



## Is Deflation Coming?

Judging from the spate of newspaper articles and commentary on the subject, many analysts are becoming increasingly concerned about the possibility of sustained deflation, which was last prevalent during the Great Depression, when it was viewed as a source of economic turmoil.

Those who fear deflation argue that U.S. monetary policy has been unduly tight at the wrong time—when financial asset prices are at unsustainably high levels and when worldwide excess capacity has severely constrained firms' ability to maintain or raise prices. The recent plummet of gold prices, many believe, can be viewed as one piece of supporting evidence for these assertions. Those who raise the specter of deflation in the United States, though, would be wise to consider a few additional facts.

To begin with, *disinflation*, which has been seen in the United States for the past few years, is not the same as *deflation*. The latter is an ongoing decrease in the aggregate price level—the opposite of inflation. The former occurs when the price index rises at a slower rate—for example, 2 percent inflation versus 3 percent inflation. Second, changes in relative prices can sometimes give the impression that all prices are declining. For example, the PPI declined over each of the first seven months of 1997, due partly to lower food and energy prices. However, the PPI is not a good measure of the aggregate price level. Rather, it is a subset of it. Moreover, as the chart shows, the PPI fluctuates quite a bit in response to these transitory influences—especially relative to broader price indexes.

Many people instead regard the consumer price index (CPI) as a good proxy for the aggregate price level because of its widespread use for cost-of-living adjustments. The broadest measure of the price level is the GDP chain-type price index, which is an output price index that encompasses goods and services not captured in the CPI, such as investment goods. No matter which index one chooses to follow, however, deflation does not actually occur unless the price index declines.

Most forecasters do not expect this to occur. For example, current projections from the Congressional Budget Office expect some upward drift in the CPI and GDP price indexes over a longer-term horizon. Privatesector forecasters, as reflected by the Blue Chip consensus, are largely in agreement with this outlook. In fact, even those projecting the least inflation foresee prices increasing by an average of about 2 percent or slightly higher over the next 10 years. Thus, while both the CPI and the GDP price index have been on a disinflation track recently, and possibly expected to continue to do so, they are still far from the negative territory of deflation.

So why the recent hubbub over the possibility of deflation? Perhaps analysts are concerned that the Fed's commitment to price stability will result in brief periods of deflation. Indeed, such periods are not out of the question in a low-inflation environment, but they are not necessarily cause for alarm. In any case, the likelihood of such an event, as best forecasters can judge, is not high.



-Kevin L. Kliesen

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

# **Tableof**Contents

#### Page

- 3 Economy at a glance
- 4 Output and growth
- 7 Interest rates
- 8 Inflation and prices
- 10 Labor markets
- 12 Consumer spending
- 14 Investment spending
- 16 Government revenues, spending, and debt
- 18 International trade
- 20 Productivity and profits
- 22 Quick reference tables
- 27 Notes and sources

#### Conventions used in this publication:

- 1. Charts and tables contain data that was current on November 4, 1997.
- 2. Shaded areas indicate recessions, as determined by the National Bureau of Economic Research.
- Percent change refers to simple percent changes. Percent change from year ago refers to the percent change from the same month or quarter in the previous year. The percent change at annual rate shows what the growth rate would be over an entire year if the same simple percent change continued for four quarters or twelve months. The percent change at annual rate of X between the previous quarter t-1 and the current quarter t is:

$$100 \times \left[ \left( \frac{X_t}{X_{t-1}} \right)^4 - 1 \right]$$

For monthly data replace 4 with 12.

4. All data with significant seasonal patterns are seasonally adjusted, unless labeled NSA.

National Economic Trends is published monthly by the Research Division of the Federal Reserve Bank of St. Louis. For more information on data, please call (314) 444-8573. Single-copy subscriptions are available free of charge by writing to the Public Affairs Office, Federal Reserve Bank of St. Louis, Post Office Box 442, St. Louis, MO 63166-0442 or by calling (314) 444-8808 or (314) 444-8809. Information in this publication is also included on the Federal Reserve Economic Data (FRED) electronic bulletin board at (314) 621-1824 or Internet World Wide Web server at http://www.stls.frb.org/fred.



#### **Industrial Production**



### **Change in Nonfarm Payrolls**

#### Consumer Price Index



#### **Interest Rates**



#### **Unemployment Rate**



Digitized for ERASER

http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis



http://f**c**aser.stlouisfed.org/ Federal Reserve Bank of St. Louis



### Industrial Production and NAPM Index



#### Aggregate Private Nonfarm Hours

Percent change



#### **Real Change in Business Inventories**



#### **Real GDP Revisions**



### **Nominal Gross Domestic Product**



#### Average Weekly Private Nonfarm Hours



32 E			
33.5	1995	1996	1997

#### **Inventory-Sales Ratio**



Digitize<del>d for FRASER</del> http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis



### Contributions to Real GDP Growth Rate

	1995	1996				1997				
	4th	1st	2nd	3rd	4th	1st	2nd	3rd		
Real GDP	2.22	1.77	5.97	1.03	4.31	4.89	3.31	3.52		
Final Sales	1.94	2.56	5.22	0.16	4.49	3.02	2.48	4.91		
Change in Inventory	0.31	-0.83	0.78	0.96	-0.29	1.76	0.79	-1.45		
Consumption	1.22	2.13	2.53	0.35	2.22	3.56	0.64	3.84		
Fixed Investment Nonresidential Residential	0.83 0.51 0.31	1.49 1.19 0.31	2.02 1.34 0.66	1.46 1.72 -0.18	0.45 0.66 -0.17	0.59 0.47 0.13	1.84 1.59 0.28	2.10 2.07 0.11		
Government Federal State and Local	-1.02 -1.23 0.21	0.32 0.49 -0.16	1.29 0.58 0.71	-0.20 -0.29 0.08	0.02 -0.35 0.37	-0.08 -0.38 0.31	0.54 0.41 0.13	0.18 -0.07 0.25		
Net Exports Exports Imports	1.00 1.32 -0.32	-1.44 0.21 -1.65	-0.69 1.13 -1.81	-1.51 0.23 -1.73	1.93 2.89 -0.94	-1.18 1.24 -2.39	-0.58 2.26 -2.80	-1.30 0.74 -2.03		
Residual	-0.11	0.11	-0.03	-0.08	-0.10	0.20	0.02	0.12		

