


Exchange Rate and Inflation Differential



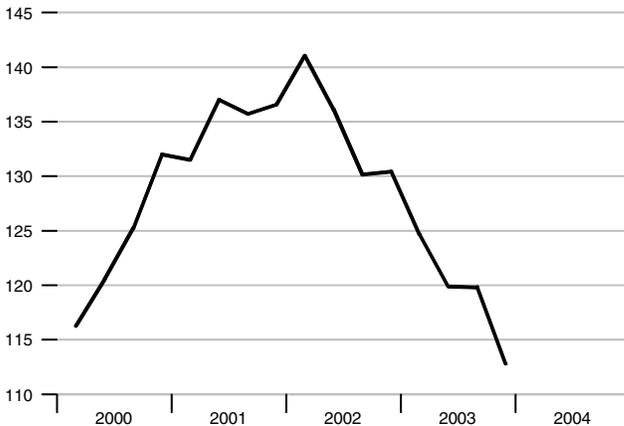
M2

Percent change from year ago



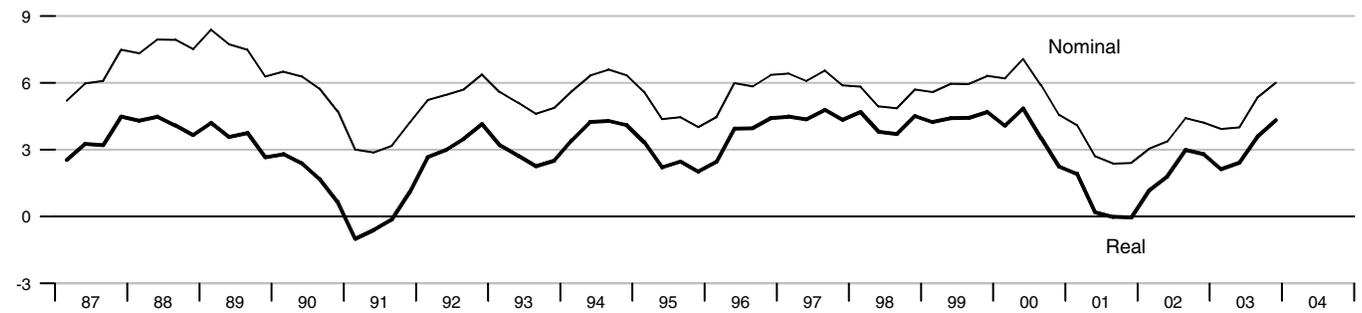
Real Effective Exchange Rate

Index 1995 = 100



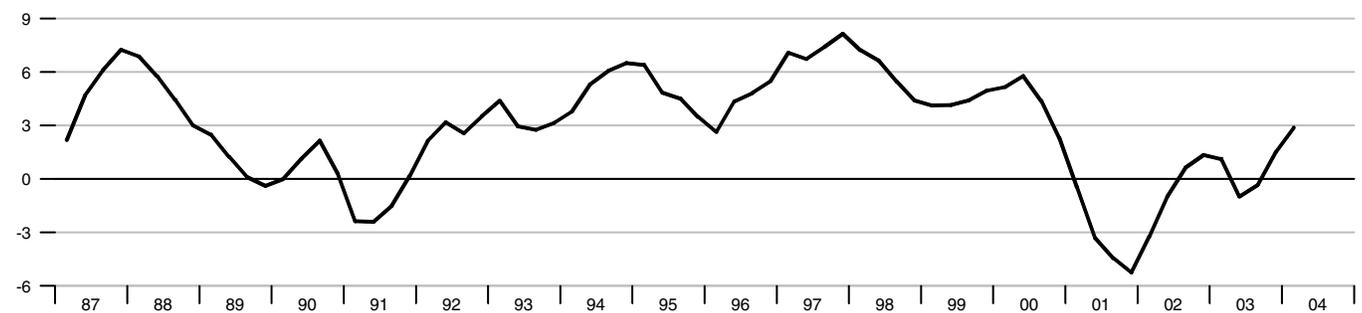
GDP

Percent change from year ago



