

## Energy and the Economy

As energy costs have risen, so have fears that these higher costs will derail economic activity. Professor James Hamilton of the University of California at San Diego has noted that sharp increases in the price of oil have preceded each post-World War II recession in the United States. Yet, some analysts suggest that energy prices today put less pressure on the economy than they did in the past—because less energy is used to produce each unit of GDP; said another way, the economy’s “energy efficiency” has increased. But such a conclusion must be drawn with care.

The chart displays annual U.S. energy use relative to use in 1970. The top line shows aggregate energy use, which in 2007 was 50 percent more than in 1970. The bottom line shows energy use per unit of real GDP, which in 2007 was 50 percent less than in 1970. Correctly assessing these trends requires adding one more variable: labor productivity (that is, increases in GDP per hour of work). The chart’s center line adjusts roughly for productivity gains by displaying the quantity of energy consumed per capita. Since 1970 energy use per capita has risen and fallen with energy prices and the business cycle, with notable decreases during 1975, 1979-82, 1990-91, and 2001. Yet, the quantity of energy consumed per capita in 2007 was approximately unchanged from that in 1970.

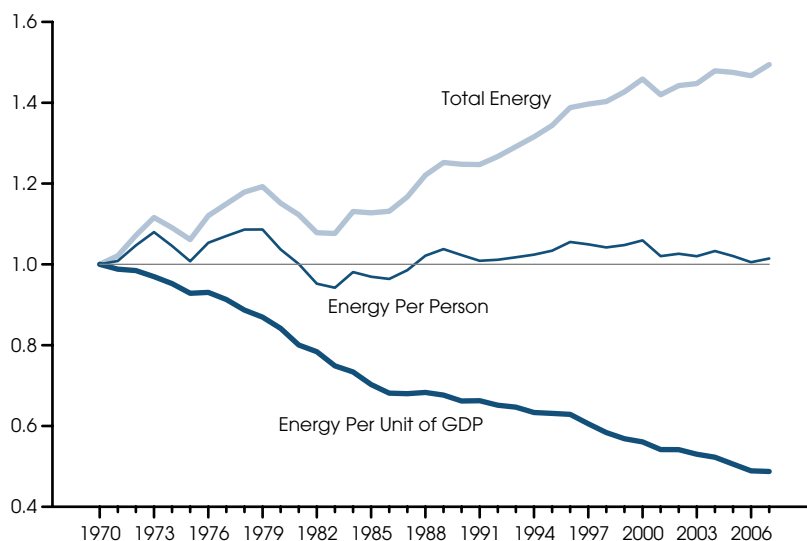
Energy use per capita is only a rough measure of the economy’s energy dependence because it does not separate the economy’s varied uses of energy. It does, however, emphasize an important underlying theme of America’s energy use: While energy efficiency has improved in almost every aspect of business and life at home, higher living standards have fully consumed that gain—overall energy use per person has changed little during the past four decades. Examples abound. In 1970, the average passenger automobile was driven 10,000 miles annually and consumed 737 gallons of fuel; in 2005, annual mileage was 12,400 using 554 gallons. In 1970, light trucks (then used almost exclusively by business) averaged 8,700 miles annually, consuming

866 gallons of fuel; in 2005, near-ubiquitous trucks and SUVs averaged 11,000 miles annually, consuming 612 gallons of fuel. For the typical household, heating and cooling comprises half of its housing-related energy usage. In 1970, the average new American single-family house was approximately 1,500 square feet; by 2005, the average home was 2,350 square feet. Appliances are more energy efficient, but there are more of them. Survey data for 1980 and 2001 show increases in the share of households with microwave ovens from 14 percent to 86 percent, dishwashers from 37 percent to 53 percent, personal computers from zero to 56 percent, and central air conditioning from 27 percent to 55 percent (the share of households with no air conditioning dropped from 42 percent in 1980 to 23 percent in 2001).

The constancy of the level of U.S. energy use per capita suggests caution when analyzing the impact of higher energy costs: Per-person energy intensity has changed little during the past four decades.

—Richard G. Anderson

**Energy Use in the United States 1970-2007**  
Annual Data, Normalized, 1970 = 100



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

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## Conventions used in this publication:

1. Shaded areas indicate recessions, as determined by the National Bureau of Economic Research.
2. *Percent change* refers to simple percent changes. *Percent change from year ago* refers to the percent change from the same month or quarter during the previous year. *Compounded annual rate of change* 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 compounded annual rate of change of  $x$  between the previous quarter  $t-1$  and the current quarter  $t$  is:  $[(x_t/x_{t-1})^4 - 1] \times 100$ . For monthly data replace 4 with 12.
3. All data with significant seasonal patterns are adjusted accordingly, unless labeled NSA.

We welcome your comments addressed to:

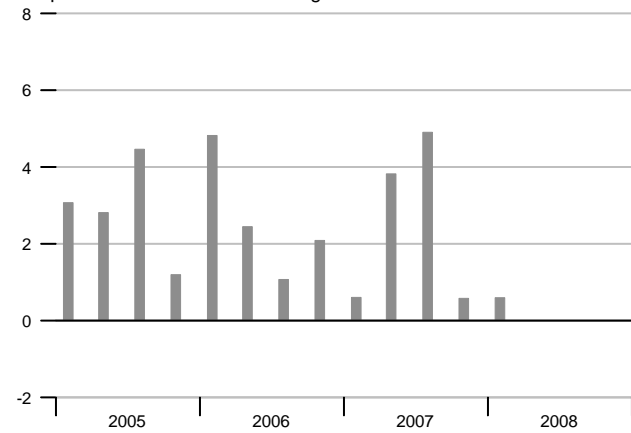
Editor, *National Economic Trends*  
Research Division  
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P.O. Box 442  
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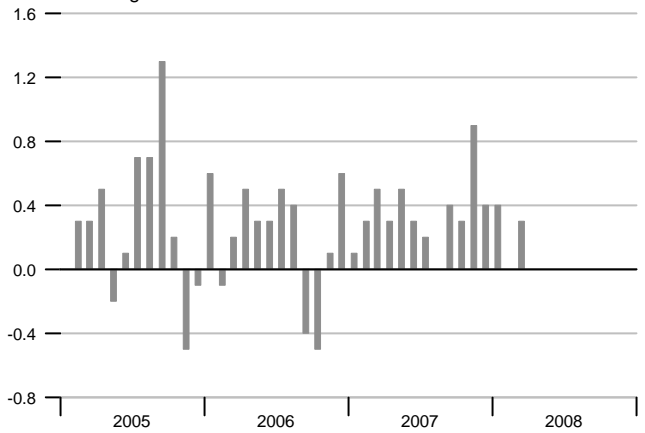
### Real GDP Growth

