



4.16 Monetary indicators and prices

	Money and quasi money		Claims on private sector		Claims on governments and other public entities		GDP implicit deflator		Consumer price index		Food price index	
	annual % growth of M2		annual growth as % of M2		annual growth as % of M2		average annual % growth		average annual % growth		average annual % growth	
	1990	1998	1990	1998	1990	1998	1980-90	1990-98	1980-90	1990-98	1980-90	1990-98
Albania	..	20.6	..	0.9	..	17.7	-0.4	51.5	..	37.0	..	40.4
Algeria	11.4	18.9	12.2	1.9	3.2	10.9	8.1	21.1	9.1	24.8	6.8	23.5
Angola	..	57.6	..	-0.1	..	69.4	5.9	924.3	..	994.2	..	1,216.9
Argentina	1,113.3	10.5	1,444.7	9.5	1,573.2	0.1	391.1	7.8	390.6	12.9	206.9	15.2
Armenia	..	38.2	..	47.9	..	8.5	..	349.1	..	140.7	..	..
Australia	12.8	8.4	15.3	14.0	-2.2	1.0	7.3	1.7	7.9	2.2	7.4	2.5
Austria ^a	..	..	..	..	..	..	3.3	2.5	3.2	2.6	2.6	1.8
Azerbaijan	..	-17.4	..	6.6	..	-3.1	..	322.3	..	1,005.8	1.5	339.5
Bangladesh	10.4	11.4	9.2	10.0	-0.7	3.6	9.5	3.6	..	5.4	10.4	4.3
Belarus	..	276.0	..	143.6	..	63.9	..	449.9	..	455.3	2.4	485.9
Belgium ^a	..	..	..	..	..	..	4.4	2.3	4.2	2.1	4.0	0.9
Benin	28.6	-3.1	-1.3	9.7	12.4	-8.8	1.7	10.1	..	11.6	..	8.2
Bolivia	52.8	12.9	40.8	25.4	8.4	5.1	327.2	9.9	322.5	10.0	322.0	10.4
Bosnia and Herzegovina	..	..	..	..	..	..	..	..	..	..	..	..
Botswana	-14.0	39.4	12.6	16.7	-52.5	-89.8	13.6	10.3	10.0	11.3	10.7	12.0
Brazil	1,289.2	10.0	1,566.4	13.6	2,815.8	14.9	284.0	347.4	285.6	333.7	238.2	327.6
Bulgaria	53.8	10.1	1.9	10.1	47.5	-19.7	1.8	116.9	6.3	138.9	..	148.6
Burkina Faso	-0.5	1.4	3.6	5.0	-1.5	-0.2	3.3	6.6	1.0	6.7	-0.5	5.4
Burundi	10.4	9.4	16.3	4.4	-8.1	18.9	4.4	11.8	7.1	16.0	6.1	6.7
Cambodia	..	15.7	..	1.7	..	11.7	..	32.8	..	7.0	..	6.8
Cameroon	-1.7	7.8	0.9	11.7	-1.9	-3.2	5.6	6.1	8.7	8.6	..	..
Canada	7.8	2.3	9.2	1.8	0.6	-1.3	4.5	1.4	5.3	1.7	4.6	1.5
Central African Republic	-3.7	-16.1	-1.6	3.2	-5.0	1.1	7.9	5.4	3.2	6.7	2.0	7.8
Chad	-2.4	-8.4	-1.3	4.3	-6.0	-4.0	1.4	8.3	0.6	9.5	..	9.6