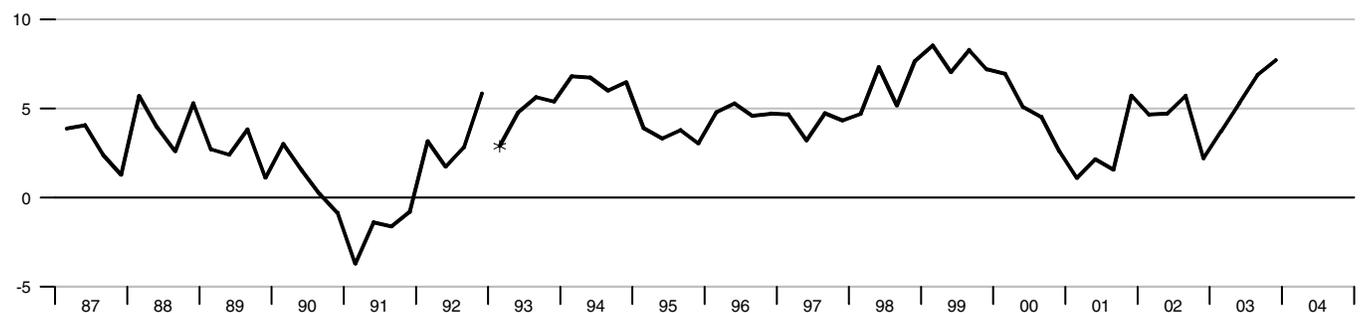
Industrial Production

Percent change from year ago



Retail Sales

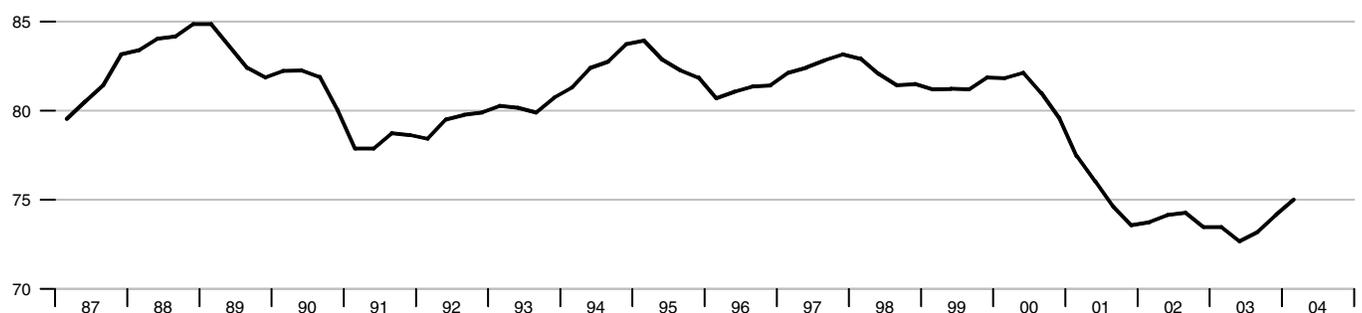
Percent change from year ago



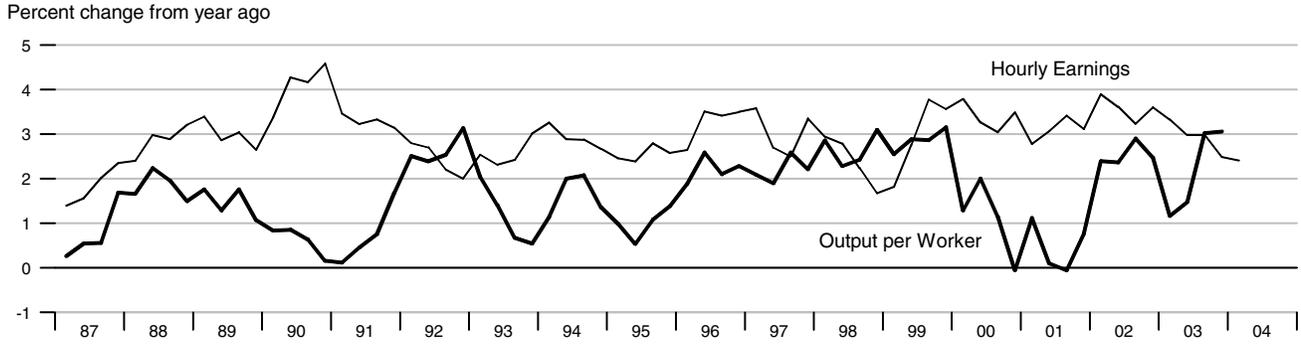
*Data prior to 1993 may not be strictly comparable with later figures (see Notes).