Compounded annual rates of change



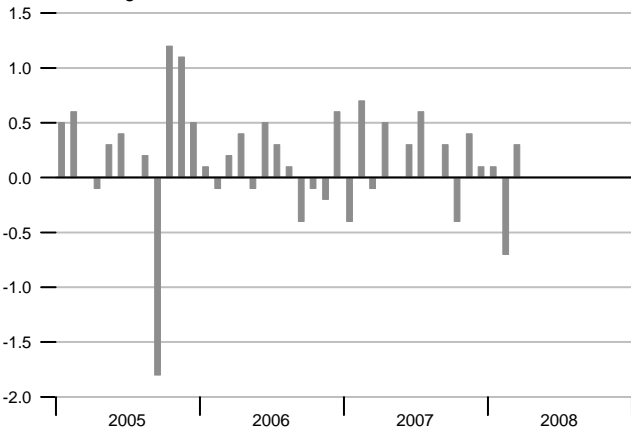
### Consumer Price Index

Percent change



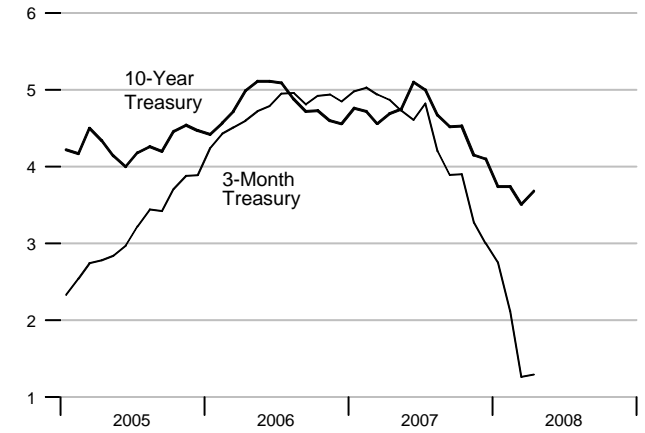
### Industrial Production

Percent change



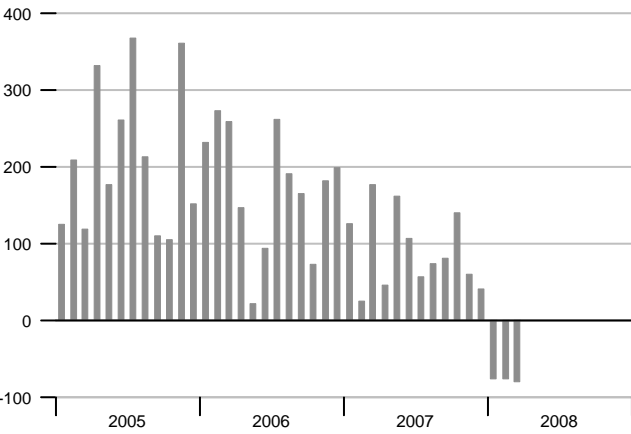
### Interest Rates

Percent



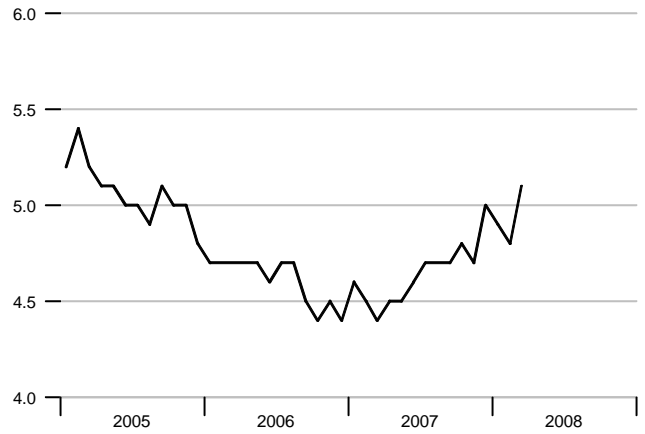
### Change in Nonfarm Payrolls

Thousands



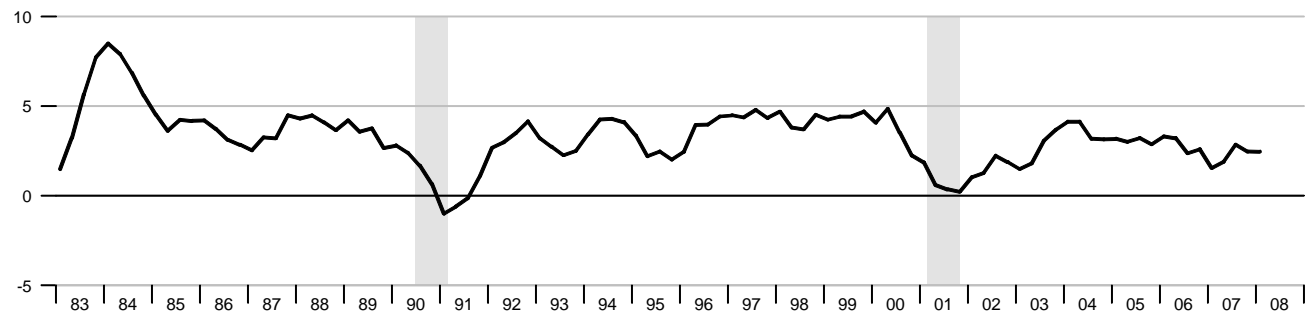
### Unemployment Rate

Percent of labor force



### Real Gross Domestic Product

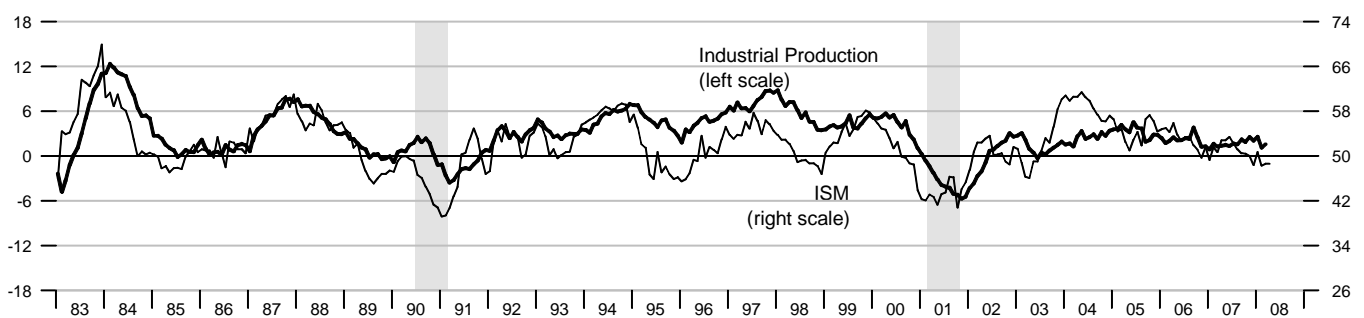
Percent change from year ago



### Industrial Production and Institute for Supply Management (ISM) Indexes

Percent change from year ago

Index



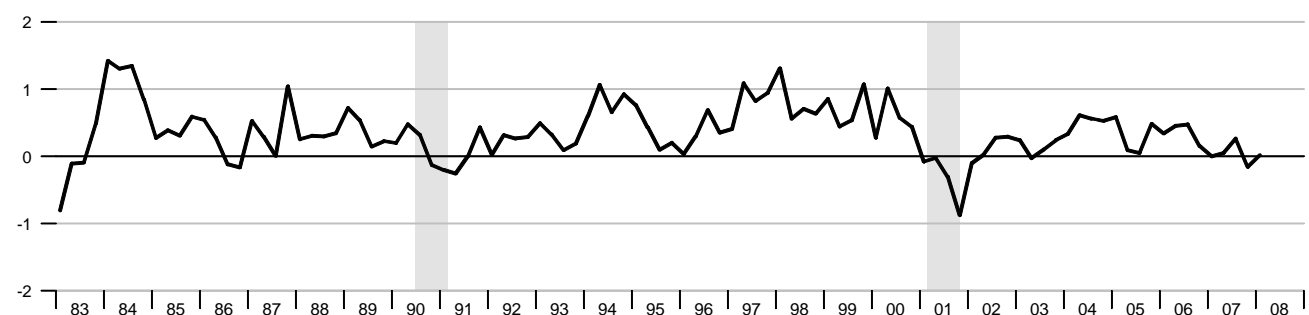
### Aggregate Private Nonfarm Hours

Percent change from year ago

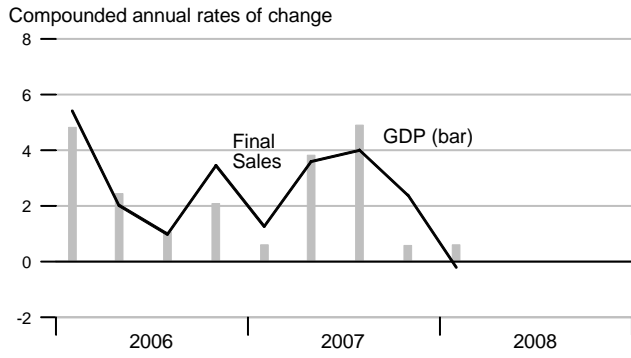


### Real Change in Private Inventories

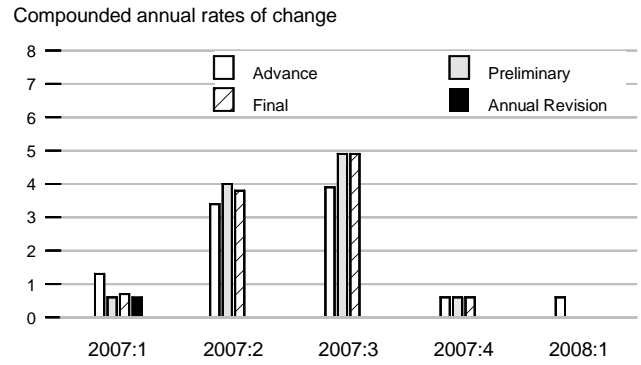
Percent of GDP



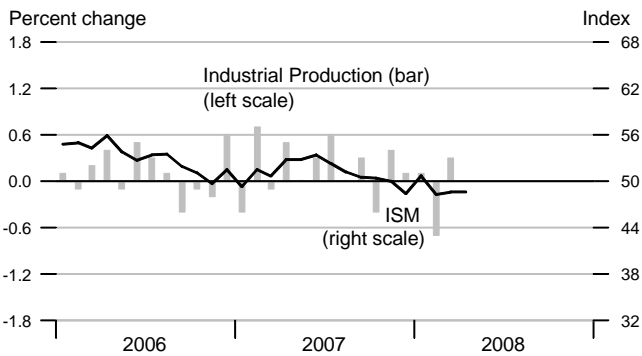
### Real Final Sales and GDP



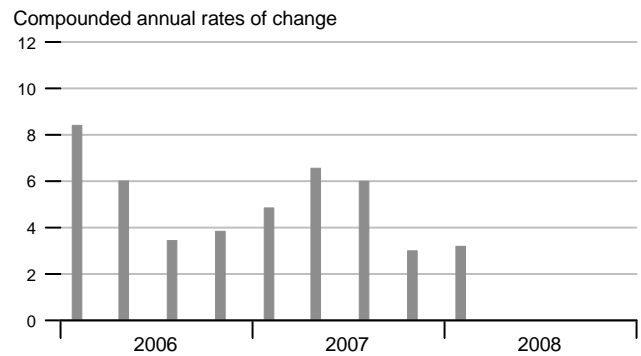
### Real GDP Revisions



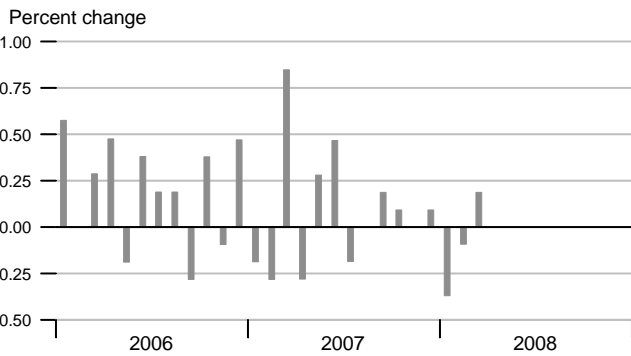
### Industrial Production and ISM Index



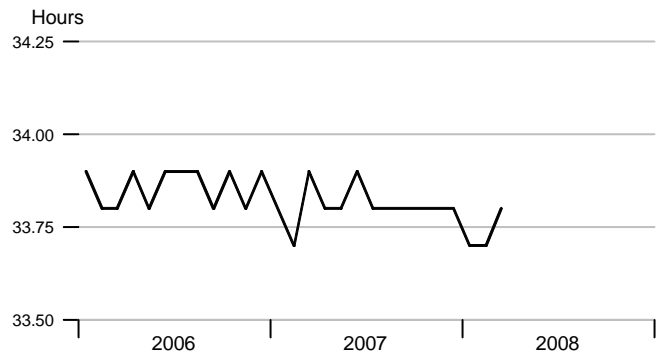
### Nominal Gross Domestic Product



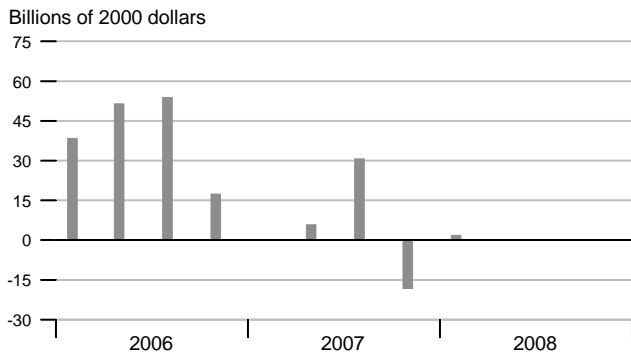
### Aggregate Private Nonfarm Hours



### Average Weekly Private Nonfarm Hours



### Real Change in Private Inventories

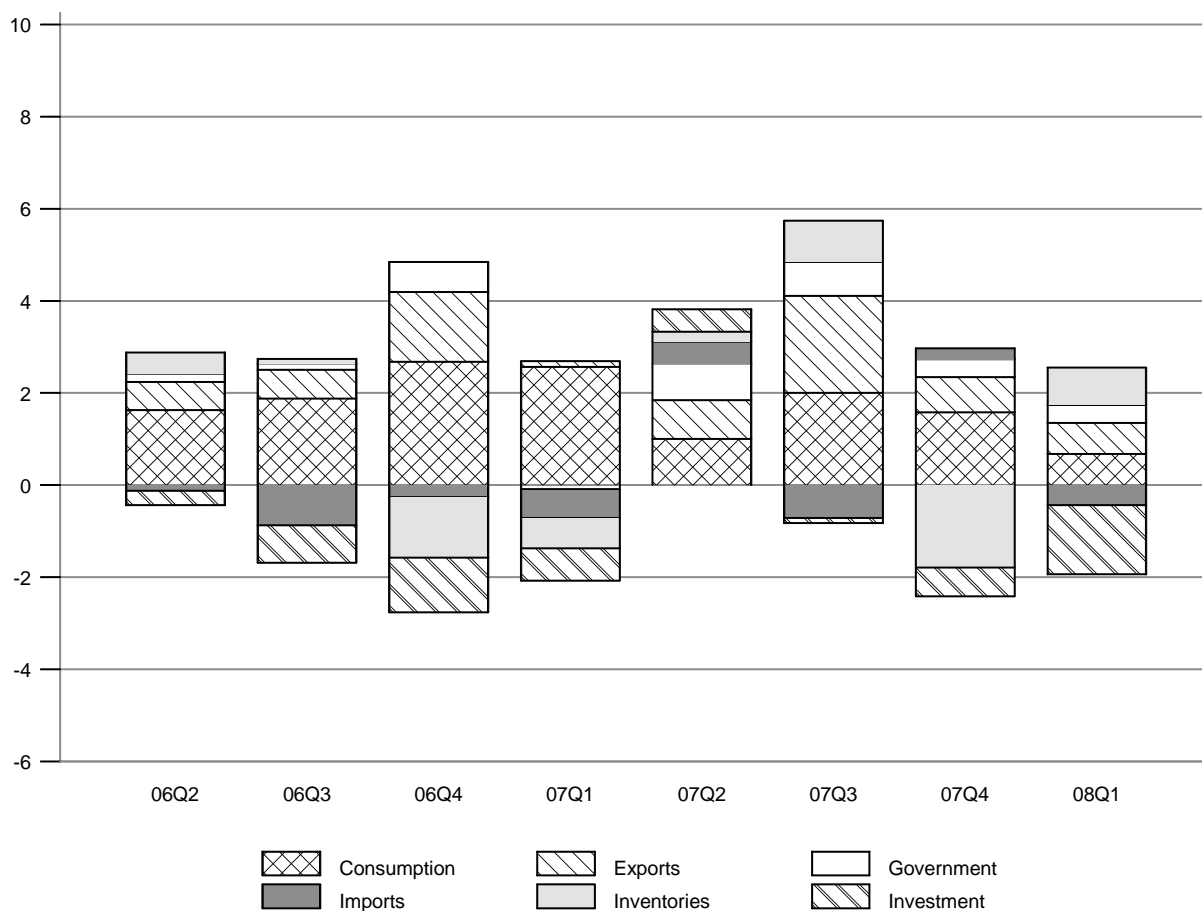


### Inventory-Sales Ratio



### Contribution of Components to Real GDP Growth

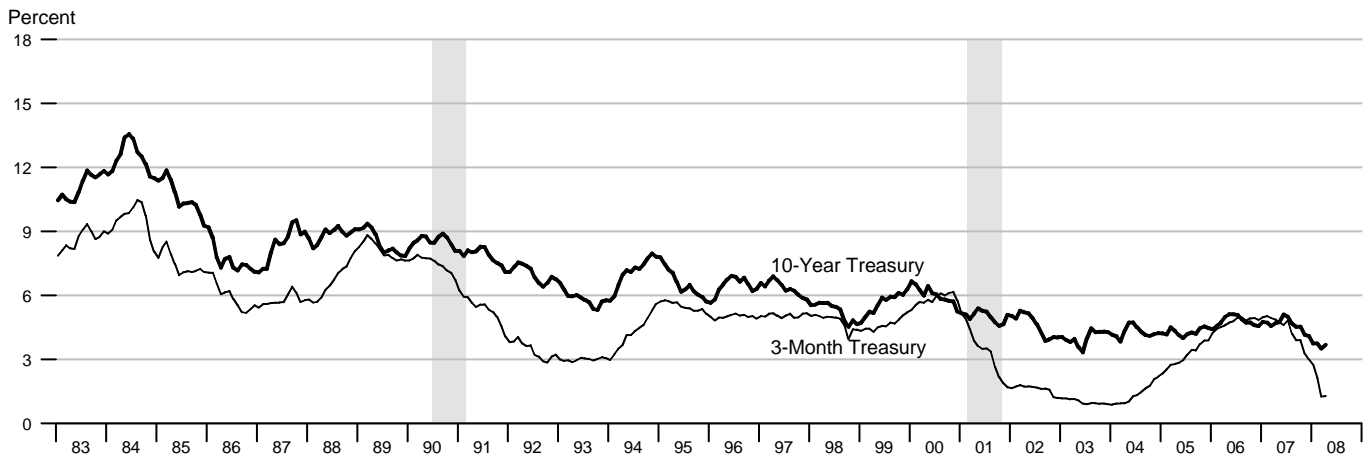
Percentage points at compounded annual rates



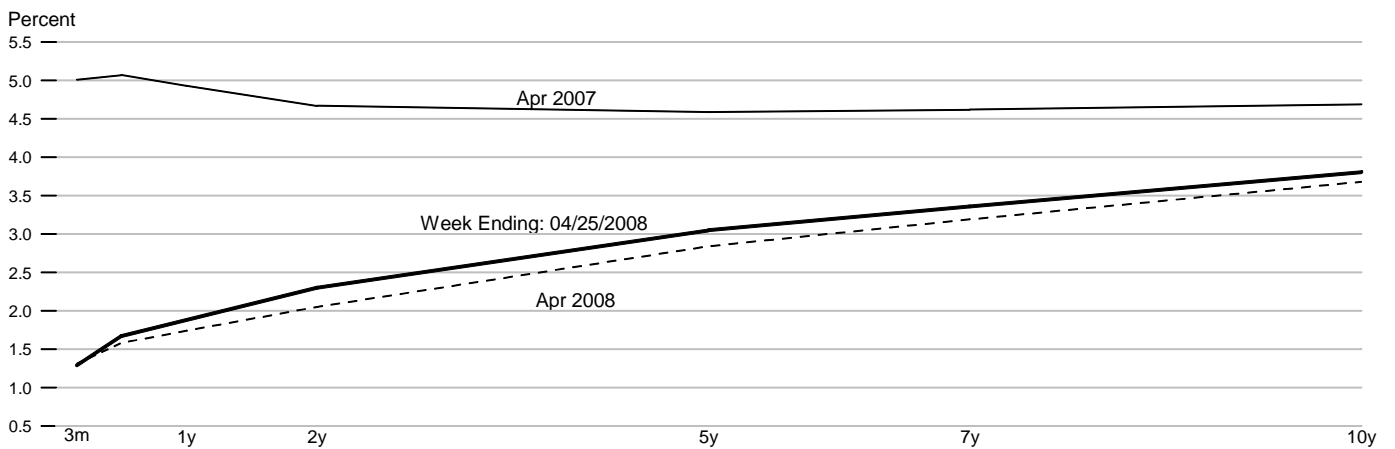
### Contributions to Real GDP Growth Rate

	2006			2007				2008
	2nd	3rd	4th	1st	2nd	3rd	4th	1st
<b>Final Sales</b>	1.98	0.97	3.40	1.25	3.60	4.02	2.37	-0.21
<b>Consumption</b>	1.63	1.88	2.68	2.56	1.00	2.01	1.58	0.68
<b>Fixed Investment</b>	-0.32	-0.80	-1.19	-0.70	0.49	-0.11	-0.62	-1.50
Nonresidential	0.44	0.53	-0.15	0.22	1.12	0.96	0.63	-0.28
Residential	-0.76	-1.33	-1.04	-0.93	-0.62	-1.08	-1.25	-1.23
<b>Government</b>	0.18	0.14	0.66	-0.09	0.79	0.74	0.38	0.39
Federal	-0.11	0.06	0.50	-0.46	0.41	0.50	0.04	0.32
State and Local	0.29	0.08	0.16	0.36	0.37	0.24	0.34	0.07
<b>Net Exports</b>	0.49	-0.25	1.25	-0.51	1.32	1.38	1.02	0.22
Exports	0.61	0.62	1.51	0.13	0.85	2.10	0.77	0.67
Imports	-0.12	-0.88	-0.26	-0.63	0.47	-0.72	0.24	-0.44
<b>Change in Inventory</b>	0.46	0.10	-1.31	-0.65	0.22	0.89	-1.79	0.81
<b>Residual</b>	-0.19	-0.26	-0.19	-0.22	-0.15	-0.25	-0.30	0.02
<b>Real GDP Growth</b>	2.44	1.07	2.09	0.60	3.82	4.91	0.58	0.60