Chile	23.5	9.6	21.4	12.5	9.1	0.8	20.7	9.3	20.6	10.5	20.8	10.3
China	28.9	14.9	26.5	13.6	1.5	3.7	5.9	9.7	..	11.3	..	..
Hong Kong, China	8.5	11.1	7.9	-6.2	-1.0	-8.4	7.7	6.4	..	7.7	6.8	6.2
Colombia	33.0	20.9	8.7	25.7	1.7	6.8	24.8	21.5	22.7	22.6	24.5	20.2
Congo, Dem. Rep.	195.4	..	18.0	..	421.6	..	62.9	1,423.1	57.1	2,089.0	..	..
Congo, Rep.	18.5	-12.8	5.1	2.7	-9.1	8.7	0.5	7.1	6.1	14.8	4.1	10.2
Costa Rica	27.5	26.3	7.3	25.2	5.0	6.7	23.6	17.6	23.0	16.9	23.0	14.7
Côte d'Ivoire	-2.6	7.1	-3.9	2.8	-3.0	3.6	2.8	8.7	5.4	8.5	..	..
Croatia	..	13.0	..	20.8	..	1.0	..	131.2	304.1	132.4	246.3	130.0
Cuba	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	..	3.4	..	-2.2	..	0.6	2.6	13.7	..	9.2	..	15.9
Denmark	6.5	3.3	3.0	6.9	-3.1	0.2	5.6	1.6	5.5	2.0	4.8	1.9
Dominican Republic	42.5	16.6	19.1	13.3	0.6	1.1	21.6	10.6	22.4	9.6	25.2	11.7
Ecuador	101.6	43.3	46.7	46.2	-25.7	13.2	36.4	32.0	35.8	33.9	43.0	33.7
Egypt, Arab Rep.	28.7	10.8	6.3	14.1	15.2	4.9	13.7	9.7	17.4	10.5	19.0	8.3
El Salvador	32.4	10.5	8.8	12.2	13.6	-10.1	16.3	8.9	19.6	10.6	21.4	12.5
Eritrea	..	..	..	..	..	..	..	10.1	..	..	..	..
Estonia	71.1	6.6	27.6	9.7	-2.2	6.3	2.3	75.4	..	30.1	..	72.1
Ethiopia	18.5	-2.8	-1.0	3.6	21.7	4.8	4.6	8.0	4.0	6.9	3.7	6.5
Finland ^a	..	..	..	..	..	..	6.8	1.7	6.2	1.6	5.8	-1.0
France ^a	..	..	..	..	..	..	6.0	1.7	5.8	1.9	5.7	1.1
Gabon	3.3	-1.8	0.7	3.3	-19.2	25.4	1.8	7.2	5.1	5.7	2.8	5.1
Gambia, The	8.4	10.2	7.8	5.4	-35.4	0.6	17.9	4.4	20.0	4.6	20.4	5.0
Georgia	..	-1.1	..	25.4	..	27.9	1.9	709.3	..	-1.7	..	..
Germany ^a	..	..	..	..	..	..	..	2.2	2.2 ^b	2.6	..	1.8
Ghana	13.3	26.1	4.9	18.4	3.9	17.1	42.1	28.6	39.1	30.4	33.1	27.5
Greece	14.3	6.7	4.6	16.3	16.3	-1.9	18.0	11.0	18.7	10.7	18.0	11.2
Guatemala	25.8	19.4	15.0	19.6	0.5	-14.0	14.6	11.4	14.0	11.4	14.6	11.5
Guinea	-17.4	18.2	13.1	-0.3	7.3	-9.1	..	6.7	..	..	..	9.1
Guinea-Bissau	65.3	48.4	57.4	8.8	98.1	21.0	57.4	41.8	..	41.9	..	..
Haiti	2.5	8.9	-0.6	4.1	2.2	2.9	7.5	23.3	5.2	24.8	4.1	19.2
Honduras	21.4	23.2	13.0	28.6	-10.5	-12.2	5.7	20.6	6.3	20.0	5.1	21.6