Capacity Utilization

Percent



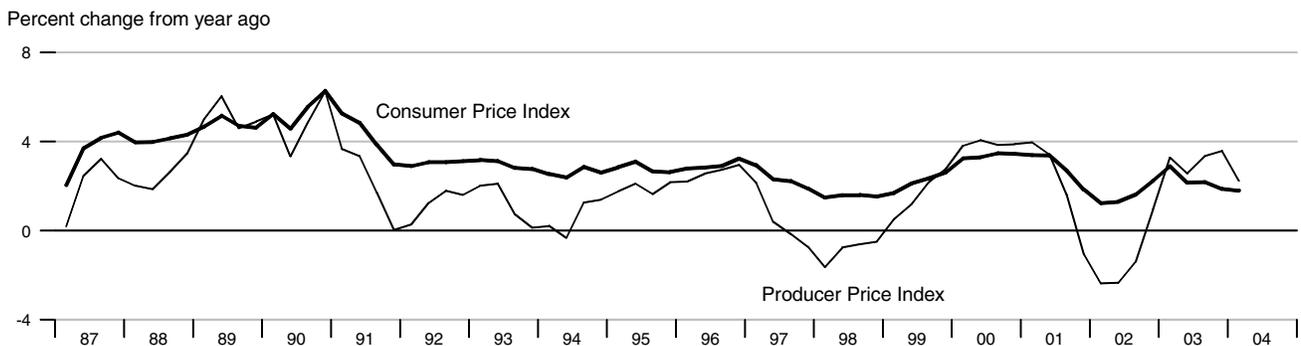
Hourly Earnings and Output per Worker



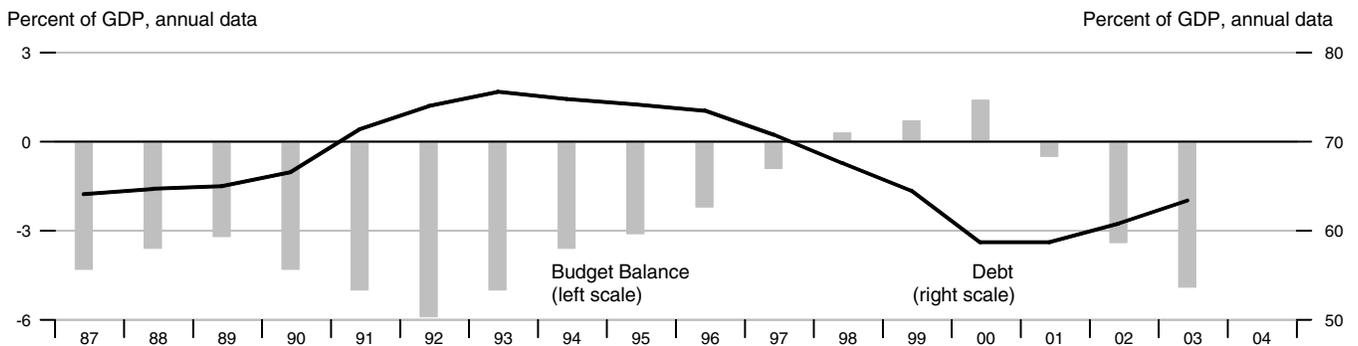
Labor Force Indicators



Inflation

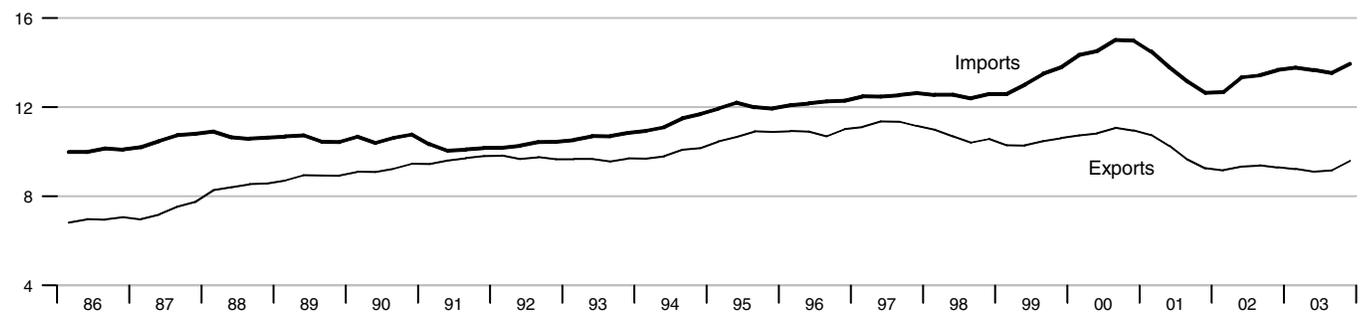


Government Debt and Budget Balance



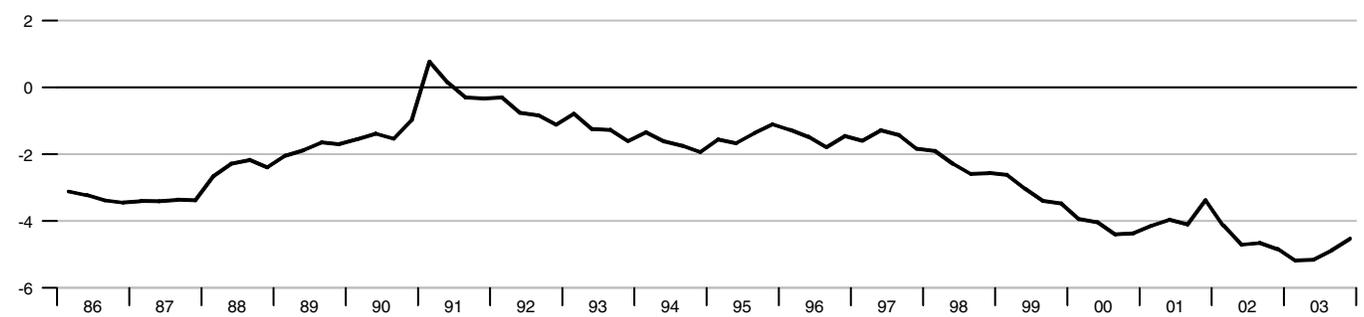
International Trade - Goods and Services