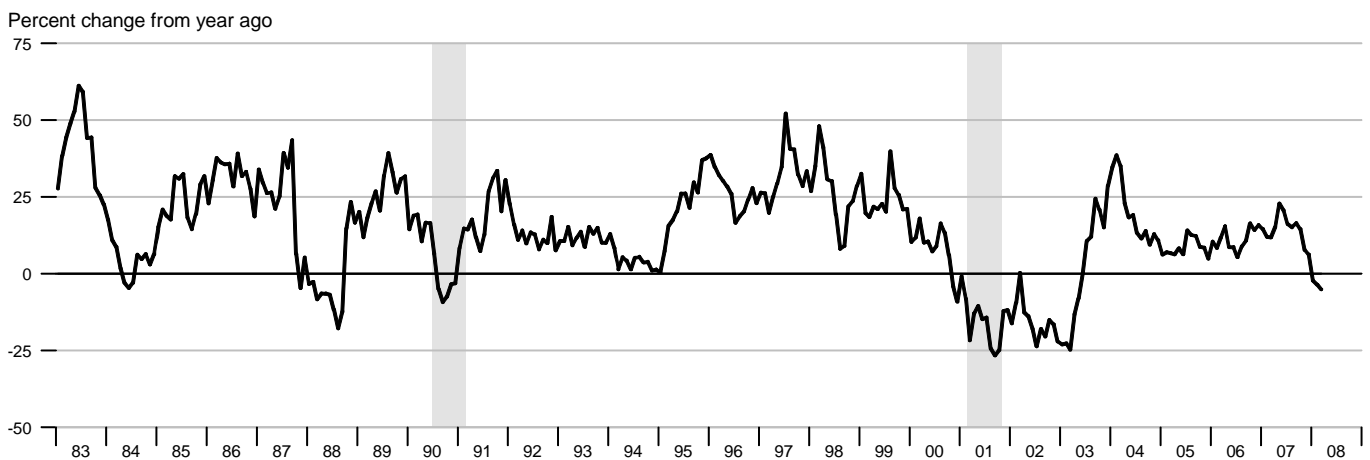
### Interest Rates



### Treasury Yield Curve

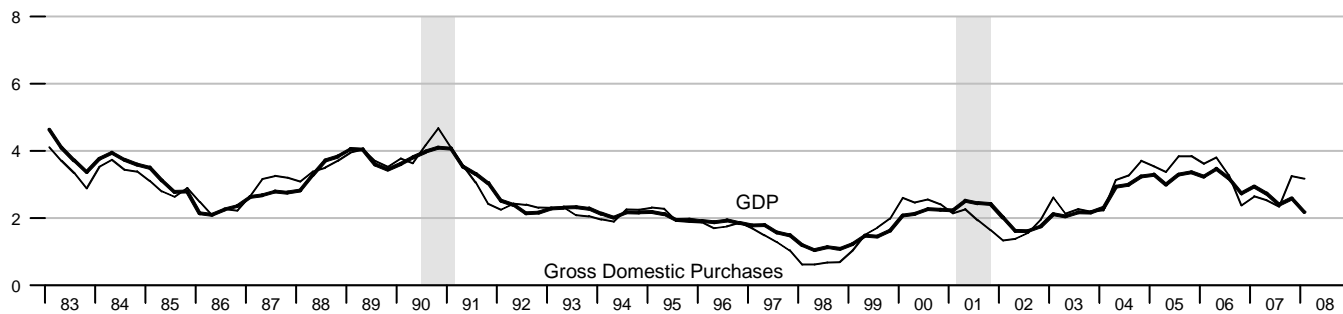


### Standard and Poor's 500 Index with Reinvested Dividends



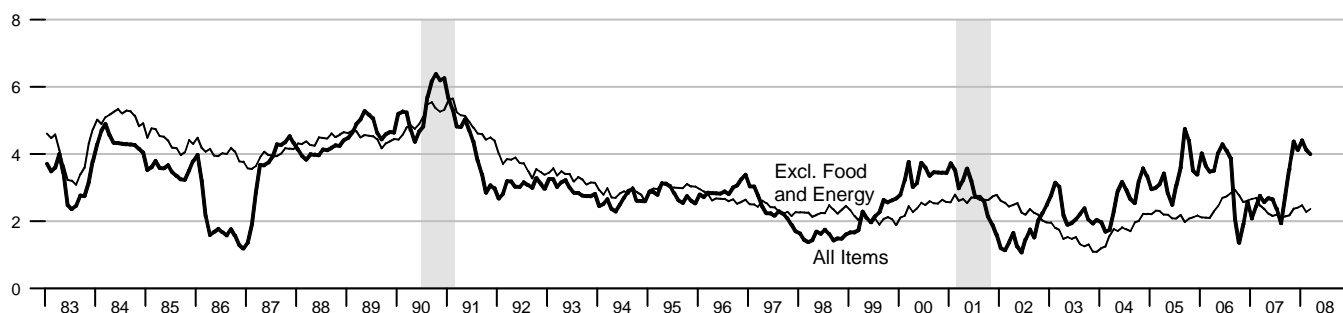
### NIPA Chain Price Indexes

Percent change from year ago



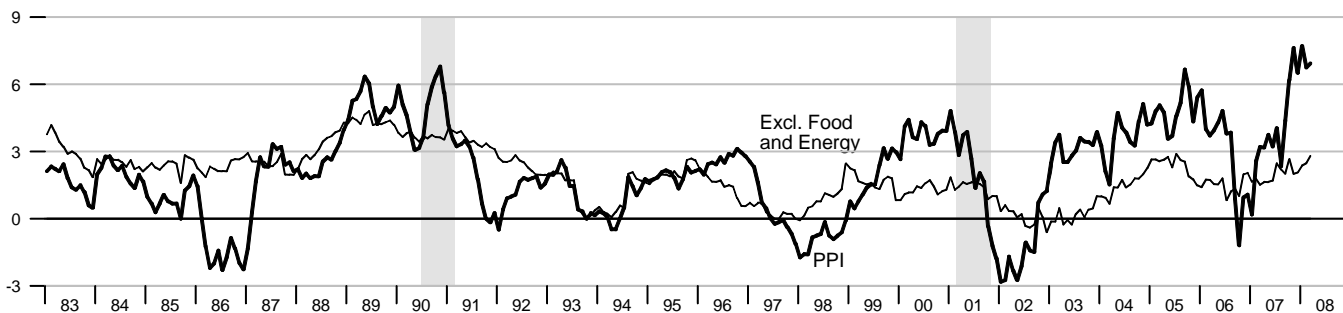
### Consumer Price Index

Percent change from year ago



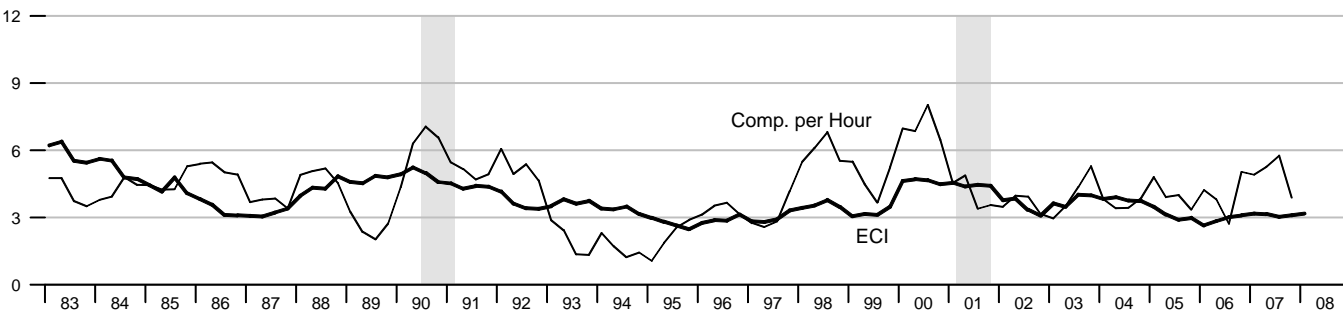
### Producer Price Index, Finished Goods

Percent change from year ago

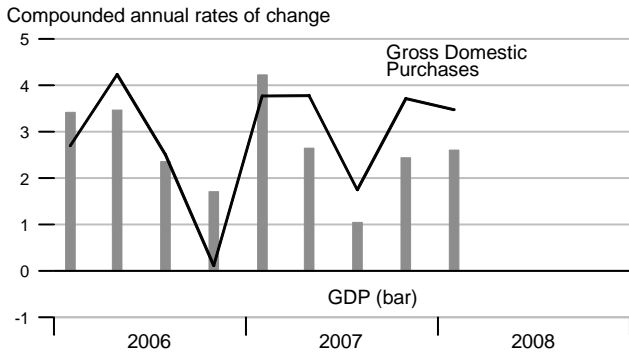


### Employment Cost Index and Compensation per Hour

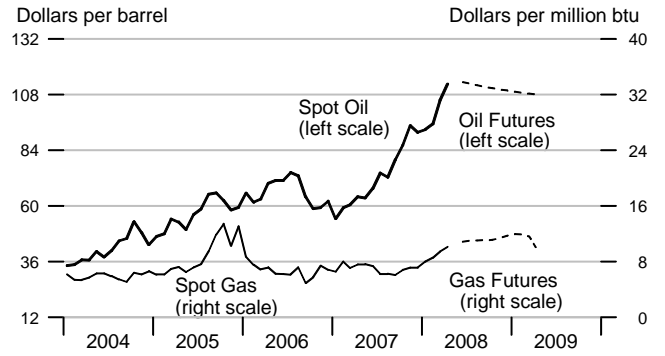
Percent change from year ago



### NIPA Chain Price Indexes

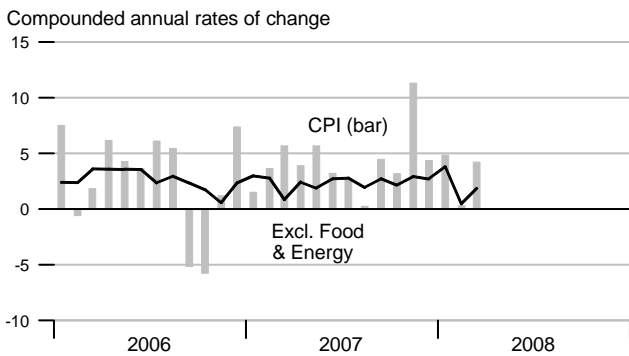


### Oil & Natural Gas Prices: Spot & Futures

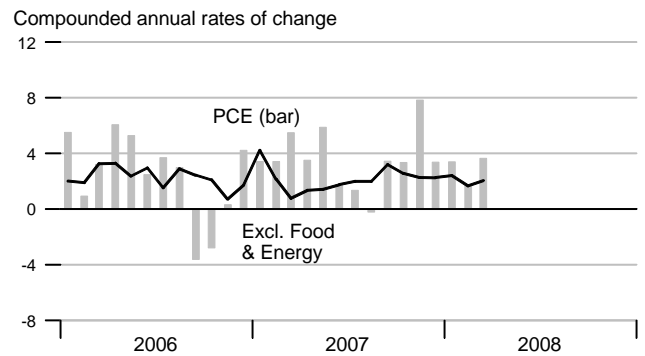


Note: Futures prices as of 04/30/2008.

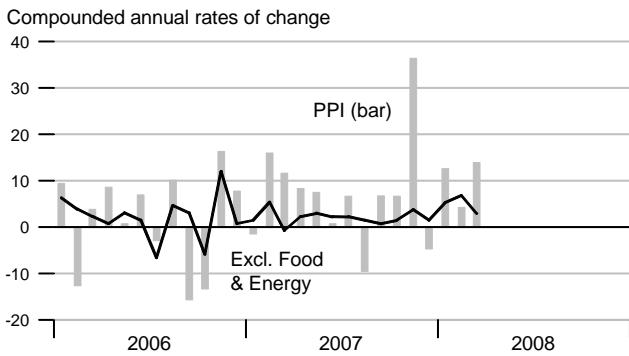
### Consumer Price Index



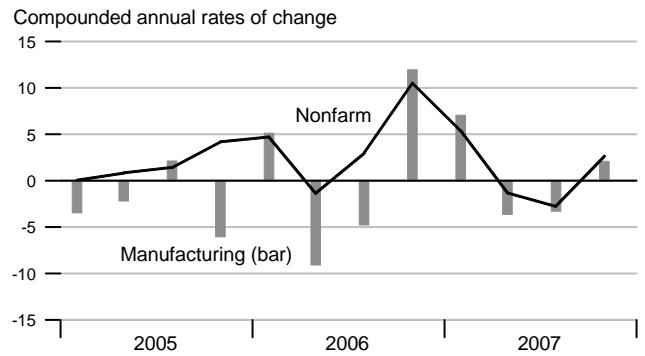
### Consumption Chain Price Index



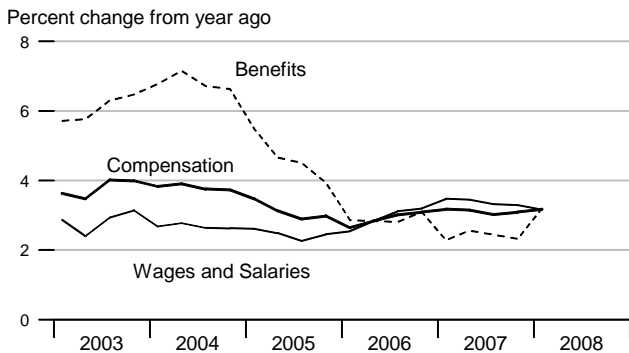
### Producer Price Index, Finished Goods