Digitized for FRASER http://feser.stlouisfed.org/ Federal Reserve Bank of St. Louis

#### **Interest Rates** Percent 18 15 -12 -10-Year Treasury 9 -6 3 - Month Treasury 3 0 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97

#### **Treasury Yield Curve**



#### Total Return on Standard and Poor's 500





Digitized for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis

#### **GDP Chain Price Index**



#### **Consumer Price Index**



#### **Producer Price Index, Finished Goods**



#### **Employment Cost Index**





#### **Consumption Chain Price Index**

Percent change at annual rate

**Crude Oil Price** 



### Unit Labor Cost

Percent change at annual rate



### **Compensation per Hour**

Percent change at annual rate





### Change in Nonfarm Payrolls



**Change in Household Employment** 



**Unemployment Rate** 

Percent 6.0 -



#### **Change in Manufacturing Payrolls**



#### Labor Force and Population





#### **Real Disposable Income**



#### **Real Consumption**



#### **Retail Sales**



Digitiz**12**for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis



**Personal Saving Rate** 







#### **Retail Sales**











#### **Real Durables Consumption**





Digitizetator FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis

#### **Gross Saving Rates and Net Foreign Investment**



### **Real Private Fixed Investment**



#### **Real Equipment Investment**

Percent change at annual rate



#### **Real Residential Investment**



#### Nondefense Capital Goods Orders

Percent change from year ago, excluding aircraft



#### **Real Nonresidential Investment**

Percent change at annual rate



#### **Housing Starts**





Federal Outlays, 1996



## **Government Receipts and Outlays**



#### Federal Receipts, 1996



State and Local Outlays, 1996



State and Local Receipts, 1996



#### **Gross Federal Debt**



#### **Change in Gross Federal Debt**



National Income Accounts

#### **Government Budgets**

Billions of dollars

## National Economic Trends Federai Deficit

#### reucial Deficit



#### Federal Deficit, Unified Basis

Billions of dollars, fiscal years



**Unified Budget** 

			Calendar	Years					Fiscal Years	
	St	ate and Local			Federal				Federal	
	Receipts	Expenditures	Surplus or Deficit(-)	Receipts	Expenditures	Surplus or Deficit(-)	-	Receipts	Outlays	Surplus or Deficit(-)
1980	361.4	291.9	69.5	561.5	622.5	-61.0		517.1	590.9	-73.8
1981	390.8	322.5	68.3	649.3	707.1	-57.8		599.3	678.2	-79.0
1982	409.0	346.4	62.6	646.4	781.0	-134.6		617.8	728.4	-110.7
1983	443.6	369.1	74.5	671.9	846.3	-174.4		600.6	808.4	-207.8
1984	492.0	390.2	101.8	746.9	902.9	-156.0		666.5	851.8	-185.4
1985	528.7	420.0	108.7	811.3	974.2	-162.9		734.1	946.4	-212.3
1986	570.6	456.7	113.9	850.1	1027.6	-177.5		769.1	990.3	-221.2
1987	594.9	494.7	100.2	937.4	1066.3	-128.9		854.1	1003.9	-149.8
1988	631.4	527.8	103.6	997.2	1118.5	-121.3		909.0	1064.1	-155.2
1989	681.0	563.2	117.8	1079.3	1192.7	-113.4		990.7	1143.2	-152.5
1990	728.9	615.5	113.4	1129.8	1284.5	-154.7		1031.3	1252.5	-221.2
1991	784.2	678.5	105.7	1149.0	1345.0	-196.0	-	1054.3	1323.6	-269.4
1992	844.3	734.1	110.2	1198.5	1479.4	-280.9		1090.5	1380.9	-290.4
1993	894.4	782.4	112.0	1275.1	1525.7	-250.6		1153.5	1408.7	-255.1
1994	949.2	831.4	117.8	1374.8	1561.4	-186.6		1257.7	1460.8	-203.1
1995	999.0	895.9	103.1	1463.2	1637.6	-174.4		1351.5	1515.4	-163.9
1996	1043.4	938.0	105.4	1587.6	1698.1	-110.5	1	1452.8	1560.2	-107.4
1997	NA	NA	NA	NA	NA	NA		1579.0	1601.6	-22.6

Digitized for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis







**Goods Export Shares, 1996** 









#### Current Account Balance



## Real GDP Growth of Major Trading Partners

Percent change at annual rate



#### Goods Trade

Percent change from year ago



#### Services Trade

-20

-30 7

1995







1996

E

1997

#### Niad:iiomal Ec:cricmic Trends





#### Output per Hour and Multifactor Productivity, Manufacturing



Digitized for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis



#### Manufacturing Output per Hour



Selected Component Shares of National Income







Digitiz<del>ed for FRASER</del> http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis