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	Money and quasi money		Claims on private sector		Claims on governments and other public entities		GDP implicit deflator		Consumer price index		Food price index	
	annual % growth of M2		annual growth as % of M2		annual growth as % of M2		average annual % growth		average annual % growth		average annual % growth	
	1990	1998	1990	1998	1990	1998	1980-90	1990-98	1980-90	1990-98	1980-90	1990-98
Hungary	29.2	..	22.8	..	2.3	..	8.9	22.0	9.6	22.7	9.5	22.6
India	15.1	18.2	5.9	7.6	10.5	7.3	8.0	8.9	8.6	9.7	8.4	10.3
Indonesia	44.6	63.5	66.9	36.5	-6.7	6.7	8.5	12.2	8.3	11.2	8.6	9.6
Iran, Islamic Rep.	18.0	20.4	14.7	9.4	5.8	21.3	14.4	28.3	18.2	28.1	16.3	29.2
Iraq	..	..	..	..	..	..	10.3	..	..	..	..	..
Ireland ^a	..	..	..	..	..	..	6.6	2.0	6.8	2.2	10.5	2.2
Israel	19.4	11.1	18.5	16.5	4.9	-6.1	101.1	11.0	101.7	11.1	102.4	9.1
Italy ^a	..	..	..	..	..	..	10.0	4.4	9.1	4.2	8.2	3.6
Jamaica	21.5	7.7	12.5	15.9	-15.1	8.2	18.6	29.1	15.1	29.2	16.2	32.9
Japan	8.2	4.2	9.7	0.8	1.5	2.2	1.7	0.2	1.7	1.0	1.6	0.8
Jordan	8.3	6.3	4.7	5.4	1.0	7.1	4.3	3.3	5.7	4.1	4.7	4.5
Kazakhstan	..	-14.1	..	16.1	..	9.3	..	330.7	..	120.3	..	338.5
Kenya	20.1	2.3	8.0	0.3	20.6	3.3	9.1	15.8	11.1	18.8	..	19.4
Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
Korea, Rep.	17.2	27.0	36.1	12.0	-1.2	6.0	6.1	6.4	4.9	5.6	5.0	5.8
Kuwait	0.7	-0.8	3.3	6.3	-3.1	-0.3	-2.8	..	2.9	2.1	1.2	2.9
Kyrgyz Republic	..	17.5	..	18.1	..	11.6	..	157.8	..	..	..	84.7
Lao PDR	7.8	113.3	3.6	60.9	-0.5	-2.0	..	16.3	..	17.2	..	..
Latvia	..	6.8	..	21.1	..	-2.3	0.0	71.1	..	41.8	..	45.9
Lebanon	55.1	16.1	27.6	9.5	18.5	10.8	..	24.0	75.5	36.8	..	..
Lesotho	8.4	20.6	6.8	3.6	-17.4	-3.9	13.8	7.7	13.6	12.1	13.2	13.0
Libya	20.3	20.7	0.9	7.0	8.5	-21.7	0.2	..	..	..	..	..
Lithuania	..	14.5	..	9.7	..	-3.3	..	111.5	..	50.8	..	87.1
Macedonia, FYR	..	13.0	..	-64.1	..	-8.4	..	17.9	..	115.5	242.1	146.3
Madagascar	4.5	6.2	23.8	0.4	-14.8	19.1	17.1	22.1	16.6	21.3	15.7	21.5
Malawi	11.1	60.0	15.8	26.9	-14.0	-25.0	14.6	33.2	16.9	33.6	16.3	38.6
Malaysia	10.6	-1.4	20.8	5.3	-1.2	-5.7	1.7	5.1	2.6	4.1	1.3	5.0
Mali	-4.9	4.0	0.1	15.7	-13.4	-1.2	4.5	9.3	..	6.3	..	..
Mauritania	11.5	4.1	20.2	9.5	1.5	-41.8	10.0	5.3	7.1	6.6	..	..
Mauritius	21.2	11.2	10.8	19.6	0.8	-0.4	9.5	6.2	6.9	7.0	7.4	7.5
Mexico	81.9	19.7	48.5	11.5	15.0	3.3	71.5	19.5	73.8	19.9	73.1	19.8
Moldova	358.0	-8.3	53.3	33.8	322.4	51.5	..	173.9	..	12.3	..	98.6
Mongolia	31.6	-1.7	40.2	22.4	15.4	4.2	-1.6	78.2	..	64.8	..	..
Morocco	21.5	6.0	12.4	8.1	-4.9	-0.2	7.1	3.5	7.0	4.6	6.7	6.3
Mozambique	37.2	17.7	22.0	16.5	-6.4	-16.8	38.3	41.1	..	44.6	..	..
Myanmar	37.7	34.2	12.8	12.5	23.9	10.7	12.2	25.9	11.5	26.8	11.9	28.2
Namibia	30.3	11.3	15.4	8.9	-7.3	0.7	13.9	9.5	12.6	10.2	14.9	9.8
Nepal	18.5	24.0	5.7	14.0	6.0	1.6	11.1	8.9	10.2	9.3	10.1	9.6
Netherlands ^a	..	..	..	..	..	..	1.6	2.1	2.0	2.4	1.2	1.5
New Zealand	12.5	1.8	4.1	7.9	-1.7	1.3	10.8	1.6	11.0	2.0	9.9	1.1
Nicaragua	7,677.8	30.5	4,932.9	27.3	3,222.5	17.2	422.3	45.5	535.7	62.9	..	..
Niger	-4.1	-18.7	-5.1	14.0	1.4	-11.2	1.9	6.8	0.7	7.2	..	..
Nigeria	32.7	21.2	7.8	15.2	27.1	25.0	16.7	38.7	21.5	40.4	21.6	37.6
Norway	5.6	5.4	5.0	10.2	-0.1	-3.2	5.6	1.8	7.4	2.1	7.8	1.5
Oman	10.0	4.8	9.6	19.3	-11.2	7.6	-3.6	-2.9	..	0.2	..	0.4
Pakistan	11.6	7.9	5.9	7.1	7.7	1.8	6.7	11.1	6.3	10.8	6.6	11.4
Panama	36.6	13.0	0.8	29.2	-25.7	-0.2	1.9	2.2	1.4	1.1	1.9	1.2
Papua New Guinea	4.3	2.5	1.3	9.8	7.2	5.3	5.3	7.1	5.6	8.1	4.6	6.8
Paraguay	52.5	9.0	33.1	-2.2	-5.6	-1.8	24.4	14.6	21.9	14.7	24.9	13.5
Peru	6,384.9	17.3	2,123.7	17.9	2,129.5	4.3	231.3	33.7	246.1	37.2	..	41.0
Philippines	22.5	8.5	15.7	-6.2	1.8	-0.2	14.9	8.5	13.4	8.7	14.1	7.9
Poland	160.1	25.2	20.8	15.7	-20.6	3.4	53.5	26.9	50.9	30.8	52.4	27.1
Portugal ^a	..	..	..	..	..	..	18.0	5.8	17.1	5.2	16.9	4.0
Puerto Rico	..	..	..	..	..	..	3.5	3.7	..	..	2.8	8.1
Romania	26.4	48.9	..	35.5	..	17.0	2.5	113.8	..	118.5	1.8	116.3
Russian Federation	..	37.5	..	24.0	..	74.6	..	230.9	..	137.0	..	207.0