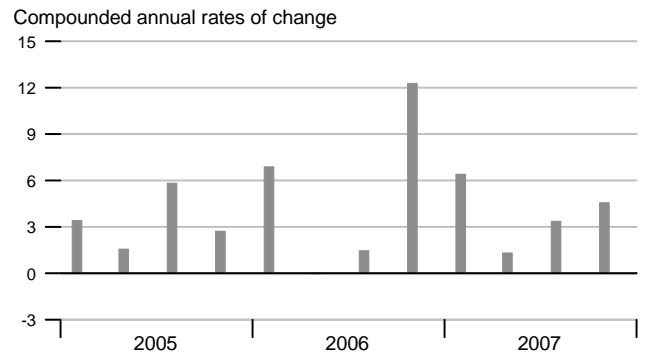
### Unit Labor Cost



### Employment Cost Index

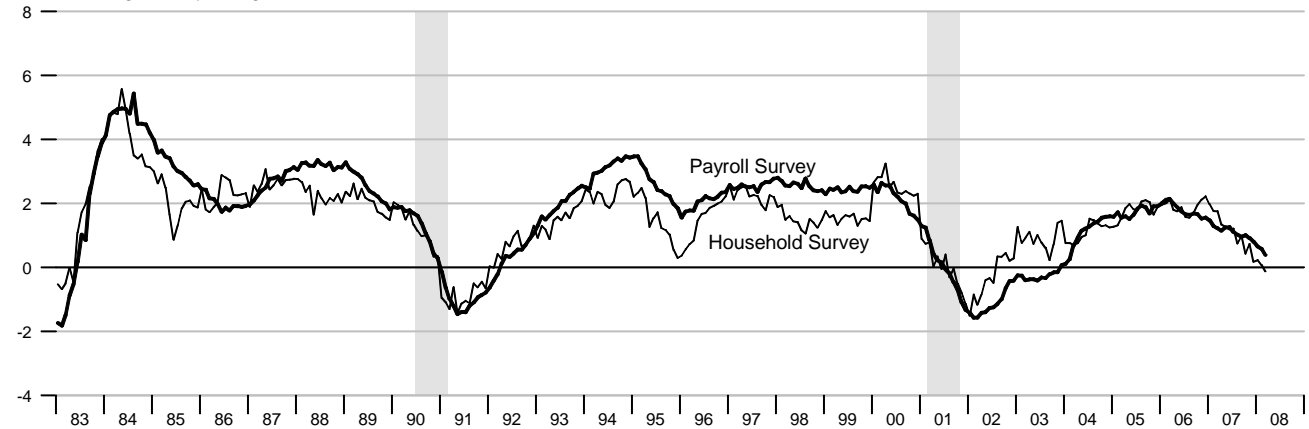


### Compensation per Hour



### Employment

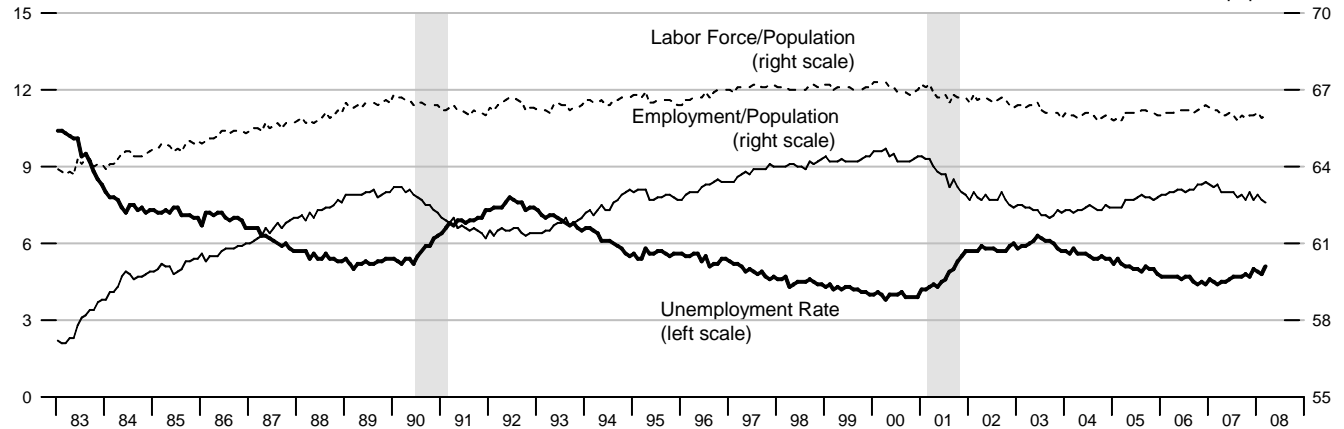
Percent change from year ago



### Unemployment, Labor Force Participation, and Employment Rates

Percent of labor force

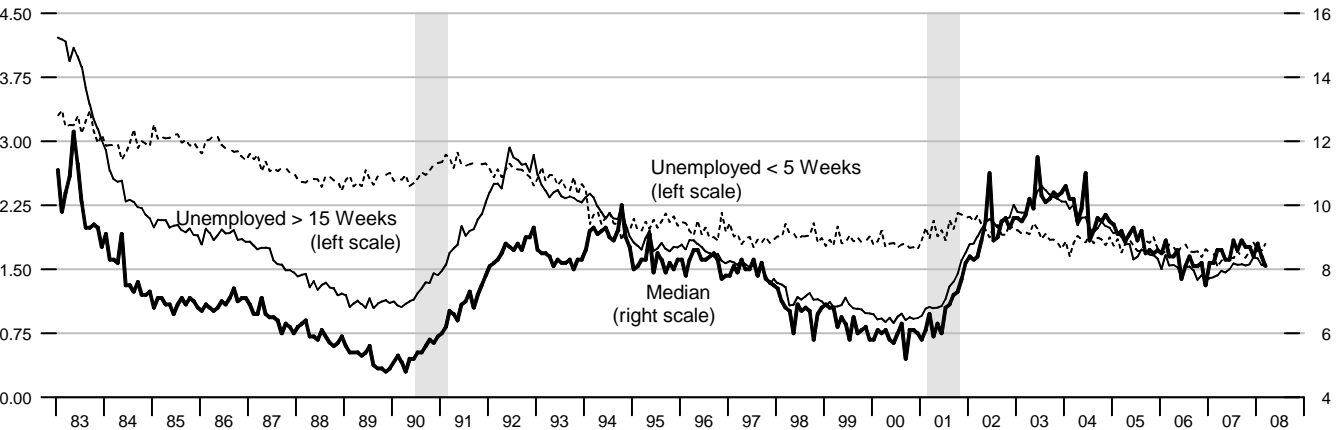
Percent of population



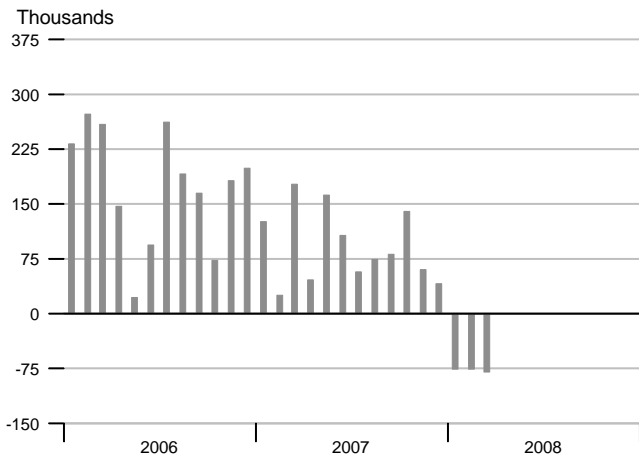
### Duration of Unemployment

Percent of labor force

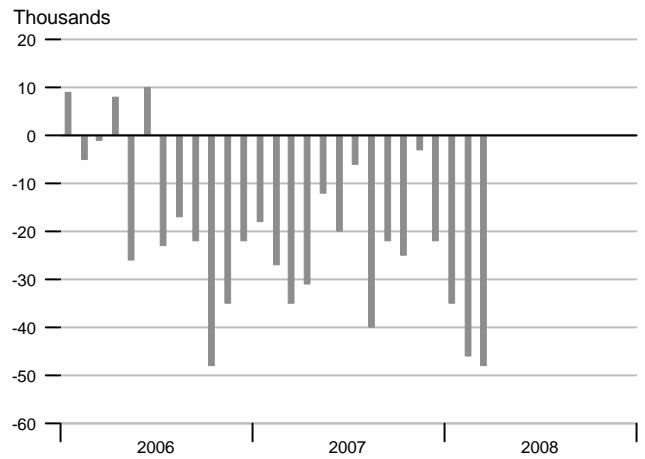
Weeks



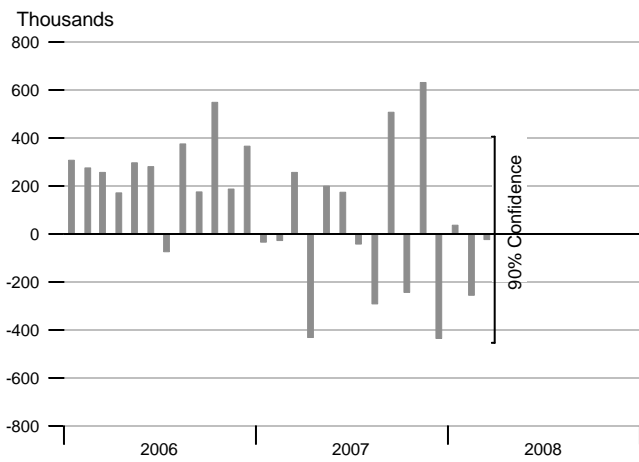
### Change in Nonfarm Payrolls



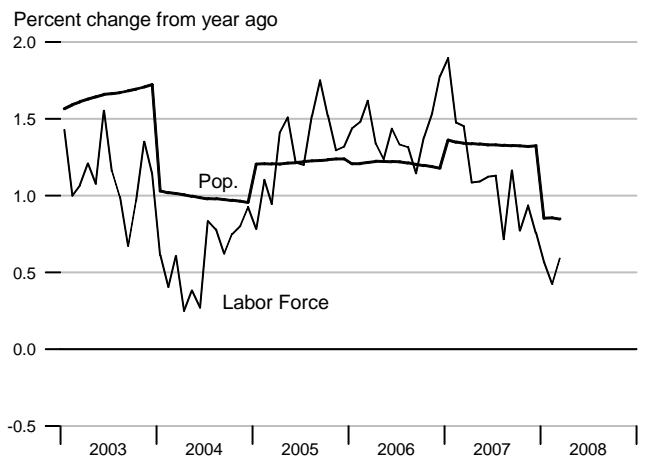
### Change in Manufacturing Payrolls



### Change in Household Employment



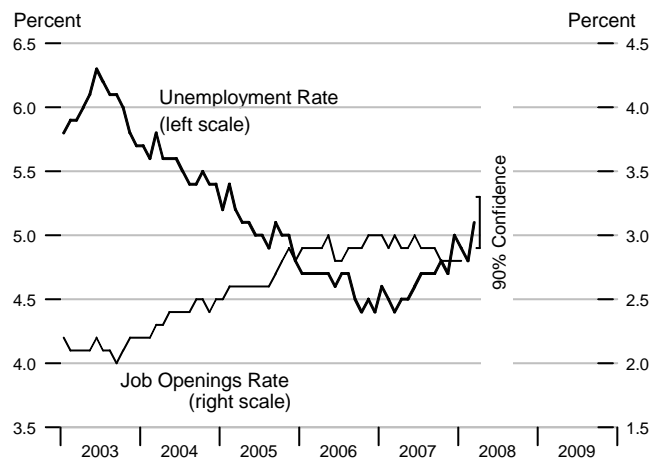
### Labor Force and Population



### Available Labor Supply and Components

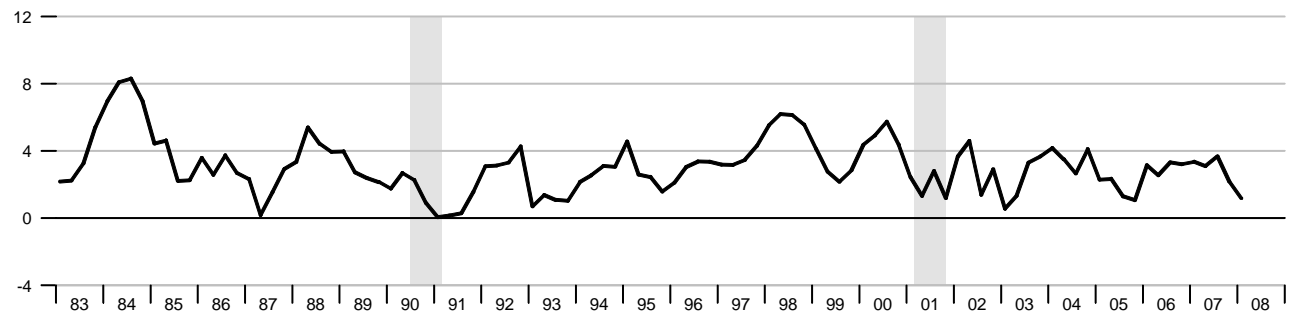


### Unemployment Rate & Job Openings Rate



### Real Disposable Personal Income

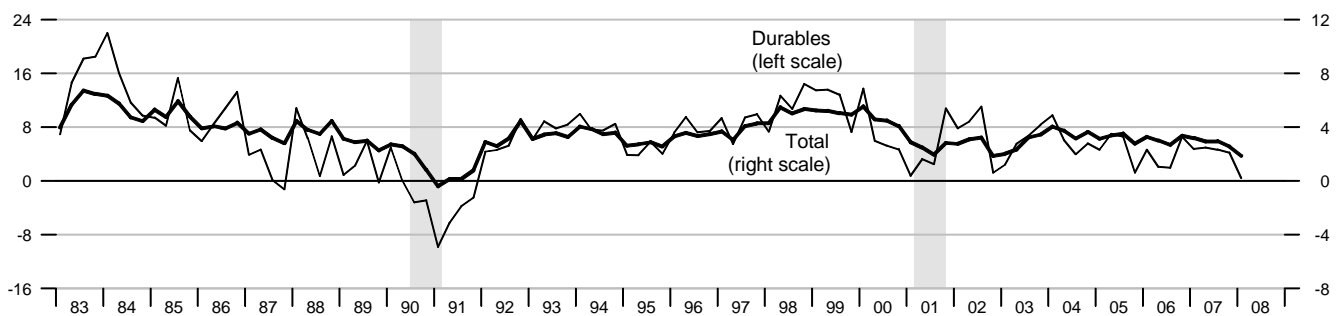
Percent change from year ago, quarterly data



### Real Consumption

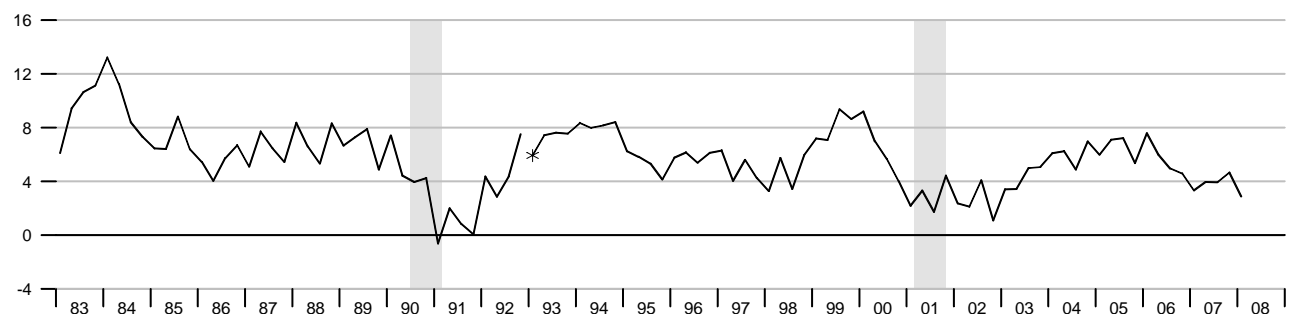
Percent change from year ago, quarterly data

Percent change from year ago, quarterly data



### Retail and Food Services Sales

Percent change from year ago, quarterly average

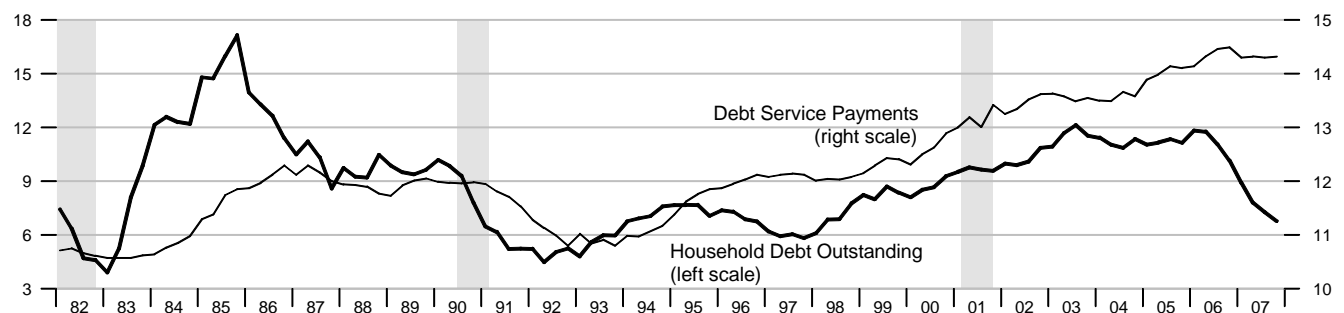


\*Data from Jan. 1992 to the present are on a NAICS basis; data prior to Jan. 1992 are on an SIC basis and are not strictly comparable (see End Note).

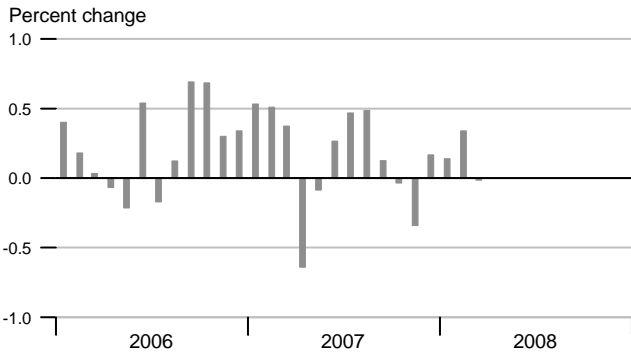
### Debt Service Payments and Household Debt Outstanding

Percent change from year ago, quarterly data

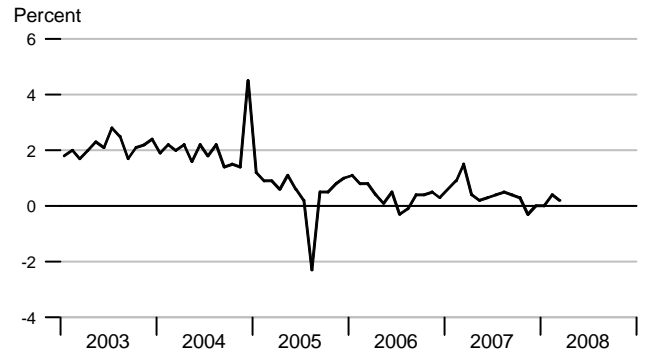
Percent of disposable personal income



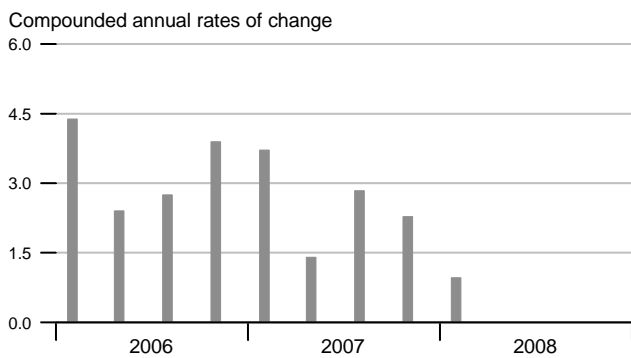
### Real Disposable Personal Income



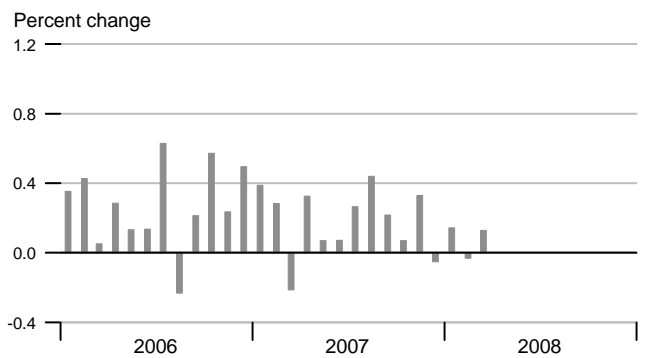
### Personal Saving Rate



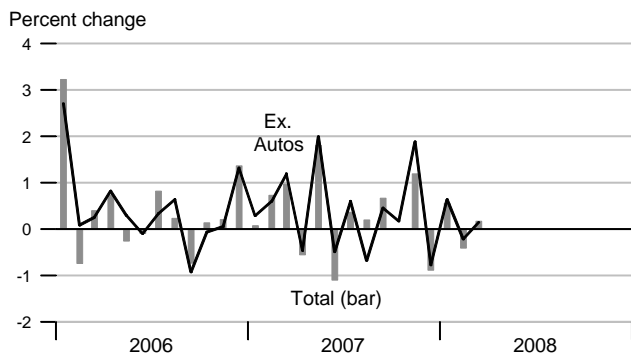
### Real Consumption



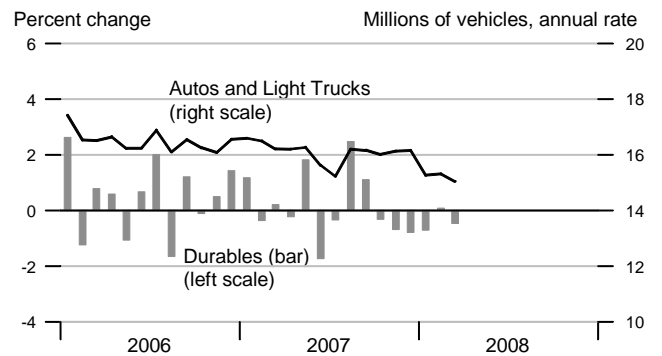
### Real Consumption



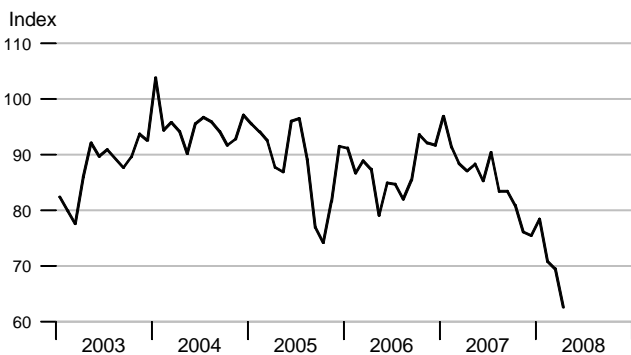
### Retail & Food Services



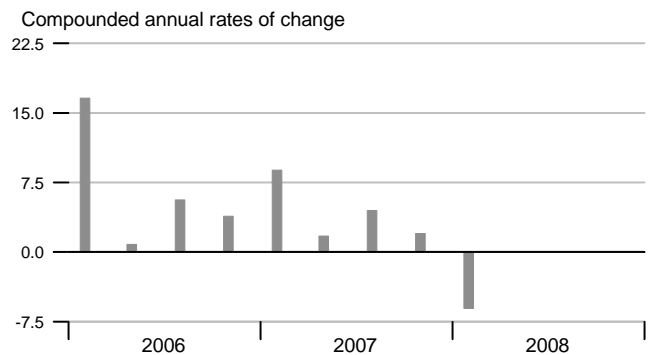
### Real Durables Consumption & Vehicle Sales



