



Vacancies and Unemployment

Job openings (vacancies) and the number of unemployed workers tend to move in opposite directions over the business cycle. Expansions are usually associated with plentiful vacancies and a low number of unemployed workers. During recessions the unemployment pool swells while employers seek to fill fewer job openings.

The inverse relationship between vacancies and unemployment is known as the Beveridge curve (see chart). Points in the upper-left corner of the chart generally characterize economic expansions and points in the bottom-right corner represent recessions. Each series of connected points creates a Beveridge curve for a particular business cycle. The solid portions of the lines represent the recessionary periods and the dashed portions represent the subsequent recoveries. The current recession is more pronounced than previous recessions (indicated by uncharacteristically high unemployment and very few vacancies).

The inward and outward “shifting” of the curve is of particular interest. Among other things,¹ increased labor market efficiency in matching unemployed workers with open positions shifts the curve toward the origin. The most recent points lie on a curve closer to the origin.²

In a recovery, typically vacancies increase faster than the number of unemployed workers decreases, generating a counterclockwise pattern. This pattern is evident during the 1983-90 expansion, where the curve moves quickly away from the bottom-right corner of the chart. However, the “jobless recoveries” following the 1990-91 and 2001 recessions are different: During both recoveries, vacancies remained low and the number of unemployed increased for a considerable time.

Research has shown that the 1990-91 and 2001 recessions were highly structural: Industries that laid off workers continued to decline after the recession ended.³ A recent notable shift was from a manufacturing-based economy to a service-based economy. In fact, during the 1990-91 and 2001 recessions, manufacturing jobs accounted for roughly three-fourths and one-half of all jobs lost. The difficulties associated with the reallocation of workers from one sector to another are one possible explanation for jobless recoveries.

What does this all imply about the possibility of another jobless recovery? It depends on the path of the adjustment back toward the upper-right corner in the chart. During the current recession, employment declines have been more dispersed. Only one-fourth of job losses have occurred in manufacturing; the sectors hit by the housing and financial crisis (construction and financial services sectors) shouldered more of the burden. Still unknown is the extent to which these sectors will recover and rehire workers or if these workers will be forced to look elsewhere for new jobs. The latter scenario would suggest the possibility of another jobless recovery.

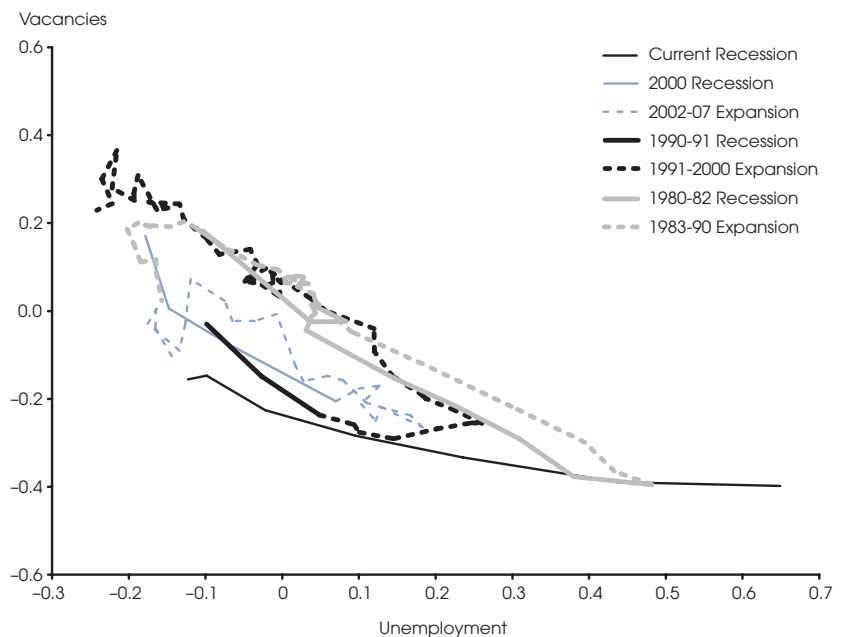
—Riccardo DiCecio and Charles S. Gascon

¹ For example, an increased labor force participation rate would shift the curve outward.

² See Bleakley, Hoyt and Fuhrer, Jeffrey C. “Shifts in the Beveridge Curve, Job Matching, and Labor Market Dynamics.” Federal Reserve Bank of Boston *New England Economic Review*, September/October 1997, pp. 3-19.