		Nom P Billions of \$	inal GDP Percent <u>cha</u> Annual rate	ange Year ago	Billions of 1992 \$	Real GDP Percent c Annual rate	hange Year ago	Fir Billions of 1992 \$	al Sales <u>Percent</u> cl Annual rate	<u>hange</u> Year ago	Chi Business Billions Last qtr	ange in Inventories of 1992 \$ Year/Year ago
199	12	6244.4		5.5	6244.442		2.7	6237.441		2.5		-2.977
199	3	6558.1		5.0	6389.563		2.3	6368.864		2.1		7.001
199	4	6947.0		5.9	6610.741		3.5	6551.247		2.9		22.102
199	5	7265.4		4.6	6742.062		2.0	6712.672		2.5		60.552
199	6	7636.0		5.1	6928.396		2.8	6900.980		2.8		27.341
1994 1	1	6794.3	5.5	5.4	6524.505	3.0	3.1	6473.029	1.2	2.8	53.061	32.301
2	2	6911.4	7.1	6.2	6600.313	4.7	3.8	6526.671	3.4	2.9	75.896	16.644
3	3	6986.5	4.4	6.3	6629.474	1.8	3.7	6580.376	3.3	3.2	49.662	15.283
4	1	7095.7	6.4	5.8	6688.609	3.6	3.3	6624.848	2.7	2.7	63.590	24.179
1995	1	7168.9	4.2	5.5	6703.721	0.9	2.7	6654.289	1.8	2.8	48.479	53.061
2	2	7209.5	2.3	4.3	6708.841	0.3	1.6	6685.289	1.9	2.4	21.638	75.896
3	3	7301.3	5.2	4.5	6759.234	3.0	2.0	6739.306	3.3	2.4	17.023	49.662
4	\$	7381.9	4.5	4.0	6796.513	2.2	1.6	6771.927	2.0	2.2	22.223	63.590
1996	1	7467.5	4.7	4.2	6826.362	1.8	1.8	6814.966	2.6	2.4	8.039	48.479
2	2	7607.7	7.7	5.5	6926.023	6.0	3.2	6902.290	5.2	3.2	21.288	21.638
3	3	7676.0	3.6	5.1	6943.820	1.0	2.7	6905.034	0.2	2.5	37.903	17.023
4	\$	7792.9	6.2	5.6	7017.379	4.3	3.2	6981.692	4.5	3.1	32.922	22.223
1997 -	1	7933.6	7.4	6.2	7101.617	4.9	4.0	7034.087	3.0	3.2	63.657	8.039
2	2	8034.3	5.2	5.6	7159.627	3.3	3.4	7077.749	2.5	2.5	77.603	21.288
3	3	8131.7	4.9	5.9	7221.760	3.5	4.0	7164.013	5.0	3.8	51.544	37.903

		[ Con	sumption		Durables	Consumption		Private Fix	ked Investmer	t	Nonreside	Ionresidential Investment	
			Percent c	hange		Percent c	hange		Percent c	hange	-	Percent cl	nange
		Billions	Annual	Year	Billions	Annual	Year	Billions	Annual	Year	Billions	Annual	Year
		of 1992 \$	rate	ago	of 1992 \$	rate	ago	of 1992 \$	rate	ago	of 1992 \$	rate	ago
1	992	4219.796		2.8	488.530		5.8	783.427		5.7	557.869		1.9
1	993	4343.563		2.9	523.841		7.2	842.772		7.6	600.167		7.6
1	994	4485.981		3.3	561.189		7.1	915.536		8.6	648.361		8.0
1	995	4595.273		2.4	583.598		4.0	962.119		5.1	706.513		9.0
1	996	4714.061		2.6	611.107		4.7	1041.699		8.3	771.683		9.2
1994	1	4439.436	3.8	3.6	550.661	6.4	9.2	887.795	3.2	9.0	626.191	0.4	8.4
	2	4472.224	3.0	3.5	555.796	3.8	7.0	913.178	11.9	9.9	641.209	9.9	7.8
	3	4498.218	2.3	3.0	561.741	4.3	6.0	922.712	4.2	9.3	653.153	7.7	8.5
	4	4534.129	3.2	3.1	576.563	11.0	6.3	938.467	7.0	6.6	672.890	12.6	7.6
1995	1	4551.303	1.5	2.5	572.230	-3.0	3.9	955.820	7.6	7.7	695.674	14.2	11.1
	2	4583.458	2.9	2.5	577.706	3.9	3.9	954.034	-0.7	4.5	705.353	5.7	10.0
	3	4612.912	2.6	2.5	590.755	9.3	5.2	962.315	3.5	4.3	708.231	1.6	8.4
	4	4633.463	1.8	2.2	593.701	2.0	3.0	976.315	5.9	4.0	716.800	4.9	6.5
1996	1	4669.373	3.1	2.6	600.662	4.8	5.0	1001.533	10.7	4.8	736.939	11.7	5.9
	2	4712.204	3.7	2.8	614.771	9.7	6.4	1035.683	14,4	8.6	759.734	13.0	7.7
	3	4718.196	0.5	2.3	611.864	-1.9 í	3.6	1060.886	10.1	10.2	789.290	16.5	11.4
	4	4756.427	3.3	2.7	617.131	3.5	3.9	1068.696	3.0	9.5	800.771	5.9	11.7
1997	1	4818.079	5.3	3.2	637.766	14.1	6.2	1079.006	3.9	7.7	808.932	4.1	9.8
	2	4829.430	0.9	2.5	628.992	-5.4	2.3	1111.393	12.6	7.3	836.993	14.6	10.2
	3	4897.115	5.7	3.8	653.790	16.7	6.9	1148.621	14.1	8.3	873.718	18.7	10.7

Digitiz<del>od for FRASER</del> http://fr**æg**r.stlouisfed.org/ Federal Reserve Bank of St. Louis