Percent of GDP



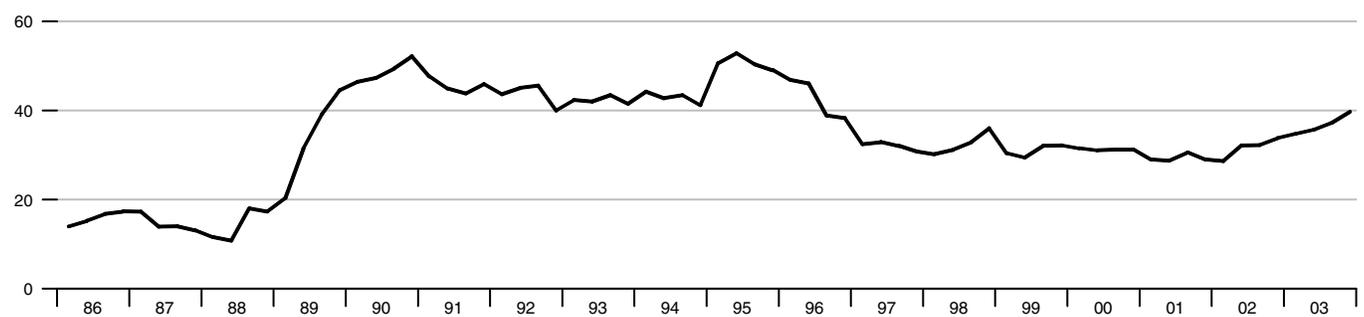
Current Account Balance

Percent of GDP



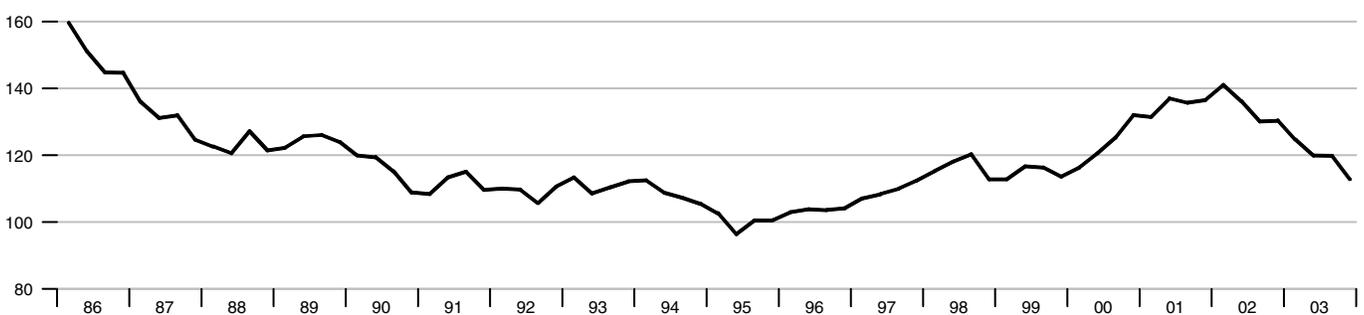
Foreign Exchange Reserves

Billions of US\$



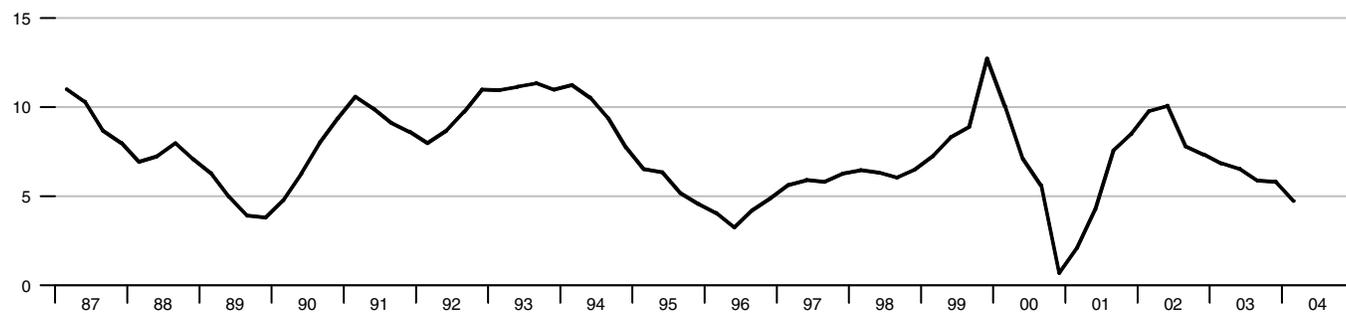
Real Effective Exchange Rate

Index 1995 = 100



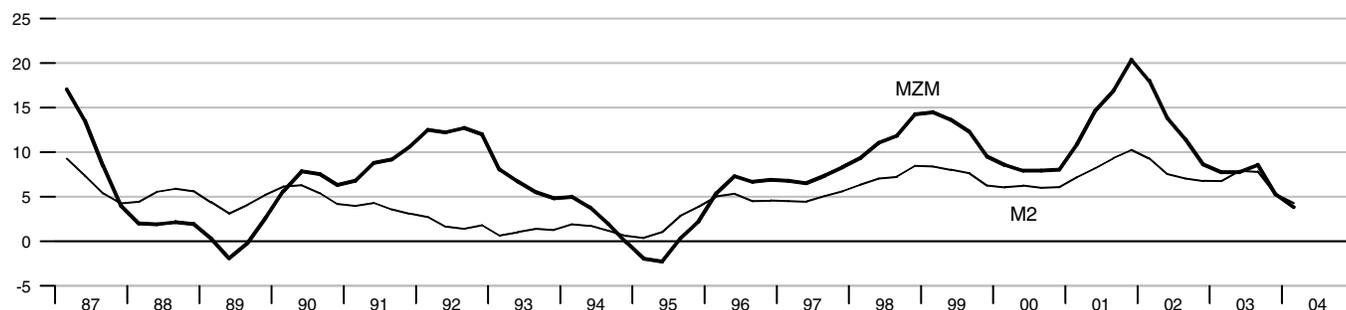
Adjusted Monetary Base

Percent change from year ago



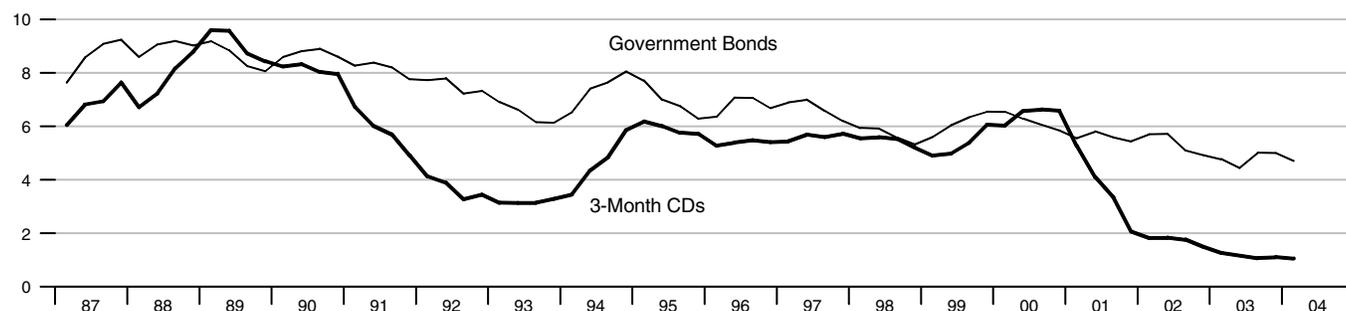
Monetary Aggregates

Percent change from year ago



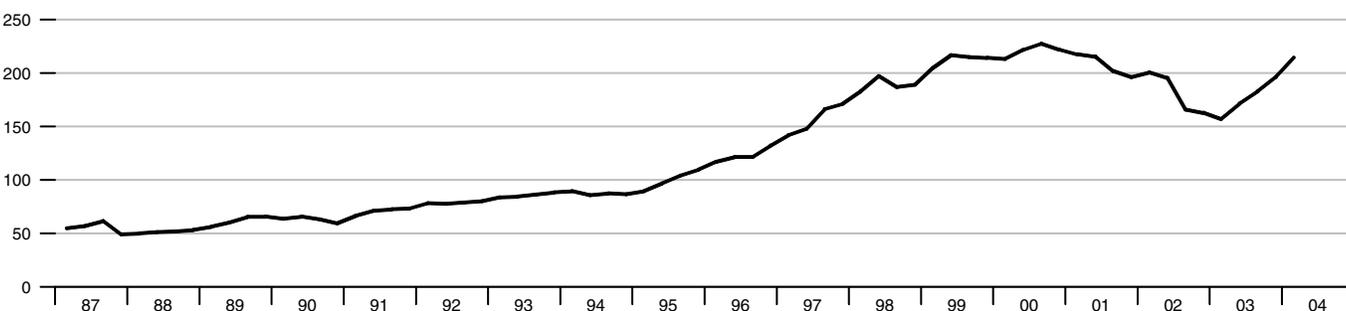
Interest Rates

Percent



Stock Exchange Index - New York Stock Exchange

1995 = 100



Notes

Euro-Area Data: On January 1, 2001, the euro area was enlarged to include Greece as its 12th member country. Historical euro area series for capacity utilization, the consumer price index, current account balance, earnings, employment, government debt and budget balance, gross domestic product (GDP), industrial production, merchandise trade, the producer price index, and unemployment include Greece. The series for interest rates, monetary aggregates, the real effective exchange rate, retail sales, and the stock exchange index incorporate Greece starting in January 2001.