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	annual % growth of M2		annual growth as % of M2		annual growth as % of M2		average annual % growth		average annual % growth		average annual % growth	
	1990	1998	1990	1998	1990	1998	1980-90	1990-98	1980-90	1990-98	1980-90	1990-98
Rwanda	5.6	3.5	-10.0	10.5	26.8	-0.4	4.0	18.1	3.9	20.0	..	..
Saudi Arabia	4.6	3.6	-4.5	9.9	4.2	5.8	-4.9	1.4	-0.8	1.5	-0.4	1.5
Senegal	-4.8	8.7	-8.4	1.7	-5.3	4.8	6.5	5.6	6.2	6.6	5.3	8.3
Sierra Leone	74.0	11.3	4.9	1.2	228.6	26.2	64.0	32.5	72.4	32.1	..	..
Singapore	20.0	30.2	13.7	9.3	-4.9	6.0	1.9	2.1	1.6	2.1	0.9	2.0
Slovak Republic	..	4.9	..	9.0	..	-1.6	1.8	11.4	..	14.0	1.6	14.2
Slovenia	123.0	19.5	96.1	19.1	-10.4	1.4	..	27.0	..	32.8	252.3	35.3
South Africa	11.4	13.7	13.7	18.8	1.8	2.8	15.5	10.6	14.8	9.6	15.1	11.3
Spain ^a	..	..	..	..	..	..	9.3	4.2	9.0	4.2	9.3	3.3
Sri Lanka	21.1	9.6	16.2	9.4	6.8	3.5	11.0	9.7	10.9	10.7	10.9	11.3
Sudan	48.8	29.9	12.6	3.2	27.9	14.3	41.0	74.4	37.6	90.8	..	..
Sweden	..	..	..	..	..	..	7.4	2.4	7.0	2.5	8.2	-0.7
Switzerland	0.8	5.1	11.7	1.9	1.0	-2.5	3.4	1.7	2.9	2.0	3.1	0.5
Syrian Arab Republic	26.1	124.0	3.4	-0.3	11.4	-7.6	15.3	8.9	23.2	9.1	24.5	7.6
Tajikistan	..	..	..	..	..	..	..	300.0	..	..	..	..
Tanzania	41.9	10.8	22.6	7.9	80.6	2.6	..	24.3	31.0	24.2	30.2	24.2
Thailand	26.7	9.7	30.0	-9.9	-4.2	9.8	3.9	4.8	3.5	5.2	2.7	6.7
Togo	9.5	0.4	1.8	3.6	6.9	7.6	4.8	8.8	2.5	10.2	..	..
Trinidad and Tobago	6.2	14.5	2.7	9.0	0.9	-3.6	2.4	6.9	10.7	6.2	14.6	13.6
Tunisia	7.6	5.4	5.9	9.7	1.8	-1.1	7.4	4.8	7.4	4.8	8.3	4.8
Turkey	53.2	89.7	42.9	39.3	3.6	41.4	45.2	79.4	44.9	82.1	..	83.4
Turkmenistan	..	..	..	..	..	..	..	663.4	..	..	..	..
Uganda	60.2	21.7	..	13.1	..	3.7	113.8	15.3	102.5	13.0	..	13.4
Ukraine	..	22.3	..	45.7	..	59.8	..	440.0	..	413.4	..	..
United Arab Emirates	-8.2	4.2	1.3	13.2	-4.8	-1.7	0.8	2.4	..	..	..	..
United Kingdom	..	..	..	..	..	..	5.7	3.0	5.8	3.0	4.6	2.4
United States	4.9	10.0	1.1	13.3	0.6	1.1	4.2	1.9	4.2	2.8	3.8	3.9
Uruguay	118.5	19.3	56.2	20.9	3.3	-4.6	61.3	40.5	61.1	43.1	62.0	39.2
Uzbekistan	..	..	..	..	..	..	..	356.7	..	..	..	..
Venezuela, RB	71.2	6.5	17.0	7.9	41.8	7.2	19.3	49.2	20.9	53.6	29.7	50.1
Vietnam	..	24.3	..	12.8	..	-0.1	210.8	18.5	..	..	..	..
West Bank and Gaza	..	..	..	..	..	..	..	11.0	..	..	..	..
Yemen, Rep.	11.3	11.8	1.4	3.9	8.3	18.7	..	24.2	..	32.6	..	..
Yugoslavia, FR (Serb./Mont.)	..	..	..	..	..	..	..	..	..	..	..	..
Zambia	47.9	25.6	22.8	1.4	185.8	178.0	42.2	63.5	72.5	80.8	42.8	73.0
Zimbabwe	15.1	11.3	13.5	32.7	7.4	28.8	11.6	21.9	13.8	25.4	14.6	31.0