	GDP Ch	nain Price Ind Percent of Annual	ex change Year	Emplo	Percent of Percent of Annual	dex change Year	Index	CI: Wages Percent c Annual	hange Year	E	Cl: Benefits Percent c Annual	hange Year
	Index		agu	Index	1816	ayo	Index		ago	Index	rate	ago
1992	100.000		2.8	114.3		3.7	111.9		2.9	120.5		5.5
1993	102.643		2.6	118.4		3.6	115.2		2.9	127.0		5.4
1994	105.088		2.4	122.3		3.3	118.5		2.9	132.0		4.0
1995	107.763		2.5	125.6		2.8	121.9		2.9	135.0		2.2
1996	110.224		2.3	129.2		2.8	125.9		3.3	137.4		1.8
1994 1	104.156	2.5	2.3	120.8	3.0	3.3	117.1	2.1	2.8	130.3	4.4	4.3
2	104.736	2.2	2.3	121.8	3.4	3.3	118.1	3.5	3.1	131.5	3.7	4.0
3	105.391	2.5	2.5	122.8	3.3	3.3	119.0	3.1	2.9	132.8	4.0	4.0
4	106.071	2.6	2.5	123.6	2.6	3.1	119.8	2.7	2.8	133.5	2.1	3.6
1995 1	106.933	3.3	2.7	124.4	2.6	3.0	120.6	2.7	3.0	133.9	1.2	2.8
2	107.485	2.1	2.6	125.2	2.6	2.8	121.5	3.0	2.9	134.6	2.1	2.4
3	108.031	2.0	2.5	126.0	2.6	2.6	122.4	3.0	2.9	135.3	2.1	1.9
4	108.603	2.1	2.4	126.9	2.9	2.7	123.2	2.6	2.8	136.0	2.1	1.9
1996 1	109.349	2.8	2.3	127.7	2.5	2.7	124.4	4.0	3.2	136.0	0.0	1.6
2	109.857	1.9	2.2	128.8	3.5	2.9	125.5	3.6	3.3	137.0	3.0	1.8
3	110.588	2.7	2.4	129.7	2.8	2.9	126.4	2.9	3.3	137.7	2.1	1.8
4	111.103	1.9	2.3	130.6	2.8	2.9	127.4	3.2	3.4	138.7	2.9	2.0
1997 1	111.775	2.4	2.2	131.4	2.5	2.9	128.5	3.5	3.3	138.7	0.0	2.0
2	112.272	1.8	2.2	132.5	3.4	2.9	129.7	3.8	3.3	139.7	2.9	2.0
3	112.656	1.4	1.9	133.6	3.4	3.0	130.9	3.8	3.6	140.4	2.0	2.0

			Exports	bondo		Imports Percent	bango	Nonfarm	Output per He	)uľ	Nonfarm C	ompensation/H	
		Billions of 1992 \$	Annual rate	Year ago	Billions of 1992 \$	Annual rate	Year ago	Index	Annual rate	Year ago	Index	Annual rate	Year ago
19	992	639.416		6.6	668.959	·	7.5	100.0		3.2	100.0		5.2
19	993	658.183		2.9	728.409		8.9	100.1		0.1	102.3		2.3
19	994	712.399		8.2	817.026		12.2	100.5		0.4	104.1		1.8
19	995	791.213		11.1	890.057		8.9	100.7		0.2	106.7		2.5
19	996	857.022		8.3	971.469		9.1	102.0		1.3	110.1		3.2
1994	1	676.029	-1.8	4.4	773.638	7.6	10.2	100.6	-0.8	0.5	103.8	3.1	2.2
	2	704.131	17.7	6.7	808.022	19.0	11.8	100.7	0.4	1.1	103.9	0.4	1.8
	3	722.105	10.6	11.7	833.229	13.1	14.2	100.4	-1.2	0.4	104.2	1.2	1.7
	4	747.330	14.7	10.0	853.197	9.9	12.3	100.8	1.6	0.0	105.0	3.1	1.9
1995	1	760.368	7.2	12.5	873.861	10.0	13.0	100.3	-2.0	-0.3	105.6	2.3	1.7
	2	777.447	9.3	10.4	890.284	7.7	10.2	100.5	0.8	-0.2	106.4	3.1	2.4
	3	802.435	13.5	11.1	895.368	2.3	7.5	100.8	1.2	0.4	107.1	2.7	2.8
	4	824.604	11.5	10.3	900.720	2.4	5.6	101.2	1.6	0.4	107.9	3.0	2.8
1996	1	828.178	1.7	8.9	928.963	13.1	6.3	101.7	2.0	1.4	108.7	3.0	2.9
	2	847.444	9.6	9.0	960.043	14.1	7.8	102.2	2.0	1.7	109.8	4.1	3.2
	3	851.382	1.9	6.1	990.240	13.2	10.6	102.0	-0.8	1.2	110.6	2.9	3.3
	4	901.071	25.5	9.3	1006.623	6.8	11.8	102.4	1.6	1.2	111.5	3.3	3.3
1997	1	922.652	9.9	11.4	1048.941	17.9	12.9	102.8	1.6	1.1	112.8	4.7	3.8
	2	962.500	18.4	13.6	1099.106	20.5	14.5	103.5	2.8	1.3	113.7	3.2	3.6
	3	975.653	5.6	14.6	1135.638	14.0	14.7						

Digitiz<del>ed for FRASER</del> http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis

		Housel	nold Survey I	mployment		Nonfa	rm Payroll En	noloyment		Non	farm Aggreg	ate Hours	
		Thousands	Change	Percent c Annual rate	hange Year ago	Thousands		Percent cl Annual rate	hande Year ago	Index	Monthly rate	<u>cent char</u> Annual rate	r <u>ae</u> Year ago
	1992	118488	775		0.7	108591	336		0.3	121.0			0.7
	1993	120259	1771		1.5	110707	2116		1.9	124.5			2.9
	1 <b>994</b>	123067	2808		2.3	114145	3438		3.1	129.8			4.2
	1 <b>99</b> 5	124899	1833		1.5	117195	3051		2.7	133.4			2.8
	1996	126705	1806		1.4	119517	2322		2.0	136.4			2.2
1995	1	124924	519	1.7	2.4	116482	873	3.1	3.4	133.0	0.8	3.2	4.3
	2	124711	-213	-0.7	1.7	116937	455	1.6	2.9	132.9	-0.1	-0.4	2.7
	3	124820	109	0.4	1.3	117414	478	1.6	2.4	133.6	0.6	2.3	2.5
	4	125142	322	1.0	0.6	117949	534	1.8	2.0	134.2	0.4	1.7	1.7
1996	1	125693	551	18	0.6	118471	522	1.8	17	1343	0.1	0.4	1.0
	2	126381	688	2.2	1.3	119248	778	2.7	2.0	136.1	1.3	5.5	2.5
	3	127042	661	2.1	1.8	119898	649	2.2	2.1	137.0	0.7	2.7	2.5
	4	127705	664	2.1	2.0	120452	555	1.9	2.1	138.1	0.8	3.1	2.9
1007	1	100700	1007	7.0	2.4	101170	696	2.7	0.7	170.5	1.0	4.1	7.0
1997	2	128/28	1023	3.Z	2.4	121138	585 715	2.3	2.3	1.39.5	0.4	4.1	3.8 2.0
	3	129402	280	0.9	2.4	122538	685	2.4	2.2	140.5	0.4	1 1	2.9
		123742	200		2.1	121000		2.0	2.2	140.0	0.0		2.0
1995	Sep	124927	198	1.9	1.1	117636	171	1.8	2.3	133.9	0.4	4.6	2.4
	Oct	125235	308	3.0	1.0	117775	139	1.4	2.2	134.4	0.4	4.6	1.8
	Nov	125124	-111	-1.1	0.5	117951	176	1.8	2.0	134.3	-0.1	-0.9	1.9
	Dec	125068	-56	-0.5	0.3	118120	169	1.7	1.9	133.9	-0.3	-3.5	1.4
1996	Jan	125311	243	2.4	0.4	118058	-62	-0.6	1.6	132.5	-1.0	-11.8	-0.8
	Feb	125706	395	3.8	0.6	118550	492	5.1	1.7	135.1	2.0	26.3	1.9
	Mar	126062	356	3.5	0.8	118804	254	2.6	1.8	135.4	0.2	2.7	2.0
	Apr	126125	63	0.6	0.9	118966	162	1.6	1.8	135.1	-0.2	-2.6	1.0
	May	126428	303	2.9	1.5	119263	297	3.0	2.1	135.7	0.4	5.5	2.9
	Jun	126590	162	1.5	1.7	119516	253	2.6	2.1	137.6	1.4	18.2	3.5
	Jul	126889	200	20	17	119691	175	18	22	136.1	-1 1	-123	1 9
	Aug	126988	295	0.9	1.7	119983	292	3.0	2.2	137.1	0.7	9.2	2.8
	Sep	127248	260	2.5	1.9	120019	36	0.4	2.0	137.9	0.6	7.2	3.0
	Oct	107617	700							477.0			
	Nov	12/61/	369	3.5	1.9	120248	229	2.3	2.1	137.2	-0.5	-5.9	2.1
	Dec	127855	211	2.0	2.0	120450	202	2.0	2.1	139.1	0.5	11.0	2.7
		127000			<b>4</b> • <b>4</b>	120000	205	2.1	2.1	100.1			
1997	Jan	128580	725	7.0	2.6	120909	250	2.5	2.4	138.2	-0.6	-7.5	4.3
	reD	128430	-150	-1.4	2.2	121162	253	2.5	2.2	140.0	1.3	16.8	3.6
	IVIAI	129175	/45	7.2	2.5	121344	182	1.8	2.1	140.2	0.1	1.7	3.5
	Apr	129384	209	2.0	2.6	121671	327	3.3	2.3	139.6	-0.4	-5.0	3.3
	May	129639	255	2.4	2.5	121834	163	1.6	2.2	140.0	0.3	3.5	3.2
	Jun	129364	-275	-2.5	2.2	122056	222	2.2	2.1	140.6	0.4	5.3	2.2
	Jul	129708	344	3.2	2.2	122440	384	3.8	2.3	140.2	-0.3	-3.4	3.0
	Aug	129804	96	0.9	2.2	122480	40	0.4	2.1	140.7	0.4	4.4	2.6
	Sep	129715	-89	-0.8	1.9	122695	215	2.1	2.2	140.5	-0.1	-1.7	1.9