Euro-area interest rates prior to December 1998 are calculated on the basis of national government yields weighted by GDP. Starting in 1999, short-term rates are euro interbank offered rates. Long-term rates are calculated on the basis of national government bond yields weighted by the nominal outstanding amounts of government bonds in each maturity band.

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

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

Third quarter 1990: current account balance, international trade, and unemployment.

First quarter 1991: consumer price index, GDP, industrial production, output per worker.

Third quarter 1992: capacity utilization.

First quarter 1993: stock exchange index.

Third quarter 1993: employment.

First quarter 1995: hourly earnings.

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

Consumer Price Index is for all items. The current index is based on goods and services consumed by all individuals for Canada; all multi-person households excluding those mainly engaged in agriculture, forestry, and fisheries for Japan; all households except pensioners dependent on state pension and high income households for the United Kingdom; and all urban households for the United States. Data for the euro area, France, Germany, and Italy are based on the harmonized index of consumer prices.

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

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

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

Real Effective Exchange Rate uses normalized unit labor costs in manufacturing. The weighting scheme used to construct the rates, for all except the euro area, is based on disaggregated data for trade among 21 industrial countries in manufactured goods for 1995. For the euro area the weights relate to the trade of the euro area with the other countries. The weights reflect the relative importance of a country's trading partners in its direct bilateral trade relations

and competition in third markets. Normalized unit labor costs in manufacturing are calculated by dividing an index of actual hourly compensation per worker by a five-year moving average index of output per man-hour.

Employment data refer to civilian employment for Canada, Germany, Italy, Japan, and the United States; industrial employment for France; and total employment for the euro area and the United Kingdom.

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

Government Budget Balance is the difference between general government current receipts and total outlays. Total outlays consist of current expenditures and net capital expenditures. **Government Debt** incorporates all financial liabilities of the general government sector. The general government sector consolidates the accounts of the central, state, local, and social security sectors.

Cumulative Inflation Differential is the cumulative change in the foreign consumer price index (CPI) over the change in the U.S. CPI, in percentage terms. The base period for the cumulative rate of change is taken to be the first period of the chart. For example, if the base period is 1999:Q1, then the cumulative inflation differential for Japan for 2003:Q3 is as follows:

$$\text{inflation differential} = 100 \cdot \left(\frac{P_{2003Q3}^J / P_{1999Q1}^J}{P_{2003Q3}^{US} / P_{1999Q1}^{US}} - 1 \right)$$

where P_{2003Q3}^J is the Japanese CPI in the third quarter of 2003. For the U.S. chart on page 41, foreign CPI is calculated as the weighted average of the CPIs of countries whose currencies are used in the major currency trade-weighted exchange rate index. Starting in 1999, the euro-area harmonized consumer price index is used for the euro area. Prior to 1999, the price levels for the individual euro area countries (excluding Greece and Luxembourg) are used. The cumulative inflation differential is shown because the theory of purchasing power parity states that exchange rate changes should be systematically positively related to this variable.

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

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

The **Long-Term Interest Rate** table on page 4 uses the government bond rate. The government bond rate is a composite of yields on federal government bonds with maturities of more than 10 years for the United States; long-term public and semi-public sector bonds for France; 7- to 15-year public sector bonds for Germany; 15- to 20-year government bonds through 1990 and 10-year government bonds starting in 1991 for Italy; and 10-year government bonds for Canada, the euro area, Japan, and the United Kingdom.

The **Reserve Money** table on page 4 refers to the adjusted monetary base for Japan and the United States; reserve money for Canada; and M0 for the United Kingdom. **Reserve Money** is currency in circulation, deposits of the deposit money banks, and demand deposits of other residents (with the exception of the central government) with the monetary authority.

Adjusted Monetary Base

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

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

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, 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 U.K. banks and building societies.
 United States: MZM less institutional money market mutual funds plus small denomination (less than \$100,000) time deposits.

M2 + CDs

Japan: M1 plus private deposits, public deposits less demand deposits, and certificates of deposit.

M3

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

M4

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

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

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

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

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

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

Sources

Abbreviations

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

Canada

Bank of Canada: 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 balance.
 OECD2: capacity utilization, consumer price index, current account balance, GDP, hourly earnings, industrial production, interest rates, producer price index, retail sales, stock exchange index, and unemployment rate.
 Statistics Canada: employment.

Euro Area

European Central Bank: current account balance and employment.
 Eurostat: capacity utilization, consumer price index, GDP, interest rates, merchandise trade, producer price index, and retail sales.

Haver Analytics: synthetic euro exchange rate.