a. As members of the European Monetary Union, these countries share a single currency, the euro. b. Data prior to 1990 refer to the Federal Republic of Germany before unification.



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About the data

Money and the financial accounts that record the supply of money lie at the heart of a country's financial system. There are several commonly used definitions of the money supply. The narrowest, M1, encompasses currency held by the public and demand deposits with banks. M2 includes M1 plus time and savings deposits with banks that require a notice for withdrawal. M3 includes M2 as well as various money market instruments, such as certificates of deposit issued by banks, bank deposits denominated in foreign currency, and deposits with financial institutions other than banks. However defined, money is a liability of the banking system, distinguished from other bank liabilities by the special role it plays as a medium of exchange, a unit of account, and a store of value.

The banking system's assets include its net foreign assets and net domestic credit. Net domestic credit includes credit to the private sector and general government, and credit extended to the nonfinancial public sector in the form of investments in short- and long-term government securities and loans to state enterprises; liabilities to the public and private sectors in the form of deposits with the banking system are netted out. It also includes credit to banking and nonbank financial institutions.

Domestic credit is the main vehicle through which changes in the money supply are regulated, with central bank lending to the government often playing the most important role. The central bank can regulate lending to the private sector in several ways—for example, by adjusting the cost of the refinancing facilities it provides to banks, by changing market interest rates through open market operations, or by controlling the availability of credit through changes in the reserve requirements imposed on banks and ceilings on the credit provided by banks to the private sector.