			Retail Sa	les		1	Industrial P	roduction		-	
	llnomol	Dur.	Per	cent chan			Per	cent chan	ge	l reas	ury
	Rate	of dollars	Monthly/ quarterly	rate	Year ago	Index	Monthly/ quarterly	Annual rate	Year ago	3 – mo	us 10 — yr
1992	7.5	1944.605			4.8	100.000	· · ·		3.2	3.43	7.01
1993	6.9	2071.178			6.5	103.366			3.4	3.00	5.86
1994	6.1	2224.913			7.4	108.558			5.0	4.25	7.08
1995	5.6	2326.536			4.6	112.109			3.3	5.49	6.58
1996	5.4	2439.872			4.9	115.198			2.8	5.01	6.44
1995 1	5 5	573 137	0.2	0.8	5.6	111 764	1.0	3.9	5 1	5 74	7 48
2	5.6	578.680	1.0	3.9	5.2	111.561	-0.2	-0.7	3.3	5.60	6.62
3	5.7	585.146	1.1	4.5	4.5	112.441	0.8	3.2	3.0	5.37	6.32
4	5.6	589.573	0.8	3.1	3.1	112.671	0.2	0.8	1.8	5.26	5.89
1996 1	5.6	600 484	19	7.6	4.8	113 128	04	1.6	12	4 93	5.91
2	5.4	609.371	1.5	6.1	5.3	114.844	1.5	6.2	2.9	5.02	6.72
3	5.3	611.057	0.3	1.1	4.4	115.774	0.8	3.3	3.0	5.10	6.78
4	5.3	618.960	1.3	5.3	5.0	117.048	1.1	4.5	3.9	4.98	6.34
1997 1	5.3	635.597	2.7	11.2	5.8	118.326	1.1	4.4	4.6	5.06	6.56
2	4.9	630.244	-0.8	-3.3	3.4	119.581	1.1	4.3	4.1	5.05	6.70
3	4.9	643.947	2.2	9.0	5.4	121.609	1.7	7.0	5.0	5.05	6.24
1995 Oct	5.5	194.865	-0.1	-1.3	2.3	112.522	-0.4	-5.0	2.3	5.28	6.04
Nov	5.6	196.702	0.9	11.9	3.1	112.704	0.2	2.0	1.9	5.36	5.93
Dec	5.6	198.006	0.7	8.3	3.8	112.788	0.1	0.9	1.1	5.14	5.71
1996 Jan	5.7	197.714	-0.1	-1.8	2.6	112.361	-0.4	-4.4	0.4	5.00	5.65
	5.5	201.085	1.7	22.5	6.1	113.782	1.3	16.3	1.9	4.83	5.81
Mar	5.5	201.685	0.3	3.6	5.6	113.241	-0.5	-5.6	1.4	4.96	6.27
Apr	5.5	202.496	0.4	4.9	6.0	114.284	0.9	11.6	2.6	4.95	6.51
May	5.5	204.177	0.8	10.4	5.8	114.782	0.4	5.4	2.9	5.02	6.74
Jun	5.3	202.698	-0.7	-8.4	4.2	115.466	0.6	/.4	3.3	5.09	6.91
Jul	5.4	203.090	0.2	2.3	4.5	115.495	0.0	0.3	3.4	5.15	6.87
Aug	5.2	203.087	-0.0	-0.0	3.7	115.848	0.3	3.7	2.9	5.05	6.64
Sep	5.2	204.880	0.9	11.1	5.0	115.978	0.1	1.4	2.6	5.09	6.83
Oct	5.2	206.277	0.7	8.5	5.9	116.231	0.2	2.6	3.3	4.99	6.53
Nov	5.3	205.789	-0.2	-2.8	4.6	117.216	0.8	10.7	4.0	5.03	6.20
Dec	5.3	206.894	0.5	6.6	4.5	117.697	0.4	5.0	4.4	4.91	6.30
1997 Jan	5.4	210.233	1.6	21.2	6.3	117.765	0.1	0.7	4.8	5.03	6.58
Feb	5.3	213.022	1.3	17.1	5.9	118.366	0.5	6.3	4.0	5.01	6.42
Mar	5.2	212.342	-0.3	-3.8	5.3	118.846	0.4	5.0	4.9	5.14	6.69
Apr	4.9	209.934	-1.1	-12.8	3.7	119.331	0.4	5.0	4.4	5.16	6.89
May	4.8	209.370	-0.3	-3.2	2.5	119.508	0.1	1.8	4.1	5.05	6.71
Jun	5.0	210.940	0.7	9.4	4.1	119.903	0.3	4.0	3.8	4.93	6.49
Jul	4.8	213.549	1.2	15.9	5.1	120.914	0.8	10.6	4.7	5.05	6.22
Aug	4.9	214.888	0.6	7.8	5.8	121.526	0.5	6.2	4.9	5.14	6.30
Sep	4.9	215.510	0.3	3.5	5.2	122.387	0.7	8.8	5.5	4.95	6.21
Oct										4.97	6.03
		1				1				I	