³ See Groshen, Erica L. and Potter, Simon. “Has Structural Change Contributed to a Jobless Recovery?” Federal Reserve Bank of New York *Current Issues in Economics and Finance*, August 2003, 9(8).

Beveridge Curves (1980:Q2–2009:Q2)



NOTE: The chart plots the percentage deviation from trend of total unemployment and the Help-Wanted Advertising Index (a proxy for vacancies). The trend is extracted by applying a Hodrick-Prescott (10⁵) filter to the data.

SOURCE: Conference Board and Bureau of Labor Statistics.

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

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. Except where otherwise noted, solid shading indicates recessions, as determined by the National Bureau of Economic Research. The NBER has not yet determined the end of the recession that began in December 2007; however, the hatched shading shows that the recession ended in July 2009. We made this determination based on a statistical model for dating business cycle turning points developed by Marcelle Chauvet and Jeremy Piger (“A Comparison of the Real-Time Performance of Business Cycle Dating Methods,” *Journal of Business and Economic Statistics*, 2008, 26, 42-49). For more information, see http://www.uoregon.edu/~jpiger/us_recession_probs.htm.
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:

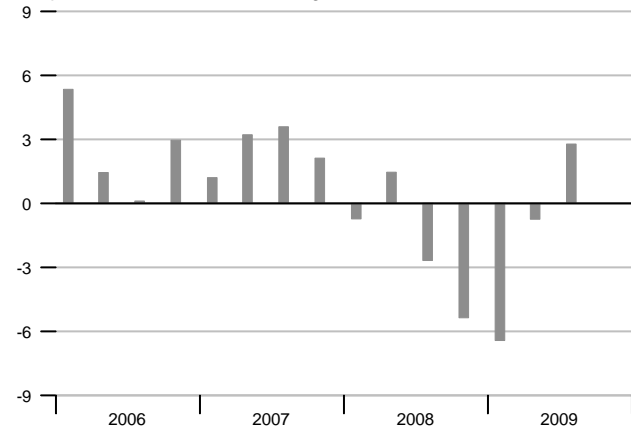
Editor, *National Economic Trends*
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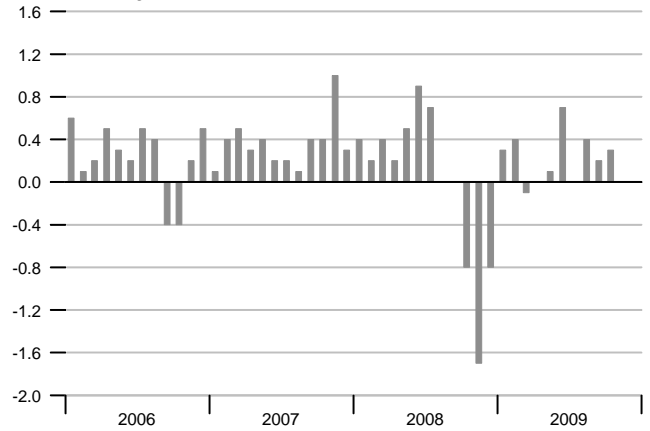
Real GDP Growth