### Consumer Sentiment (U. of Michigan)

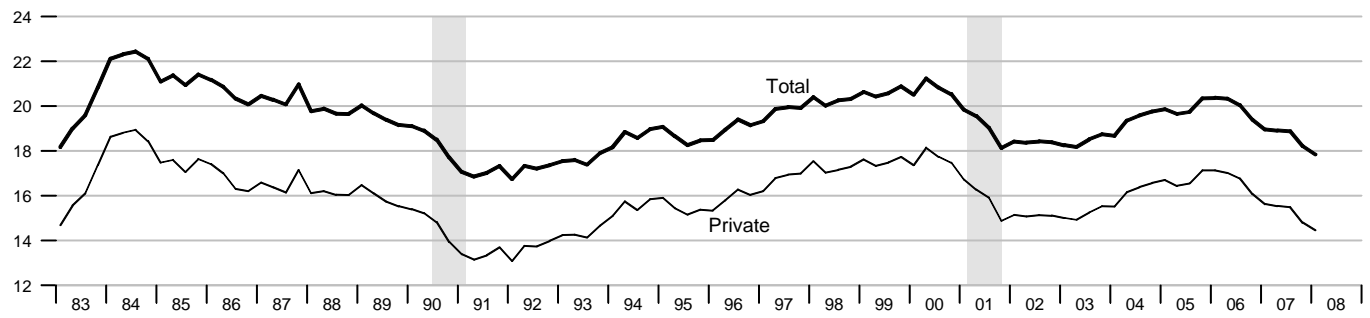


### Real Durables Consumption



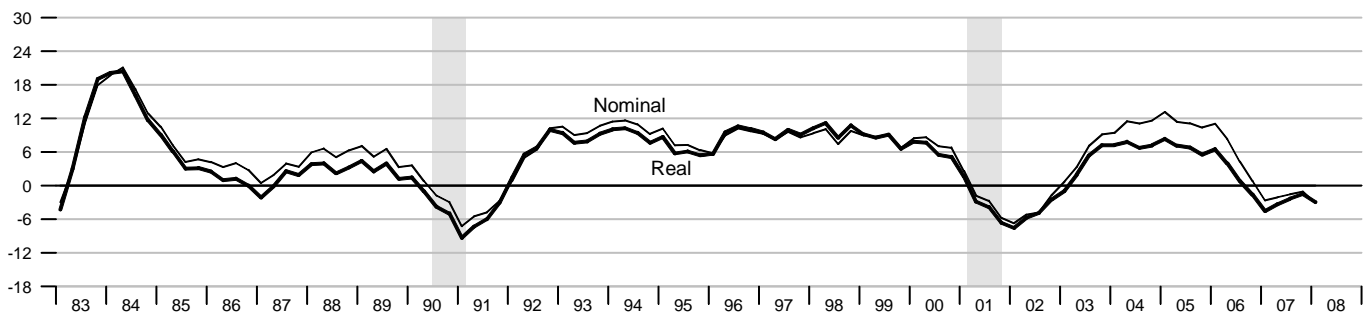
### Investment

Percent of nominal GDP



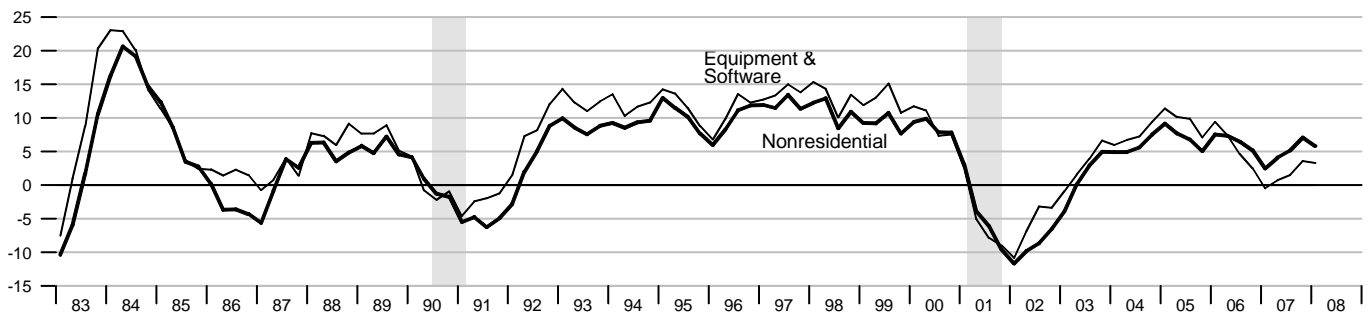
### Private Fixed Investment

Percent change from year ago



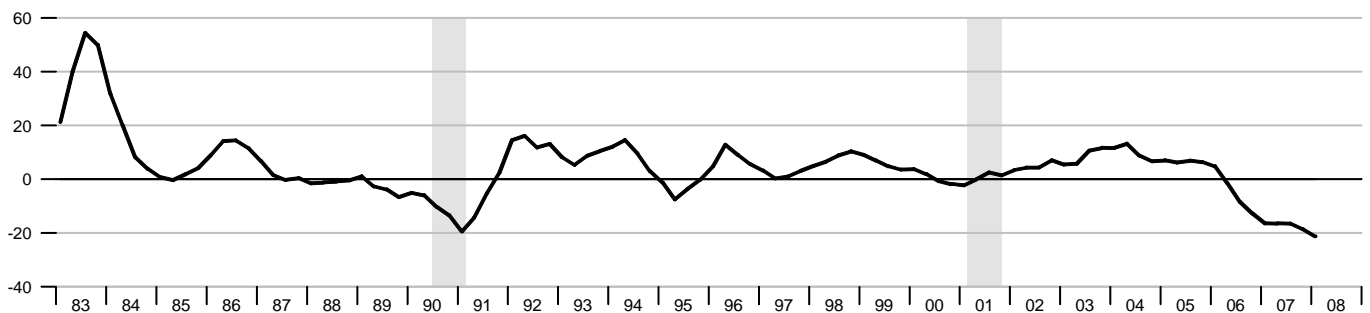
### Real Nonresidential Fixed and Equipment & Software Investment

Percent change from year ago



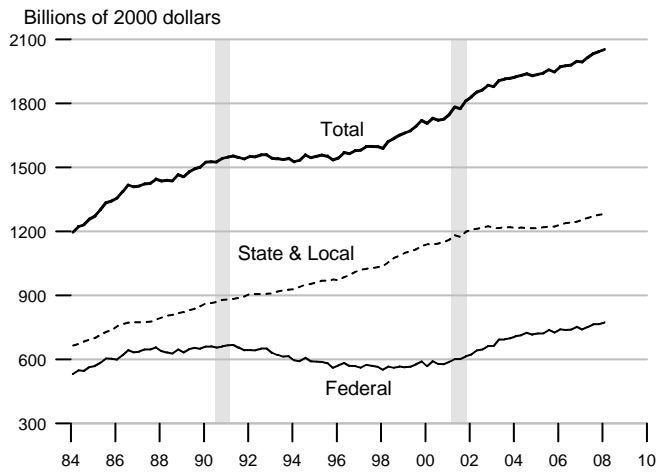
### Real Residential Fixed Investment

Percent change from year ago

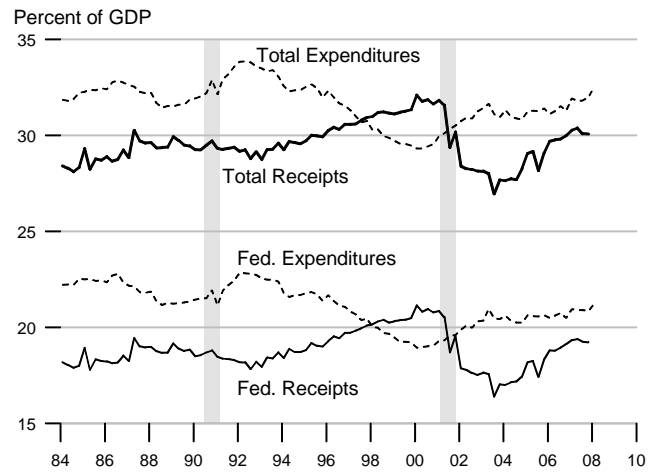




**Govt. Consumption and Investment**



**Govt. Current Receipts and Expenditures**



**Government Budgets**

Billions of dollars

**National Income Accounts**

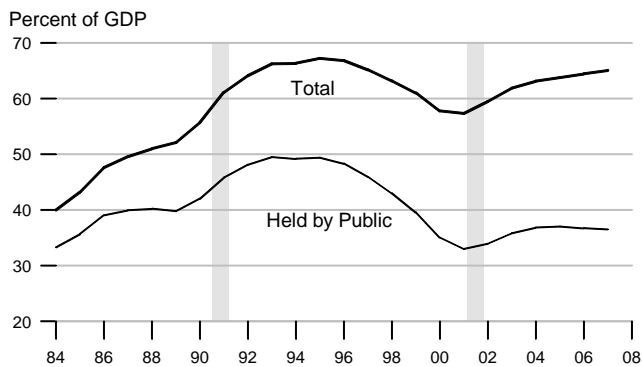
Calendar Years

**Unified Budget**

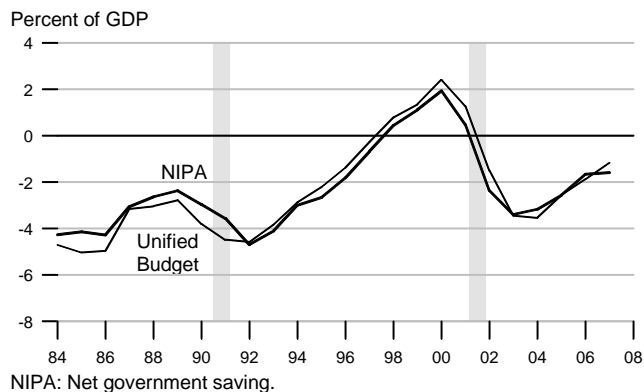
Fiscal Years

	State and Local			Federal			Federal		
	Receipts	Expenditures	Surplus or Deficit (-)	Receipts	Expenditures	Surplus or Deficit (-)	Receipts	Outlays	Surplus or Deficit (-)
1991	789.2	793.3	-4.1	1101.3	1315.0	-213.7	1055.1	1324.3	-269.2
1992	845.7	845.0	0.7	1147.2	1444.6	-297.4	1091.3	1381.6	-290.3
1993	886.9	886.0	0.9	1222.5	1496.0	-273.5	1154.5	1409.5	-255.1
1994	942.9	932.4	10.5	1320.8	1533.1	-212.3	1258.7	1461.9	-203.2
1995	990.2	978.2	12.0	1406.5	1603.5	-197.0	1351.9	1515.9	-164.0
1996	1043.3	1017.5	25.8	1524.0	1665.8	-141.8	1453.2	1560.6	-107.4
1997	1097.4	1058.3	39.1	1653.1	1708.9	-55.8	1579.4	1601.3	-21.9
1998	1163.2	1111.2	52.0	1773.8	1734.9	38.9	1722.0	1652.7	69.3
1999	1236.7	1186.3	50.4	1891.2	1787.6	103.6	1827.6	1702.0	125.6
2000	1319.5	1269.5	50.0	2053.8	1864.4	189.4	2025.5	1789.2	236.2
2001	1373.0	1368.2	4.8	2016.2	1969.5	46.7	1991.4	1863.2	128.2
2002	1410.1	1444.3	-34.2	1853.2	2101.1	-247.9	1853.4	2011.2	-157.8
2003	1494.2	1514.5	-20.3	1879.9	2252.1	-372.2	1782.5	2160.1	-377.6
2004	1594.3	1592.8	1.5	2008.9	2379.5	-370.6	1880.3	2293.0	-412.7
2005	1706.9	1691.7	15.2	2243.4	2561.6	-318.2	2153.9	2472.2	-318.3
2006	1797.7	1773.0	24.7	2495.8	2715.8	-220.0	2407.3	2655.4	-248.2
2007	1886.4	1898.2	-11.8	2671.4	2892.0	-220.6	2568.2	2730.2	-162.0
2006Q2	1803.7	1760.9	42.8	2471.5	2711.4	-239.9	772.1	675.7	96.5
2006Q3	1806.7	1794.4	12.3	2513.1	2752.3	-239.2	596.9	638.7	-41.7
2006Q4	1812.4	1804.8	7.6	2561.9	2743.4	-181.5	573.5	653.9	-80.4
2007Q1	1856.6	1862.4	-5.8	2619.7	2838.2	-218.5	547.4	725.4	-178.0
2007Q2	1889.9	1876.5	13.4	2670.1	2876.9	-206.8	824.4	686.9	137.5
2007Q3	1892.8	1905.8	-13.0	2689.4	2919.7	-230.3	622.3	664.2	-41.8
2007Q4	1906.2	1948.1	-41.9	2706.5	2933.2	-226.7	606.2	711.7	-105.5
2008Q1	.	1985.0	.	.	3008.2	.	539.8	745.7	-205.9

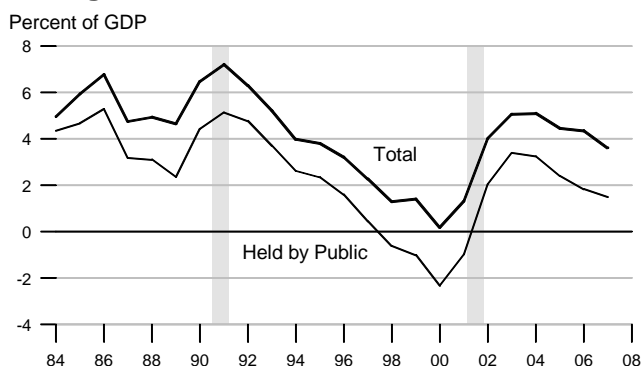
### Federal Debt



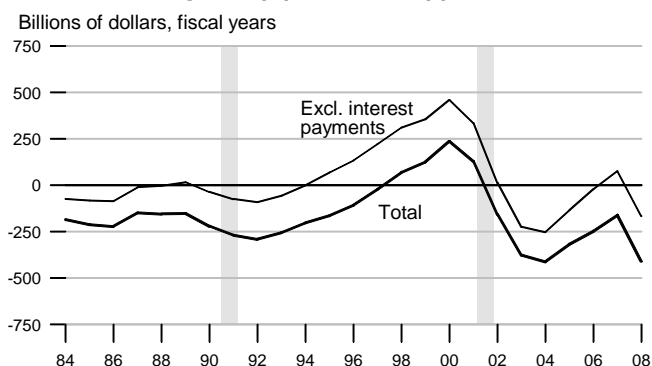
### Federal Surplus (+) / Deficit (-)