		Consumer Price Index Percent change						Consul less Fo	mer Price In od and End Percent	ndex ergy change			Producer Price Index Finished Goods			
		Index	Monthly/ quarterly	Annual rate	Year ago	Year to date	Index	Monthly/ quarterly	Annual rate	Year ago	Year to date	Index	Monthly/ quarterly	Annual rate	Year ago	
19	992	140.4			3.0		147.5			3.7		123.2			1.2	
1!	993	144.6			3.0		152.4			3.3		124.7			1.2	
ן: אר	994	148.3			2.6		156.7			2.8		125.6			0.7	
19	990	152.5			2.8		161.4			3.0		127.9			1.9	
					2.5		100.0			2					2.0	
1995	1	151.0	0.7	2.8	2.9	2.8	159.6	0.8	3.3	3.0	3.3	127.1	0.7	3.0	1.7	
	2	152.1	0.8	3.1	3.0	3.0	161.0	0.8	3.4	3.0	3.4	127.6	0.4	1.7	2.0	
	3	152.9	0.5	2.1	2.6	2.7	162.0	0.6	2.6	3.0	3.1	128.0	0.3	1.3	1.6	
	4	153.9	0.6	2.5	2.6	2.6	163.1	0.7	2.8	3.0	3.0	129.0	0.7	2.9	2.2	
1996	1	155.1	0.8	3.3	2.8	3.3	164.2	0.7	2.6	2.9	2.6	129.9	0.7	3.0	2.2	
	2	156.4	0.8	3.4	2.8	3.4	165.3	0.6	2.6	2.7	2.6	130.9	0.7	2.9	2.5	
	3	157.5	0.7	2.7	3.0	3.1	166.3	0.6	2.5	2.7	2.6	131.6	0.6	2.3	2.8	
	4	158.8	0.8	3.3	3.2	3.2	167.4	0.6	2.6	2.6	2.6	132.9	1.0	3.9	3.0	
1997	1	159.7	0.6	2.4	2.9	2.4	168.3	0.6	2.2	2.5	2.2	132.6	-0.2	-0.7	2.1	
	2	160.1	0.3	1.1	2.4	1.7	169.5	0.7	2.8	.2.5	2.5	131.3	-1.0	-3.9	0.4	
	3	160.9	0.5	2.0	2.2	1.8	170.2	0.4	1.7	2.3	2.2	131.5	0.1	0.4	-0.1	
1995 S	Sep	153.2	0.1	1.6	2.5	2.6	162.4	0.2	3.0	3.0	3.2	128.3	0.3	3.8	1.8	
C	Oct	153.7	0.3	4.0	2.7	2.7	162.9	0.3	3.8	3.1	3.3	128.5	0.2	1.9	2.4	
N	lov	153.8	0.1	0.8	2.6	2.5	163.1	0.1	1.5	3.0	3.1	128.8	0.2	2.8	2.1	
D	)ec	154.1	0.2	2.4	2.5	2.5	163.4	0.2	2.2	3.0	3.0	129.6	0.6	7.7	2.2	
1996 J	Jan	154.7	0.4	4.8	2.7	4.8	163.8	0.2	3.0	2.9	3.0	129.7	0.1	0.9	2.2	
F	eb	155.1	0.3	3.1	2.7	4.0	164.2	0.2	3.0	2.9	3.0	129.7	0.0	0.0	2.0	
N	<b>/</b> ar	155.6	0.3	3.9	2.8	4.0	164.6	0.2	3.0	2.8	3.0	130.4	0.5	6.7	2.4	
A	Apr	156.1	0.3	3.9	2.8	3.9	164.9	0.2	2.2	2.7	2.8	130.6	0.2	1.9	2.4	
M	lay	156.5	0.3	3.1	2.9	3.8	165.3	0.2	3.0	2.7	2.8	130.8	0.2	1.9	2.4	
J	Jun	156.7	0.1	1.5	2.8	3.4	165.6	0.2	2.2	2.7	2.7	131.2	0.3	3.7	2.7	
	Jul	157.1	0.3	3.1	2.9	3.4	166.0	0.2	2.9	2.7	2.7	131.2	0.0	0.0	2.6	
A	vug	157.4	0.2	2.3	2.9	3.2	166.2	0.1	1.5	2.6	2.6	131.6	0.3	3.7	2.9	
S	Sep	157.9	0.3	3.9	3.1	3.3	166.7	0.3	3.7	2.6	2.7	132.0	0.3	3.7	2.9	
C	Oct	158.3	0.3	3.1	3.0	3.3	167.0	0.2	2.2	2.5	2.6	132.5	0.4	4.6	3.1	
N	lov	158.8	0.3	3.9	3.3	3.3	167.4	0.2	2.9	2.6	2.7	132.7	0.2	1.8	3.0	
D	)ec	159.2	0.3	3.1	3.3	3.3	167.7	0.2	2.2	2.6	2.6	133.4	0.5	6.5	2.9	
1997 J	lan	159.4	0.1	1.5	3.0	1.5	167.9	0.1	1.4	2.5	1.4	133.0	-0.3	-3.5	2.5	
F	eb	159.8	0.3	3.1	3.0	2.3	168.3	0.2	2.9	2.5	2.2	132.6	-0.3	-3.5	2.2	
N	<b>/</b> ar	159.9	0.1	0.8	2.8	1.8	168.7	0.2	2.9	2.5	2.4	132.3	-0.2	-2.7	1.5	
A	Apr	160.0	0.1	0.8	2.5	1.5	169.2	0.3	3.6	2.6	2.7	131.6	-0.5	-6.2	0.8	
М	lay	160.1	0.1	0.8	2.3	1.4	169.5	0.2	2.1	2.5	2.6	131.3	-0.2	-2.7	0.4	
J	Jun	160.3	0.1	1.5	2.3	1.4	169.7	0.1	1.4	2.5	2.4	131.1	-0.2	-1.8	-0.1	
	Jul	160.6	0.2	2.3	2.2	1.5	170.0	0.2	2.1	2.4	2.4	131.0	-0.1	-0.9	-0.2	
A	ug	160.9	0.2	2.3	2.2	1.6	170.1	0.1	0.7	2.3	2.2	131.4	0.3	3.7	-0.2	
S	Sep	161.3	0.2	3.0	2.2	1.8	170.4	0.2	2.1	2.2	2.2	132.0	0.5	5.6	0.0	

#### Notes

Pages 4, 5: Final sales is gross domestic product (GDP) minus change in business inventories. Advance, preliminary, and final GDP growth rates are released during the first, second, and third months of the following quarter. Changes result from incorporation of more complete information. The Purchasing Managers' Index is a weighted average of diffusion indexes for new orders, production, supplier deliveries, inventories, and employment. The National Association of Purchasing Management (NAPM) surveys over 300 firms in 20 manufacturing industries, weighting responses by industry share of GDP. Aggregate and average weekly hours are paid hours of production and nonsupervisory employees. The inventory-sales ratio uses nominal (current-dollar) inventory and sales data.

*Page 6:* The **contribution** of a component  $X_t$  to the overall GDP growth rate in quarter t is  $100 \times [(1 + (X_t - X_{t-1})/GDP_{t-1})^4 - 1]$ . The sign is changed for **imports**. This calculation forces components to add up to the GDP growth rate before compounding and does not exactly match *Survey of Current Business*, Table 8.2. The **residual** line is calculated using the finest level of detail in the table.