Monetary accounts are derived from the balance sheets of financial institutions—the central bank, commercial banks, and nonbank financial intermediaries. Although these balance sheets are usually reliable, they are subject to errors of classification, valuation, and timing and to differences in accounting practices. For example, whether interest income is recorded on an accrual or a cash basis can make a substantial difference, as can the treatment of nonperforming assets. Valuation errors typically arise with respect to foreign exchange transactions, particularly in countries with flexible exchange rates or in those that have undergone a currency devaluation during the reporting period. The valuation of financial derivatives and the net liabilities of the banking system can also be difficult.

The quality of commercial bank reporting also may be adversely affected by delays in reports from bank branches, especially in countries where branch accounts are not computerized. Thus the data in the balance sheets of commercial banks may be based on preliminary estimates subject to constant revision. This problem is likely to be even more serious for nonbank financial intermediaries.

Controlling inflation is one of the primary goals of monetary policy and is intimately linked to the growth in money supply. Inflation is measured by the rate of increase in a price index, but actual price change can also be negative. Which index is used depends on which set of prices in the economy is being examined. The GDP deflator reflects changes in prices for total gross domestic product. It is the most general measure of the overall price level and takes into account changes in government consumption, capital formation (including inventory appreciation), international trade, and the main component, private consumption. It is usually derived implicitly as the ratio of current to constant price GDP, resulting in a Paasche index. As a general measure of inflation for use in policy, however, it is defective because of the long lags in deriving estimates and because it is often only an annual measure.

Consumer price indexes are more current and produced more frequently. They are also constructed explicitly, based on surveys of the cost of a defined basket of consumer goods and services. Consumer price indexes should be interpreted with caution. The definition of a household and the geographic (urban or rural) and income group coverage of consumer price surveys can vary widely across countries, as can the basket of goods chosen. In addition, the weights are derived from household expenditure surveys, which, for budgetary reasons, tend to be conducted infrequently in developing countries, leading to poor comparability over time. Although a useful indicator for measuring consumer price inflation within a country, the consumer price index is of less value in making comparisons across countries. Like consumer price indexes, the food price index too should be interpreted with caution because of the high variability across countries in the items covered.

The least-squares method is used to calculate the growth rates of the GDP implicit deflator, consumer price index, and food price index.

Definitions

- **Money and quasi money** comprise the sum of currency outside banks, demand deposits other than those of the central government, and the time, savings, and foreign currency deposits of resident sectors other than the central government. This definition of the money supply is frequently called M2; it corresponds to lines 34 and 35 in the International Monetary Fund's (IMF) *International Financial Statistics* (IFS). The change in money supply is measured as the difference in end-of-year totals relative to the level of M2 in the preceding year.
- **Claims on private sector** (IFS line 32d) include gross credit from the financial system to individuals, enterprises, nonfinancial public entities not included under net domestic credit, and financial institutions not included elsewhere.
- **Claims on governments and other public entities** (IFS line 32an + 32b + 32bx + 32c) usually comprise direct credit for specific purposes such as financing the government budget deficit, loans to state enterprises, advances against future credit authorizations, and purchases of treasury bills and bonds, net of deposits by the public sector. Public sector deposits with the banking system also include sinking funds for the service of debt and temporary deposits of government revenues.
- **GDP implicit deflator** measures the average annual rate of price change in the economy as a whole for the periods shown.
- **Consumer price index** reflects changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or change at specified intervals, such as yearly. The Laspeyres formula is generally used.
- **Food price index** is a subindex of the consumer price index.

Data sources

The IMF collects data on the financial systems of its member countries. The data in the table are published in its monthly *International Financial Statistics* and annual *International Financial Statistics Yearbook*. The World Bank receives data from the IMF in electronic files that may contain more recent revisions than the published sources. The GDP data are from the World Bank's national accounts files. The food price index data are from the United Nations Statistics Division's *Statistical Yearbook* and *Monthly Bulletin of Statistics*. The discussion of monetary indicators draws from an IMF publication by Marcello Caiola, *A Manual for Country Economists* (1995).