### Change in Federal Debt



### Federal Surplus (+) / Deficit (-), Unified Basis

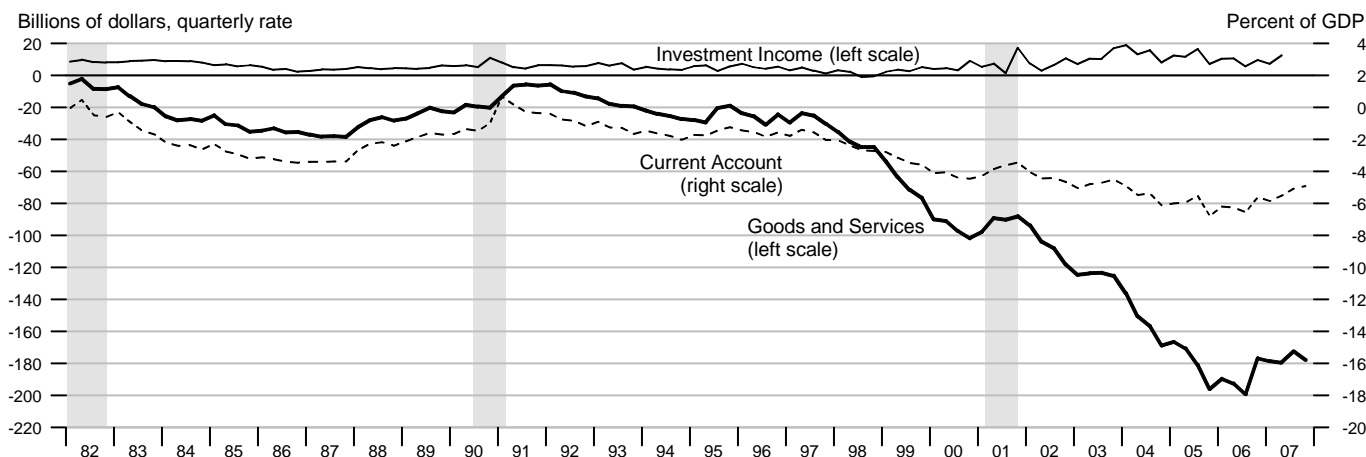


### Federal Government Debt

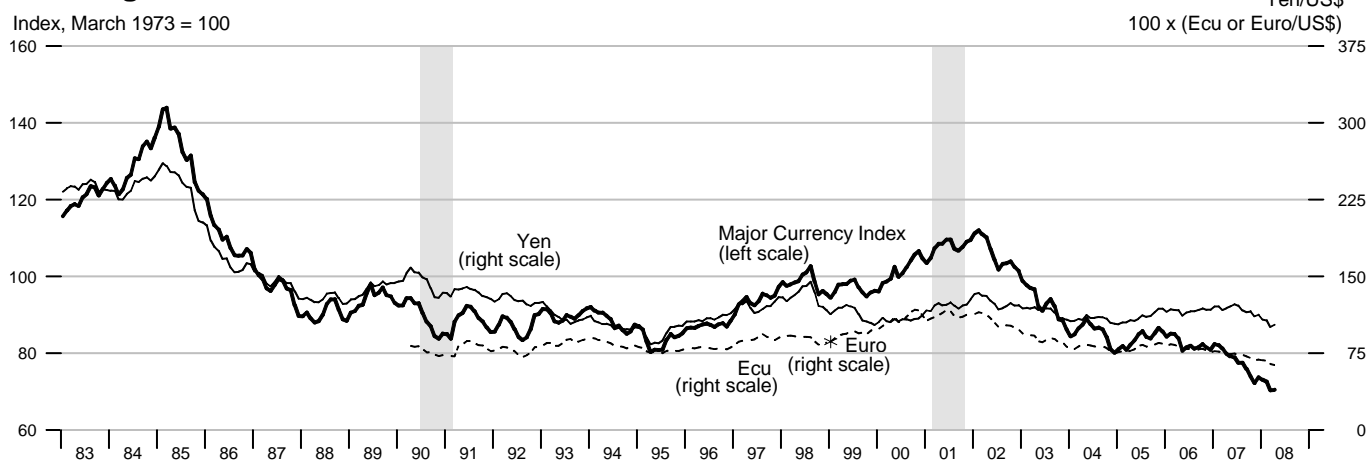
Billions of dollars, end of month or fiscal year  
Excludes Agency-issued debt

		Total Public Debt	Held by Agencies and Trusts	Held by Public		Held by Private Investors	
				Total	Federal Reserve Banks	Total	Foreign and International
2005		7932.7	3331.1	4601.6	736.4	3864.9	1930.6
2006		8507.0	3663.8	4843.2	768.9	4074.2	2027.3
2007		9007.7	3958.4	5049.2	779.6	4269.7	2240.3
2004	March	7131.1	2954.4	4176.7	674.1	3502.8	1677.1
	June	7274.3	3055.6	4218.7	687.4	3531.5	1739.6
	September	7379.1	3075.7	4303.4	700.3	3607.0	1798.7
	December	7596.1	3189.8	4406.4	717.8	3690.6	1853.4
2005	March	7776.9	3204.5	4572.4	717.3	3855.4	1956.3
	June	7836.5	3308.9	4527.6	724.7	3803.0	1879.6
	September	7932.7	3331.1	4601.6	736.4	3864.9	1930.6
	December	8170.4	3455.8	4714.6	744.2	3970.6	2036.0
2006	March	8371.2	3498.4	4872.8	758.5	4114.0	2084.5
	June	8420.0	3622.6	4797.5	766.4	4030.8	1979.8
	September	8507.0	3663.8	4843.2	768.9	4074.2	2027.3
	December	8680.2	3779.0	4901.2	778.9	4122.1	2105.0
2007	March	8849.7	3795.4	5054.3	780.9	4273.1	2196.7
	June	8867.7	3924.7	4943.0	790.5	4152.6	2193.4
	September	9007.7	3958.4	5049.2	779.6	4269.7	2240.3
	December	9229.2	4092.9	5136.3	740.6	4395.7	2335.3

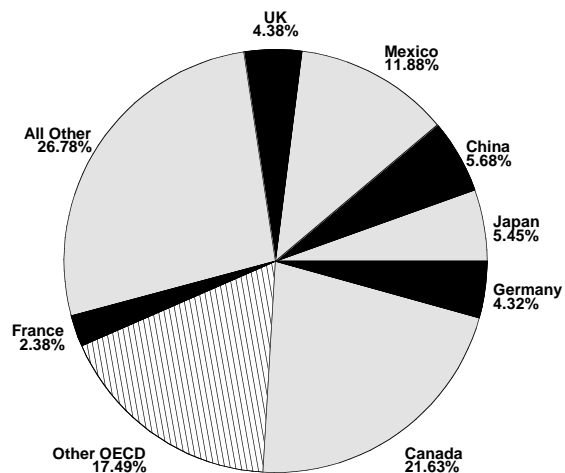
### Current Account, Trade and Investment Income Balances



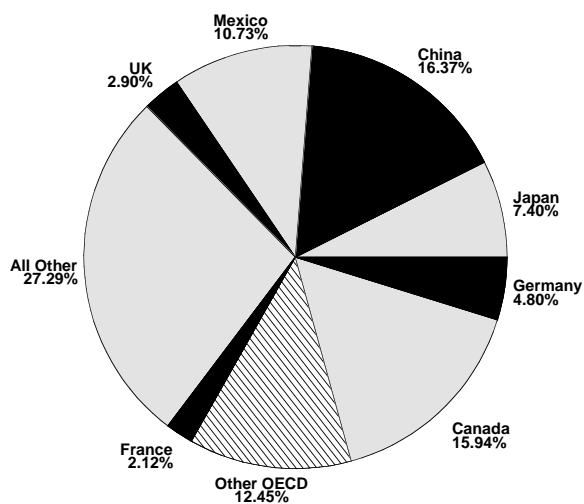
### Exchange Rates



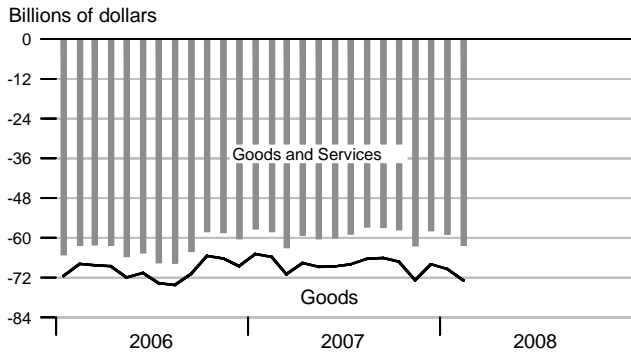
### Goods Export Shares, 2007



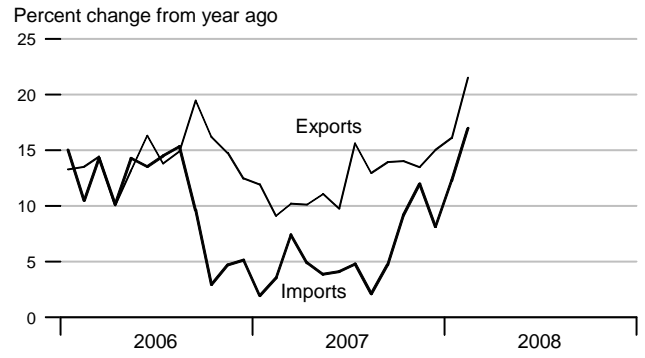
### Goods Import Shares, 2007



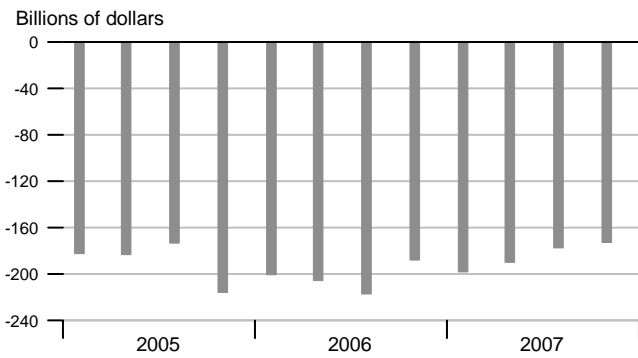
### Trade Balance



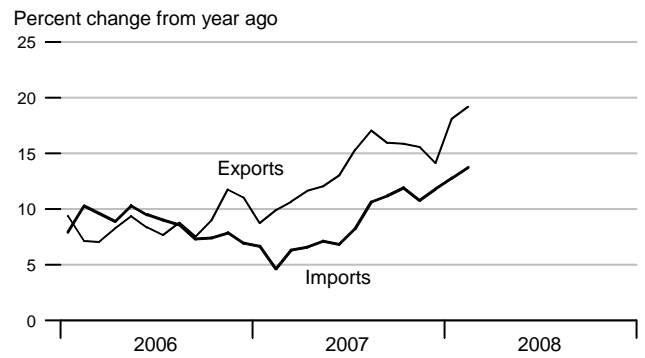
### Goods Trade



### Current Account Balance

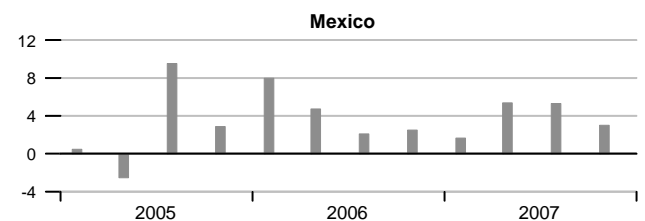
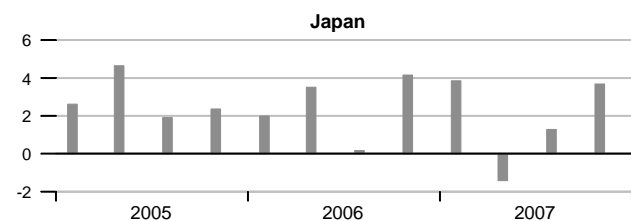
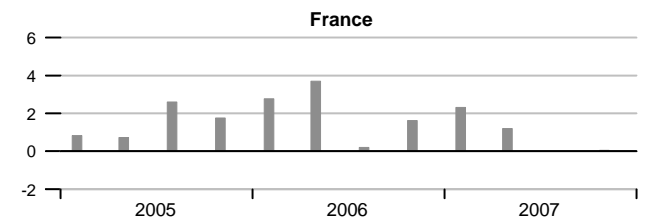
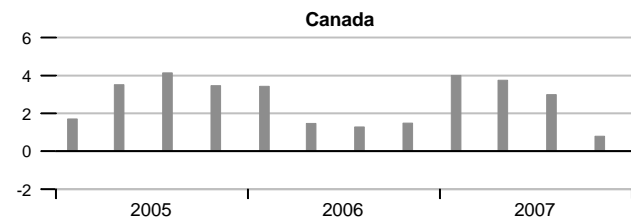
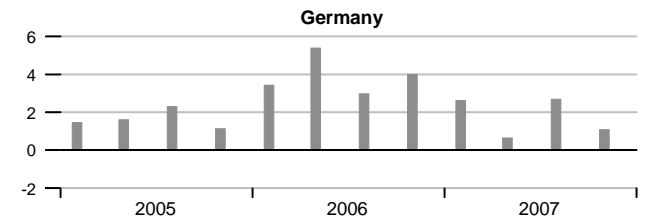
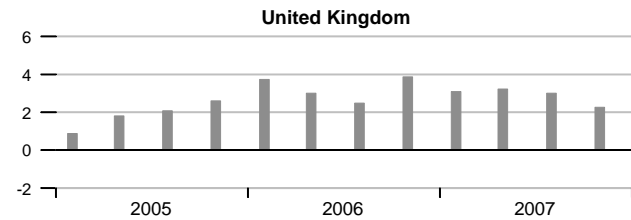