Page 7: Ten-year **Treasury yields** are adjusted to constant maturity. Three-month yields are secondary market averages, but all rates used in the yield curves are adjusted to constant maturity. The **total return on the Standard and Poor's 500** is dividends as a percent of the value of the index plus the percent change in the index.

Pages 8,9: Oil prices are monthly averages of daily spot prices for West Texas intermediate crude (*Wall Street Journal*). Consumer price index is for all urban consumers. The consumption chain price index is the index associated with the personal consumption expenditures component of GDP. The Employment Cost Index (ECI) covers private nonfarm employers. ECI compensation refers to a fixed sample of jobs, while compensation per hour covers all workers in the nonfarm business sector in a given quarter. In both cases, compensation is wages and salaries plus benefits.

Pages 10,11: Nonfarm payroll employment is counted in a survey of about 390,000 establishments (Current Employment Survey). It excludes self-employed individuals and workers in private households, but double-counts individuals with more than one job. The household survey (Current Population Survey) of about 50,000 households provides estimates of civilian employment, unemployment rate, labor force participation rate, and employment-population ratio. Population is civilian, noninstitutional, 16 years and over. New population controls introduced in January 1997 affect levels and growth rates of household survey employment, labor force and population. The unemployment rate and other ratios are minimally affected. 90 percent confidence intervals for the unemployment rate (± 0.2 percentage points) and change in household survey employment (± 376,000) measure uncertainty due to sample size. The household survey was changed in January 1994, so care should be exercised in making short-term comparisons around this date, particularly with the duration data shown on page 10. Other changes in the survey are detailed in Bureau of Labor Statistics, Employment and Earnings, Appendix A.

Pages 12, 13: Debt service is an estimate of scheduled interest and principal payments on outstanding debt. The Michigan consumer sentiment index shows changes in a summary measure of consumers' answers to five questions about their current and expected financial situation, expectations about future economic conditions, and attitudes about making large purchases. The survey is based on a representative sample of U.S. households.

Pages 14, 15: Overall gross saving includes government saving, which is the sum of the government surplus and capital consumption (see notes for pages 16 and 17). Net foreign investment (NFI) is U.S. investment abroad minus foreign investment in the U.S. Aside from a statistical discrepancy, NFI also equals the difference between gross domestic investment and saving.

Pages 16, 17: Government consumption and investment is current expenditures on goods and services, including capital consumption (depreciation) and gross investment, as reported in the National Income and Product Accounts (NIPA). The unified federal budget deficit differs from NIPA basis in four main ways: (1) NIPA excludes transactions involving existing assets; (2) NIPA outlays exclude government investment and include consumption of government capital, while unified budget outlays do the reverse; (3) NIPA accounts exclude Puerto Rico and U.S. territories; and (4) various timing issues are handled differently. Outlays and receipts on these pages are from the NIPAs, except as noted. Since 1977, the federal fiscal year starts on October 1. Federal debt held by the public includes holdings of the Federal Reserve System and excludes holdings of the social security and other federal trust funds. Federal grants in aid to state and local governments appear in both state and local receipts and federal outlays.

Pages 18, 19: The trade balance (shown on a balance of payments basis) is the difference between exports and imports of goods (merchandise) and services. It is nearly identical in concept to the net exports component of GDP, but differs slightly in accounting details. The investment income balance equals income received from U.S.-owned assets in other countries minus income paid on foreign-owned assets in the U.S. The investment income balance is nearly identical in concept to the difference between gross national product and gross domestic product, but differs in accounting details. The current account balance is the trade balance plus the balance on investment income plus net unilateral transfers to the U.S. from other countries.

Pages 20, 21: Output per hour (Y/H), unit labor cost (C/Y), and compensation per hour (C/H) are indexes which approximately obey the following relationship: %(Y/H) + %(C/Y) = %(C/H) with %()meaning percent changes. Unit labor cost is shown on page 9. Real compensation per hour uses the CPI to adjust for the effects of inflation. Multifactor productivity estimates changes in output that do not correspond to changes in quantities of labor, capital, or intermediate inputs. Inventory valuation adjustments (IVA) remove the effect of changes in the value of existing inventories from corporate profits and proprietors' income. (This change in value does not correspond to current production and therefore is not part of GDP). Capital consumption adjustments (CCAdj) increase profits and proprietors' income by the difference between estimates of economic depreciation and depreciation allowed by the tax code. Components of national income not shown are rental income of persons and net interest.

#### Sources

- Bureau of Economic Analysis (BEA), U.S. Dept. of Commerce National income and product accounts, international trade and investment data (except by country), auto and light truck sales
- Census Bureau, U.S. Dept. of Commerce Inventory-sales ratios, retail sales, capital goods orders, housing starts, exports and imports by country
- Bureau of Labor Statistics (BLS), U.S. Dept. of Labor All employment-related data, employment cost index, consumer and producer price indexes, unit labor cost, output per hour, compensation per hour, total factor productivity
- United States Department of Treasury Unified budget receipts, outlays, deficit
- *Federal Reserve Board* Index of industrial production, treasury yields, exchange rates, capacity utilization, consumer debt service
- The Survey Research Center, The University of Michigan Consumer sentiment index
- The Conference Board
- Help-wanted advertising index
- Organization for Economic Cooperation and Development (OECD) GDP for major trading partners (not available on FRED)

Federal Reserve Bank of St. Louis Post Office Box 442 St. Louis, Missouri 63166



Subscriber: Please include address label with subscription inquiries or address changes.

Digitized for FRASER http://fraser.stlouisfed.org/ Federal Reserve Bank of St. Louis