IMF: real effective exchange rate.

OECD1: government debt and budget balance.

OECD2: hourly earnings, industrial production, M1, M3, stock exchange index, and unemployment.

France

BOG: exchange rate.

Eurostat: capacity utilization, consumer price index, producer price index, and retail sales (starting in 1996).

IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.

Institut National de la Statistique et des Etudes Economiques: employment.

OECD1: government debt and budget balance.

OECD2: current account balance, GDP, hourly earnings, industrial production, retail sales (prior to 1996), interest rates, stock exchange index, and unemployment.

Germany

BOG: exchange rate.

Bundesanstalt Fur Arbeit: employment.

Eurostat: capacity utilization, consumer price index, and producer price index.

IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.

OECD1: government debt and budget balance.

OECD2: current account balance, GDP, hourly earnings, industrial production, M1, M3, retail sales, interest rates, stock exchange index, and unemployment.

Italy

BOG: exchange rate.

Eurostat: capacity utilization, consumer price index, and producer price index.

IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.

Instituto Nazionale di Statistica: employment.

OECD1: government debt and budget balance.

OECD2: current account balance, GDP, hourly earnings, industrial production, long-term interest rates, retail sales, stock exchange index, and unemployment.

Japan

Bank of Japan: adjusted monetary base and long-term interest rate.

BOG: exchange rate.

IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.

OECD1: government debt and budget balance.

OECD2: capacity utilization, consumer price index, current account balance, employment, GDP, hourly earnings, industrial production, M1, M2, producer price index, retail sales, short-term interest rate, stock exchange index, and unemployment.

United Kingdom

Bank of England: M2.

BOG: exchange rate.

IMF: foreign exchange reserves, merchandise and service trade, and real effective exchange rate.

OECD1: government debt and budget balance.

OECD2: capacity utilization, consumer price index, current account balance, GDP, industrial production, interest rates, M4, producer price index, retail sales, stock exchange index, unemployment, and weekly earnings.

U.K. Office for National Statistics: employment and M0.

United States

BOG: capacity utilization, exchange rate, industrial production index, M2, and interest rates.

BEA: GDP, current account balance, merchandise and service trade, and retail sales.

BLS: employment, consumer price index, and producer price index.

Federal Reserve Bank of St. Louis: adjusted monetary base and MZM.

IMF: foreign exchange reserves and real effective exchange rate.

OECD1: government debt and budget balance.

OECD2: hourly earnings, stock exchange index, and unemployment.

Dear Customer,

Beginning in 2005, *International Economic Trends* will be available only in electronic form on our website at research.stlouisfed.org/publications/iet/. Printed copies will continue to be mailed to all current subscribers through the November 2004 issue. Our website provides the full text of all our publications free of charge. (Please note: Subscriptions to the printed version of *International Economic Trends* included both the quarterly and annual editions, but the annual edition is a separate publication on our website: research.stlouisfed.org/publications/aiet/.)

We also encourage you to take advantage of our email notification system—a timely and flexible way to receive updates for *International Economic Trends*. To learn more about these free email notifications, please read “How to Register for Email Notifications” on the next few pages. If you have additional questions about your *International Economic Trends* subscription, please contact us at stlsFRED@stls.frb.org; (314) 444-8590; or (800)-333-0810, ext. 44-8590.

Sincerely,

Research Division
Federal Reserve Bank of St. Louis

How to Register for *International Economic Trends* Email Notifications

To receive email notifications when *International Economic Trends* is updated, users must first register for a user account on the research.stlouisfed.org website. All email accounts are secure, and no information is shared with any third parties. (Go to research.stlouisfed.org/privacy.html for our “Privacy Policy.”) If you already have a user account, please skip over the next section (“How to Create a User Account”) and go directly to Step 4, “Signing up for *International Economic Trends* Email Notifications.”

• How to Create a User Account

STEP 1

Please go to research.stlouisfed.org/useraccount/register and enter your email address and your new password. Click the button “Continue, using our secure server” to proceed to the next step.

STEP 2

After Step 1 is complete, the research.stlouisfed.org website will email an account registration notification to the email address that you provided in Step 1. Open this message and please click one of the url addresses provided in the email to proceed to Step 3. (Please note: the url addresses that you receive in your email will be different from the screenshot below.)

ECONOMIC RESEARCH
Federal Reserve Bank of St. Louis
Advancing Economic Knowledge Through Research and Data

Welcome (My Account - Email Notifications | Data Lists | Log In | Help) About | Contact Us | Privacy | Legal

Home > My Account > Register User Account: Step 1 of 3

Search
Economic Research
Go ▶

Economic Research
Economic Data - FRED II
Publications
Working Papers
Economists
Conferences & Lectures
Seminar Series
Job Opportunities
Monetary Aggregates
Regional Economics
Tips of the Month

St. Louis Fed
Home
About the Fed
Banking Information
Community Development
Consumer Information
Education Resources
Financial Services
News and Events
Publications
Speeches by the St. Louis Fed President

Register User Account: Step 1 of 3

Step 1. Complete the form on this page. Asterisks indicate required fields.
Step 2. Wait for a confirmation email to arrive.
Step 3. Visit a link in the confirmation email to verify access to your email address.