### Services Trade

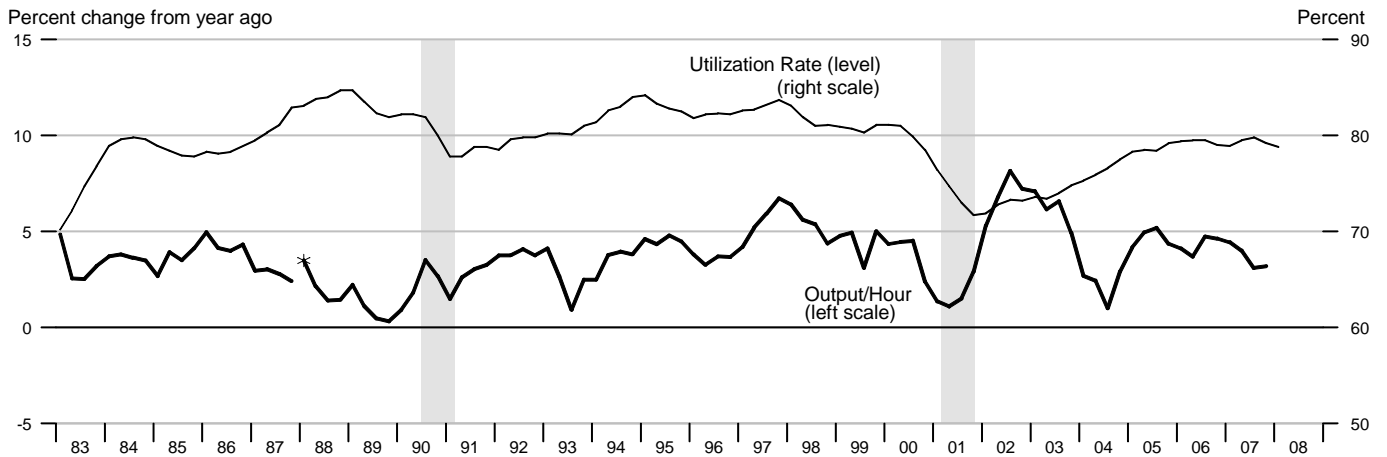


### Real GDP Growth of Major Trading Partners

Compounded annual rates of change

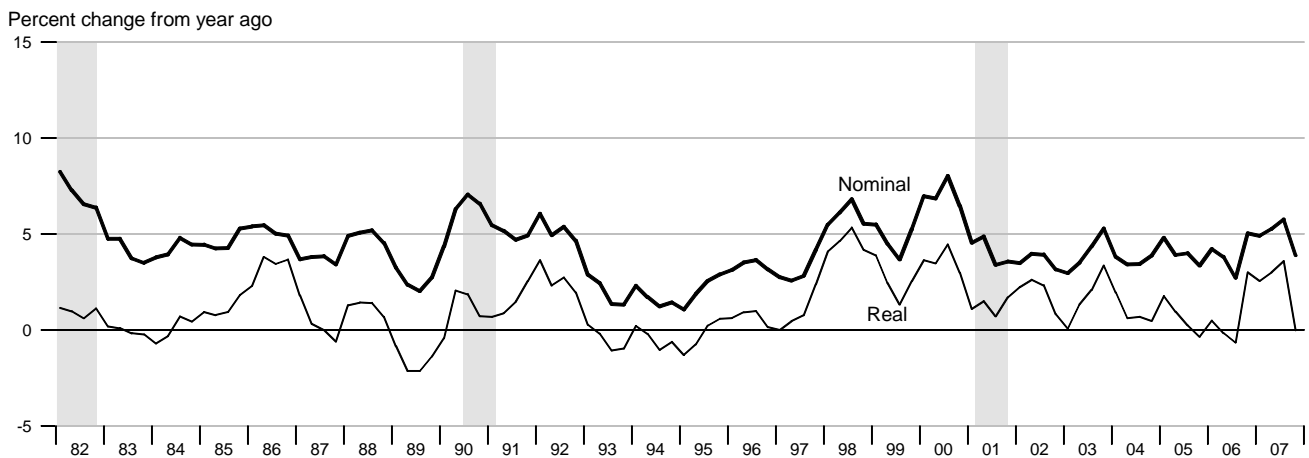


### Output per Hour and Capacity Utilization, Manufacturing

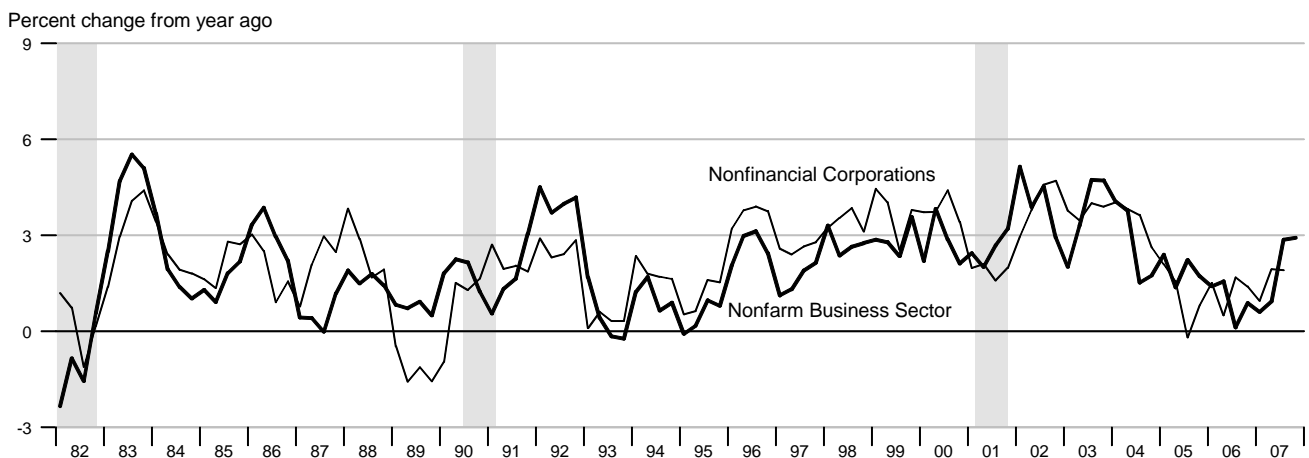


\*Data from 1987 to the present are on a NAICS basis; data prior to 1987 are on an SIC basis and are not strictly comparable (see End Note).

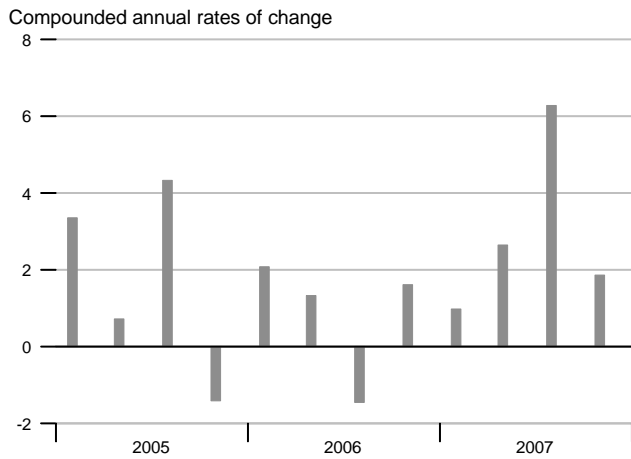
### Nonfarm Compensation per Hour



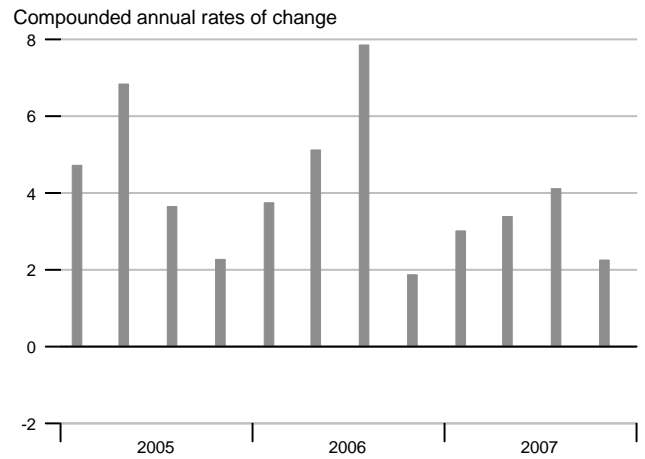
### Output per Hour, Nonfarm Business and Nonfinancial Corporations



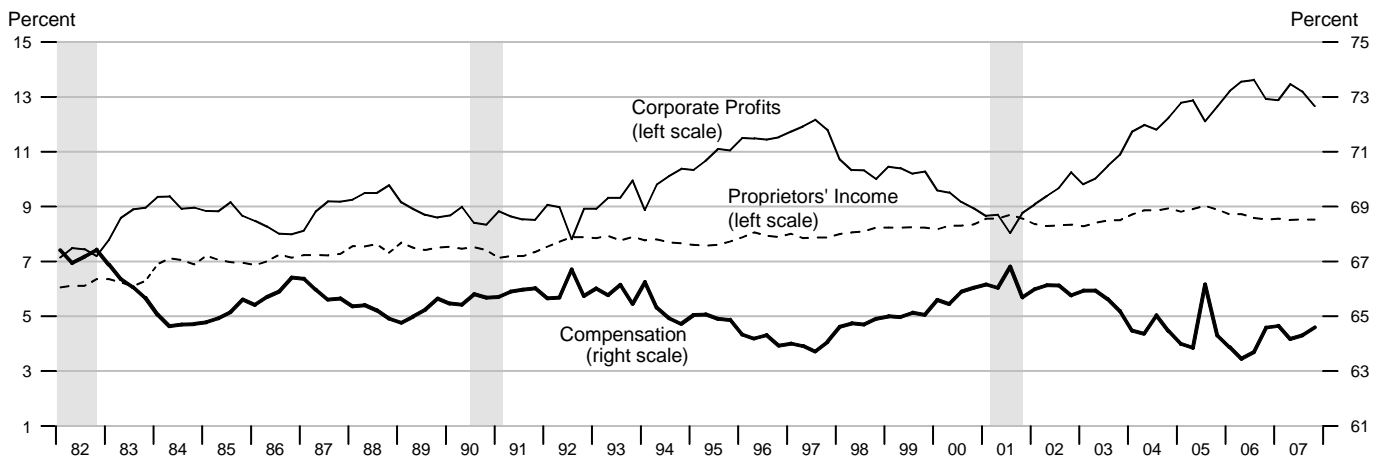
### Nonfarm Output per Hour



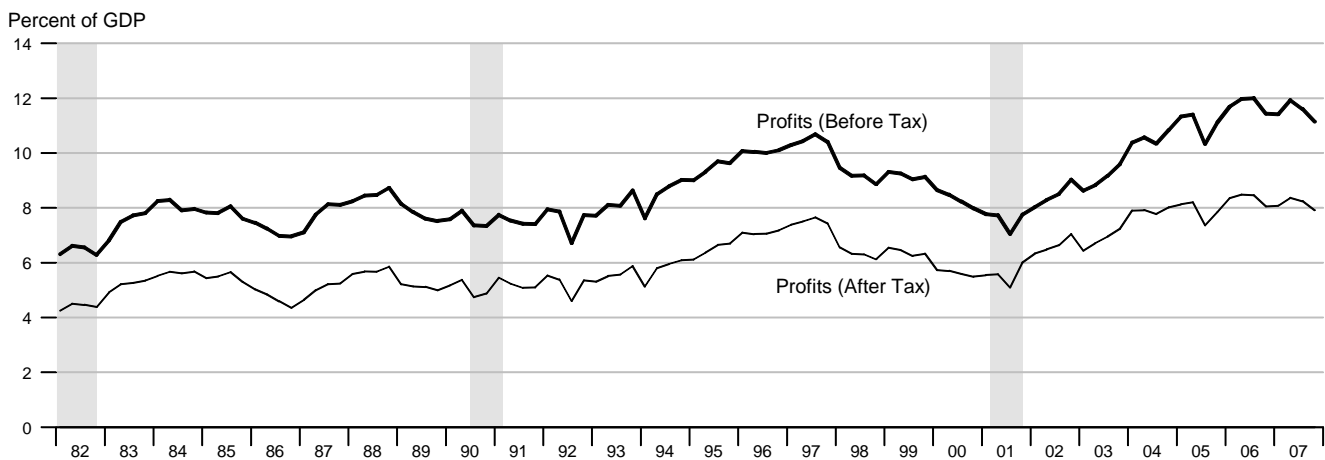
### Manufacturing Output per Hour



### Selected Component Shares of National Income



### Corporate Profits





	GDP Chain Price Index			Employment Cost Index			ECI: Wages			ECI: Benefits		
	Index	Percent change		Index	Percent change		Index	Percent change		Index	Percent change	
		Annual rate	Year ago		Annual rate	Year ago		Annual rate	Year ago		Annual rate	Year ago
2004	109.462		2.9	96.2		3.8	96.8		2.7	94.8		6.8
2005	113.005		3.2	99.2		3.1	99.2		2.5	99.2		4.6
2006	116.568		3.2	102.1		2.9	102.1		2.9	102.1		2.9
2007	119.668		2.7	105.2		3.1	105.5		3.4	104.5		2.4
2005 1	111.745	3.9	3.3	98.2	3.8	3.5	98.3	2.5	2.6	98.0	6.4	5.5
2	112.455	2.6	3.0	98.8	2.5	3.1	98.8	2.1	2.5	98.8	3.3	4.7
3	113.422	3.5	3.3	99.5	2.9	2.9	99.4	2.5	2.3	99.7	3.7	4.5
4	114.398	3.5	3.4	100.2	2.8	3.0	100.1	2.8	2.5	100.3	2.4	3.9
2006 1	115.363	3.4	3.2	100.8	2.4	2.6	100.8	2.8	2.5	100.8	2.0	2.9
2	116.350	3.5	3.5	101.6	3.2	2.8	101.6	3.2	2.8	101.6	3.2	2.8
3	117.030	2.4	3.2	102.5	3.6	3.0	102.5	3.6	3.1	102.5	3.6	2.8
4	117.527	1.7	2.7	103.3	3.2	3.1	103.3	3.2	3.2	103.4	3.6	3.1
2007 1	118.750	4.2	2.9	104.0	2.7	3.2	104.3	3.9	3.5	103.1	-1.2	2.3
2	119.527	2.6	2.7	104.8	3.1	3.1	105.1	3.1	3.4	104.2	4.3	2.6
3	119.837	1.0	2.4	105.6	3.1	3.0	105.9	3.1	3.3	105.0	3.1	2.4
4	120.560	2.4	2.6	106.5	3.5	3.1	106.7	3.1	3.3	105.8	3.1	2.3
2008 1	121.337	2.6	2.2	107.3	3.0	3.2	107.6	3.4	3.2	106.4	2.3	3.2
	Exports			Imports			Nonfarm Output per Hour			Nonfarm Compensation per Hour		
	Billions of 2000 \$	Percent change		Billions of 2000 \$	Percent change		Index	Percent change		Index	Percent change	
		Annual rate	Year ago		Annual rate	Year ago		Annual rate	Year ago		Annual rate	Year ago
2004	1126.134		9.7	1719.939		11.3	131.572		2.8	155.905		3.6
2005	1203.444		6.9	1821.457		5.9	134.102		1.9	162.154		4.0
2006	1304.104		8.4	1928.567		5.9	135.426		1.0	168.552		3.9
2007	1409.857		8.1	1965.432		1.9	137.903		1.8	176.887		4.9
2005 1	1172.397	6.0	6.4	1796.826	2.1	8.8	133.330	3.4	2.4	160.260	3.4	4.8
2	1199.343	9.5	7.1	1800.339	0.8	5.3	133.568	0.7	1.4	160.878	1.6	3.9
3	1205.647	2.1	6.9	1809.724	2.1	4.6	134.992	4.3	2.2	163.169	5.8	4.0
4	1236.387	10.6	7.0	1878.952	16.2	5.1	134.511	-1.4	1.7	164.264	2.7	3.4
2006 1	1270.569	11.5	8.4	1910.696	6.9	6.3	135.204	2.1	1.4	167.023	6.9	4.2
2	1288.438	5.7	7.4	1915.005	0.9	6.4	135.650	1.3	1.6	167.006	-0.0	3.8
3	1306.571	5.7	8.4	1940.374	5.4	7.2	135.154	-1.5	0.1	167.612	1.5	2.7
4	1350.861	14.3	9.3	1948.210	1.6	3.7	135.695	1.6	0.9	172.535	12.3	5.0
2007 1	1354.654	1.1	6.6	1966.775	3.9	2.9	136.025	1.0	0.6	175.233	6.4	4.9
2	1379.485	7.5	7.1	1953.360	-2.7	2.0	136.917	2.6	0.9	175.800	1.3	5.3
3	1441.150	19.1	10.3	1974.272	4.4	1.7	139.017	6.3	2.9	177.262	3.4	5.8
4	1464.139	6.5	8.4	1967.321	-1.4	1.0	139.660	1.9	2.9	179.248	4.6	3.9
2008 1	1483.796	5.5	9.5	1979.703	2.5	0.7						