Would you like to learn more about user accounts?

First Name: _____ **Last Name:** _____

Email Address:* _____

Enter a New Password:*
(Passwords must be between 4 and 16 characters.)

Retype Password:* _____

If you experience problems using our secure server, you can register a user account using our standard server instead. Note: Our standard server does not encrypt your information.

Questions/Comments? Contact webmaster@research.stlouisfed.org ▲ Top of Page

Thank you for registering with research.stlouisfed.org, the St. Louis Fed's Economic Research web site. In order to activate your account, please visit the following web page on our secure server:

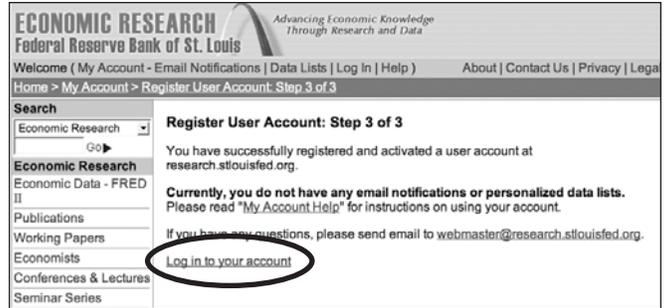
<https://research.stlouisfed.org/useraccount/register/step3/> _____

If you experience problems using our secure server, you can use our standard server instead by visiting the following web page:

<http://research.stlouisfed.org/useraccount/register/step3/> _____

STEP 3

You should receive a message indicating that you have registered and activated a user account at research.stlouisfed.org. Please click on the “Log in to your account” link to sign up for *International Economic Trends* email notifications.



• **Signing up for *International Economic Trends* Email Notifications**

STEP 4

Please be sure to log in to your user account before proceeding to Step 5.

To log in, please visit the research.stlouisfed.org website and click the “Log In” link, which is on the masthead of each page on the site.

Users can also log in to their user account by visiting research.stlouisfed.org/useraccount/login directly.

Please enter your email address and password in the appropriate fields and click the button labeled “Log in using our secure server.”



STEP 5

Please go to the Publications index page. This index page can be reached by clicking the “Publications” link on the left-hand side of all research.stlouisfed.org pages.

Click on the “Email Notifications” link that is listed right below the *International Economic Trends* header.

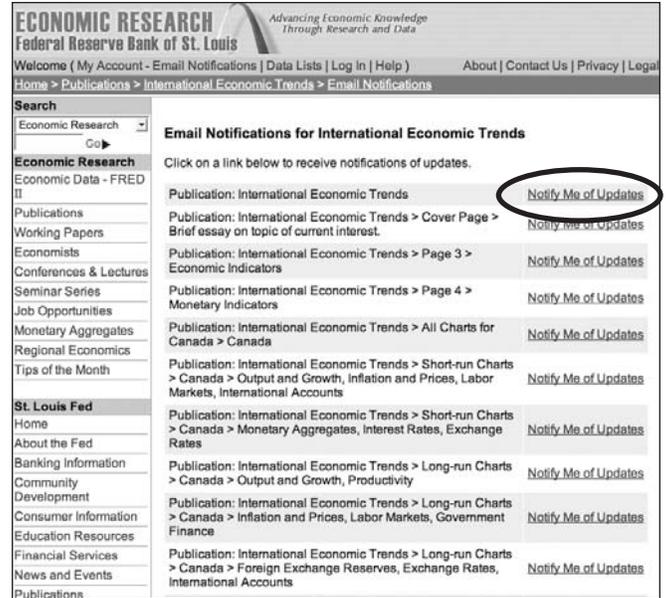
(The instructions in steps 5 and 6 refer to the standard edition; notifications for the annual edition can be obtained in the same way.)



STEP 6

You now should have reached the index page that lists every email notification for *International Economic Trends*. To receive an email notification when a particular *International Economic Trends* item is updated, please click the “Notify Me of Updates” listed right across from that particular *International Economic Trends* item. For example, if you want to receive an email notification when a new issue of *International Economic Trends* is available, please click the first “Notify Me of Updates” link listed on the page.

If you would like to receive additional *International Economic Trends* email notifications, either hit the “Back” button on your web browser or repeat Step 5 under “Signing up for *International Economic Trends* Email Notifications.” Then click “Notify Me of Updates” for the additional *International Economic Trends* item you want to receive through email notification.



• Revising Your Email Notifications

While you are logged in to your account, click on “Email Notifications” on the masthead of any page. Your current email notifications will appear, along with a “Remove” option for each notification. Click the “Remove” link to delete a notification from your account.