	Household Survey Employment					Nonfarm Payroll Employment				Nonfarm Aggregate Hours			
	Thousands	Change	Percent change		Thousands	Change	Percent change		Index	Percent change			
			Annual rate	Year ago			Annual rate	Year ago		Monthly rate	Annual rate	Year ago	
2003	137729	1248		0.9	129996	-344		-0.3	98.6			-1.4	
2004	139242	1512		1.1	131419	1423		1.1	100.2			1.6	
2005	141716	2474		1.8	133695	2276		1.7	102.8			2.6	
2006	144421	2706		1.9	136092	2397		1.8	105.7			2.9	
2007	146049	1628		1.1	137618	1527		1.1	107.2			1.4	
2006	1	143356	704	2.0	2.1	135383	722	2.2	2.1	104.9	0.9	3.8	3.2
	2	144083	727	2.0	1.8	135840	457	1.4	1.9	105.6	0.7	2.7	3.1
	3	144604	521	1.5	1.6	136354	514	1.5	1.7	106.0	0.4	1.7	2.8
	4	145642	1038	2.9	2.1	136789	434	1.3	1.6	106.4	0.3	1.4	2.4
2007	1	145983	340	0.9	1.8	137184	395	1.2	1.3	106.6	0.2	0.8	1.6
	2	145904	-78	-0.2	1.3	137500	316	0.9	1.2	107.2	0.5	2.1	1.5
	3	146019	115	0.3	1.0	137758	259	0.8	1.0	107.5	0.3	1.1	1.4
	4	146291	272	0.7	0.4	138031	272	0.8	0.9	107.7	0.2	1.0	1.3
2008	1	146070	-221	-0.6	0.1	137925	-106	-0.3	0.5	107.4	-0.3	-1.2	0.8
2006	Mar	143619	257	2.2	2.2	135647	259	2.3	2.1	105.1	0.3	3.5	3.3
	Apr	143791	172	1.4	1.8	135794	147	1.3	2.0	105.6	0.5	5.9	3.1
	May	144088	297	2.5	1.8	135816	22	0.2	1.9	105.4	-0.2	-2.2	3.1
	Jun	144369	281	2.4	1.9	135910	94	0.8	1.7	105.8	0.4	4.7	3.1
	Jul	144295	-74	-0.6	1.6	136172	262	2.3	1.7	106.0	0.2	2.3	3.1
	Aug	144671	376	3.2	1.6	136363	191	1.7	1.6	106.2	0.2	2.3	3.1
	Sep	144846	175	1.5	1.7	136528	165	1.5	1.7	105.9	-0.3	-3.3	2.3
	Oct	145395	549	4.6	2.0	136601	73	0.6	1.7	106.3	0.4	4.6	2.6
	Nov	145583	188	1.6	2.1	136783	182	1.6	1.5	106.2	-0.1	-1.1	2.1
	Dec	145949	366	3.1	2.2	136982	199	1.8	1.6	106.7	0.5	5.8	2.4
2007	Jan	145915	-34	-0.3	2.0	137108	126	1.1	1.5	106.5	-0.2	-2.2	1.6
	Feb	145888	-27	-0.2	1.8	137133	25	0.2	1.3	106.2	-0.3	-3.3	1.3
	Mar	146145	257	2.1	1.8	137310	177	1.6	1.2	107.1	0.8	10.7	1.9
	Apr	145713	-432	-3.5	1.3	137356	46	0.4	1.2	106.8	-0.3	-3.3	1.1
	May	145913	200	1.7	1.3	137518	162	1.4	1.3	107.1	0.3	3.4	1.6
	Jun	146087	174	1.4	1.2	137625	107	0.9	1.3	107.6	0.5	5.7	1.7
	Jul	146045	-42	-0.3	1.2	137682	57	0.5	1.1	107.4	-0.2	-2.2	1.3
	Aug	145753	-292	-2.4	0.7	137756	74	0.6	1.0	107.4	0.0	0.0	1.1
	Sep	146260	507	4.3	1.0	137837	81	0.7	1.0	107.6	0.2	2.3	1.6
	Oct	146016	-244	-2.0	0.4	137977	140	1.2	1.0	107.7	0.1	1.1	1.3
	Nov	146647	631	5.3	0.7	138037	60	0.5	0.9	107.7	0.0	0.0	1.4
	Dec	146211	-436	-3.5	0.2	138078	41	0.4	0.8	107.8	0.1	1.1	1.0
2008	Jan	146248	37	0.3	0.2	138002	-76	-0.7	0.7	107.4	-0.4	-4.4	0.8
	Feb	145993	-255	-2.1	0.1	137926	-76	-0.7	0.6	107.3	-0.1	-1.1	1.0
	Mar	145969	-24	-0.2	-0.1	137846	-80	-0.7	0.4	107.5	0.2	2.3	0.4

		Unempl. Rate	Retail and Food Services Sales				Industrial Production				Treasury Yields	
			Billions of dollars	Percent change			Index	Percent change			(Percent)	
				Monthly/ quarterly	Annual rate	Year ago			Monthly/ quarterly	Annual rate	Year ago	3-mo
2003		6.0	3614.120			4.2	101.2448			1.2	1.01	4.02
2004		5.5	3832.862			6.1	103.7644			2.5	1.37	4.27
2005		5.1	4078.592			6.4	107.2099			3.3	3.15	4.29
2006		4.6	4313.695			5.8	109.5711			2.2	4.73	4.79
2007		4.6	4484.933			4.0	111.3983			1.7	4.35	4.63
2006	1	4.7	1070.109	3.1	13.0	7.6	108.8526	0.8	3.2	2.1	4.39	4.57
	2	4.7	1075.965	0.5	2.2	6.0	109.5473	0.6	2.6	2.2	4.70	5.07
	3	4.6	1082.149	0.6	2.3	5.0	110.0689	0.5	1.9	2.8	4.91	4.90
	4	4.4	1085.472	0.3	1.2	4.6	109.8155	-0.2	-0.9	1.7	4.90	4.63
2007	1	4.5	1105.710	1.9	7.7	3.3	110.2336	0.4	1.5	1.3	4.98	4.68
	2	4.5	1118.461	1.2	4.7	3.9	111.0922	0.8	3.2	1.4	4.74	4.85
	3	4.7	1124.771	0.6	2.3	3.9	112.0778	0.9	3.6	1.8	4.30	4.73
	4	4.8	1135.991	1.0	4.1	4.7	112.1896	0.1	0.4	2.2	3.39	4.26
2008	1	4.9	1137.574	0.1	0.6	2.9	112.1592	-0.0	-0.1	1.7	2.04	3.66
2006	Apr	4.7	359.389	0.7	9.2	6.4	109.4348	0.4	4.9	2.5	4.60	4.99
	May	4.7	358.461	-0.3	-3.1	7.0	109.3408	-0.1	-1.0	2.1	4.72	5.11
	Jun	4.6	358.115	-0.1	-1.2	4.6	109.8664	0.5	5.9	2.1	4.79	5.11
	Jul	4.7	361.048	0.8	10.3	4.1	110.1428	0.3	3.1	2.4	4.95	5.09
	Aug	4.7	361.877	0.2	2.8	5.8	110.2365	0.1	1.0	2.3	4.96	4.88
	Sep	4.5	359.224	-0.7	-8.5	5.0	109.8273	-0.4	-4.4	3.8	4.81	4.72
	Oct	4.4	359.706	0.1	1.6	4.5	109.7437	-0.1	-0.9	2.5	4.92	4.73
	Nov	4.5	360.428	0.2	2.4	4.0	109.5274	-0.2	-2.3	1.2	4.94	4.60
	Dec	4.4	365.338	1.4	17.6	5.3	110.1754	0.6	7.3	1.3	4.85	4.56
2007	Jan	4.6	365.610	0.1	0.9	2.1	109.7791	-0.4	-4.2	0.9	4.98	4.76
	Feb	4.5	368.271	0.7	9.1	3.6	110.5181	0.7	8.4	1.6	5.03	4.72
	Mar	4.4	371.829	1.0	12.2	4.2	110.4036	-0.1	-1.2	1.3	4.94	4.56
	Apr	4.5	369.759	-0.6	-6.5	2.9	110.9530	0.5	6.1	1.4	4.87	4.69
	May	4.5	376.430	1.8	23.9	5.0	110.9686	0.0	0.2	1.5	4.73	4.75
	Jun	4.6	372.272	-1.1	-12.5	4.0	111.3551	0.3	4.3	1.4	4.61	5.10
	Jul	4.7	373.615	0.4	4.4	3.5	112.0024	0.6	7.2	1.7	4.82	5.00
	Aug	4.7	374.336	0.2	2.3	3.4	111.9712	-0.0	-0.3	1.6	4.20	4.67
	Sep	4.7	376.820	0.7	8.3	4.9	112.2598	0.3	3.1	2.2	3.89	4.52
	Oct	4.8	376.802	-0.0	-0.1	4.8	111.8262	-0.4	-4.5	1.9	3.90	4.53
	Nov	4.7	381.280	1.2	15.2	5.8	112.2963	0.4	5.2	2.5	3.27	4.15
	Dec	5.0	377.909	-0.9	-10.1	3.4	112.4462	0.1	1.6	2.1	3.00	4.10
2008	Jan	4.9	380.019	0.6	6.9	3.9	112.5885	0.1	1.5	2.6	2.75	3.74
	Feb	4.8	378.462	-0.4	-4.8	2.8	111.7610	-0.7	-8.5	1.1	2.12	3.74
	Mar	5.1	379.093	0.2	2.0	2.0	112.1281	0.3	4.0	1.6	1.26	3.51
	Apr										1.29	3.68

		Consumer Price Index					Consumer Price Index less Food and Energy					Producer Price Index Finished Goods				
		Percent change					Percent change					Percent change				
		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	
2003		184.000			2.3		193.225			1.5		143.3			3.2	
2004		188.908			2.7		196.633			1.8		148.5			3.6	
2005		195.283			3.4		200.875			2.2		155.7			4.9	
2006		201.583			3.2		205.933			2.5		160.3			3.0	
2007		207.345			2.9		210.731			2.3		166.6			3.9	
2006	1	199.433	0.4	1.8	3.7	1.8	203.667	0.6	2.5	2.1	2.5	159.6	0.1	0.6	4.5	
	2	201.267	0.9	3.7	3.9	2.7	205.400	0.9	3.4	2.5	3.0	160.8	0.8	3.0	4.3	
	3	203.200	1.0	3.9	3.3	3.1	206.867	0.7	2.9	2.8	2.9	161.1	0.2	0.8	2.8	
	4	202.433	-0.4	-1.5	1.9	1.9	207.800	0.5	1.8	2.7	2.7	159.8	-0.8	-3.3	0.3	
2007	1	204.269	0.9	3.7	2.4	3.7	208.975	0.6	2.3	2.6	2.3	162.7	1.9	7.6	2.0	
	2	206.566	1.1	4.6	2.6	4.1	210.025	0.5	2.0	2.3	2.2	166.2	2.1	8.8	3.4	
	3	207.989	0.7	2.8	2.4	3.7	211.309	0.6	2.5	2.1	2.3	166.9	0.4	1.6	3.6	
	4	210.555	1.2	5.0	4.0	4.0	212.615	0.6	2.5	2.3	2.3	170.6	2.2	9.3	6.8	
2008	1	212.796	1.1	4.3	4.2	4.3	213.931	0.6	2.5	2.4	2.5	174.3	2.2	9.0	7.1	
2006	Mar	199.600	0.2	1.8	3.5	2.9	204.200	0.3	3.6	2.1	2.8	159.3	0.3	3.8	3.7	
	Apr	200.600	0.5	6.2	3.5	3.7	204.800	0.3	3.6	2.3	3.0	160.4	0.7	8.6	4.0	
	May	201.300	0.3	4.3	4.0	3.8	205.400	0.3	3.6	2.4	3.1	160.5	0.1	0.8	4.3	
	Jun	201.900	0.3	3.6	4.3	3.8	206.000	0.3	3.6	2.7	3.2	161.4	0.6	6.9	4.8	
	Jul	202.900	0.5	6.1	4.1	4.1	206.400	0.2	2.4	2.7	3.1	161.0	-0.2	-2.9	3.8	
	Aug	203.800	0.4	5.5	3.9	4.3	206.900	0.2	2.9	2.8	3.0	162.3	0.8	10.1	3.8	
	Sep	202.900	-0.4	-5.2	2.1	3.2	207.300	0.2	2.3	2.9	3.0	160.0	-1.4	-15.7	0.9	
	Oct	201.900	-0.5	-5.8	1.4	2.2	207.600	0.1	1.8	2.8	2.8	158.1	-1.2	-13.4	-1.2	
	Nov	202.100	0.1	1.2	1.9	2.1	207.700	0.0	0.6	2.6	2.6	160.1	1.3	16.3	0.9	
	Dec	203.300	0.6	7.4	2.6	2.6	208.100	0.2	2.3	2.6	2.6	161.1	0.6	7.8	1.1	
	2007	Jan	203.552	0.1	1.5	2.1	1.5	208.608	0.2	3.0	2.7	3.0	160.9	-0.1	-1.5	0.2
		Feb	204.158	0.3	3.6	2.4	2.6	209.085	0.2	2.8	2.7	2.9	162.9	1.2	16.0	2.6
Mar		205.098	0.5	5.7	2.8	3.6	209.233	0.1	0.9	2.5	2.2	164.4	0.9	11.6	3.2	
Apr		205.751	0.3	3.9	2.6	3.7	209.650	0.2	2.4	2.4	2.3	165.5	0.7	8.3	3.2	
May		206.700	0.5	5.7	2.7	4.1	209.978	0.2	1.9	2.2	2.2	166.5	0.6	7.5	3.7	
Jun		207.246	0.3	3.2	2.6	3.9	210.446	0.2	2.7	2.2	2.3	166.6	0.1	0.7	3.2	
Jul		207.708	0.2	2.7	2.4	3.7	210.926	0.2	2.8	2.2	2.3	167.5	0.5	6.7	4.0	
Aug		207.749	0.0	0.2	1.9	3.3	211.265	0.2	1.9	2.1	2.3	166.1	-0.8	-9.6	2.3	
Sep		208.509	0.4	4.5	2.8	3.4	211.737	0.2	2.7	2.1	2.3	167.0	0.5	6.7	4.4	
Oct		209.055	0.3	3.2	3.5	3.4	212.115	0.2	2.2	2.2	2.3	167.9	0.5	6.7	6.2	
Nov		210.930	0.9	11.3	4.4	4.1	212.626	0.2	2.9	2.4	2.4	172.3	2.6	36.4	7.6	
Dec		211.680	0.4	4.4	4.1	4.1	213.103	0.2	2.7	2.4	2.4	171.6	-0.4	-4.8	6.5	
2008	Jan	212.516	0.4	4.8	4.4	4.8	213.765	0.3	3.8	2.5	3.8	173.3	1.0	12.6	7.7	
	Feb	212.571	0.0	0.3	4.1	2.6	213.851	0.0	0.5	2.3	2.1	173.9	0.3	4.2	6.8	
	Mar	213.301	0.3	4.2	4.0	3.1	214.176	0.2	1.8	2.4	2.0	175.8	1.1	13.9	6.9	

## Notes

Pages 4, 5: **Final Sales** is gross domestic product (GDP) minus change in private 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. Real GDP is measured in 2000 dollars. The **ISM** (formerly Purchasing Managers') **Index** is a weighted average of diffusion indexes for new orders, production, supplier deliveries, inventories, and employment. **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: For information on how to calculate the **Contribution** of a component to the overall GDP growth rate, see the October 1999 issue of the Survey of Current Business, p. 16. The sign is changed for **Imports**.

Page 7: Ten-year **Treasury Yields** are adjusted to constant maturity; three-month yields are secondary market averages. All rates used in the yield curves are adjusted to constant maturity. The 30-year constant maturity series was discontinued by the Treasury Department as of Feb. 18, 2002. **Standard and Poor's 500 Index with Reinvested Dividends** shows the total return: capital gains plus dividends.

Pages 8, 9: **Oil** (West Texas intermediate) and **Natural Gas** (Henry Hub) spot and futures **prices** are listed in the *Wall Street Journal*. Spot prices are monthly averages of daily prices; futures prices are usually taken from the last trading day of the month. **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: Effective with the January 2008 **Employment Situation**, the establishment survey data for employment, hours, and earnings have been converted from the 2002 NAICS system to the 2007 NAICS system. For more information see <http://www.bls.gov/ces/>. **Nonfarm Payroll Employment** is counted in a survey of about 400,000 establishments (Current Employment Statistics). 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 60,000 households provides estimates of civilian employment, unemployment rate, labor force participation rate, and employment-population ratio. **Population** is civilian, noninstitutional, 16 years and over. The 90 percent confidence intervals for the unemployment rate ( $\pm 0.2$  percentage points) and change in household survey employment ( $\pm 430,000$ ) measure uncertainty due to sample size. Because the household survey was changed in January 1994, data prior to this date are not strictly comparable. The Bureau of Labor Statistics announced several revisions to the Household Survey on Feb. 7, 2003, with the release of the January 2003 data. For more information, see [www.bls.gov/cps/](http://www.bls.gov/cps/). The **Job Openings rate** is the number of job openings on the last business day of the month as a percent of total employment plus job openings.

Page 13: 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.

Page 15: **Gross Private Saving** is the sum of personal saving, undistributed corporate profits with IVA and CCAj (see notes for pp. 18-19), and private wage accruals less disbursements. **Gross Government Saving** is net government saving (surplus/deficit) plus consumption of fixed capital. **Balance on Current Account (NIPA)** is net capital transfer payments to the rest of the world plus net lending or net borrowing (international trade and income flows).

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 NIPAs. The **Unified Federal Budget Surplus/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** are from the NIPAs, except as noted. Since 1977, the federal **Fiscal Year** starts on October 1. Excluded agency debt was 0.6 percent of federal debt at the end of fiscal 1997. **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. Nonfarm business accounted for about 77 percent of the value of GDP in 2000, while nonfinancial corporations accounted for about 54 percent. **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 (CCAj)** 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, multifactor productivity.

*United States Department of Treasury*

Unified budget receipts, outlays, deficit, debt.

*Federal Reserve Board*

Index of industrial production, treasury yields, exchange rates, capacity utilization, household debt.

*The Survey Research Center, The University of Michigan*

Consumer sentiment index.

*Organization for Economic Cooperation and Development (OECD)*

GDP for major trading partners (not available on FRED).