Compounded annual rates of change



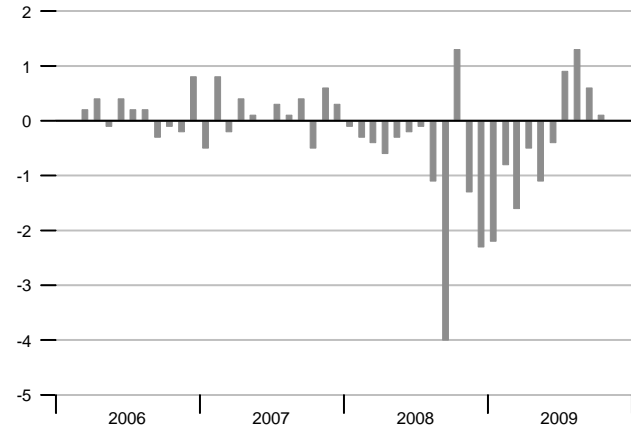
Consumer Price Index

Percent change



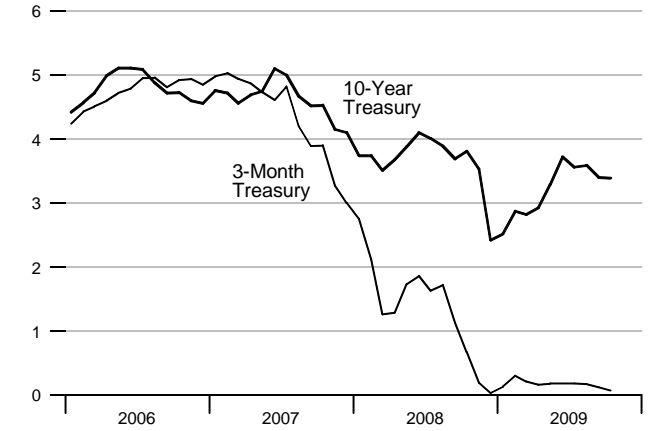
Industrial Production

Percent change



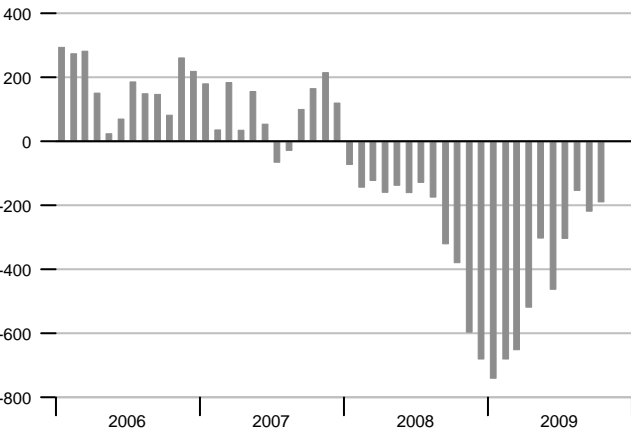
Interest Rates

Percent



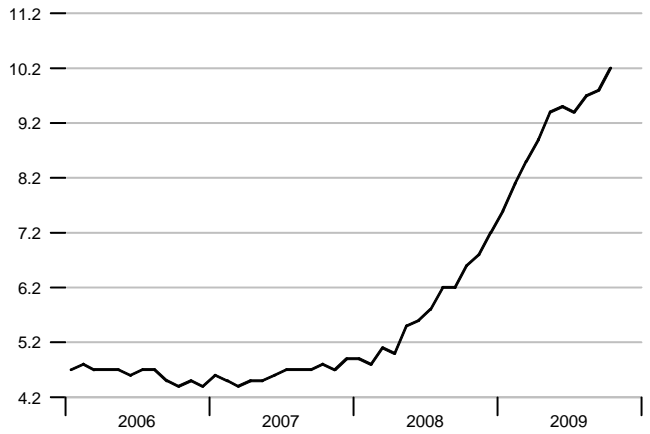
Change in Nonfarm Payrolls

Thousands



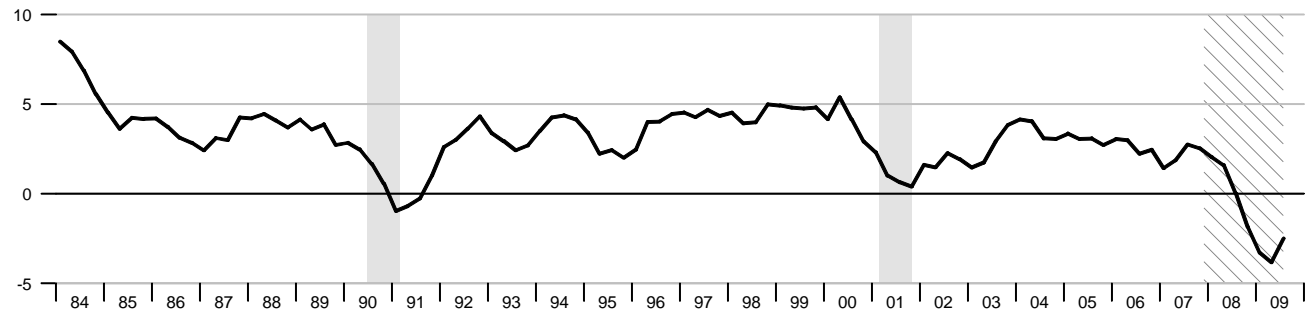
Unemployment Rate

Percent of labor force



Real Gross Domestic Product

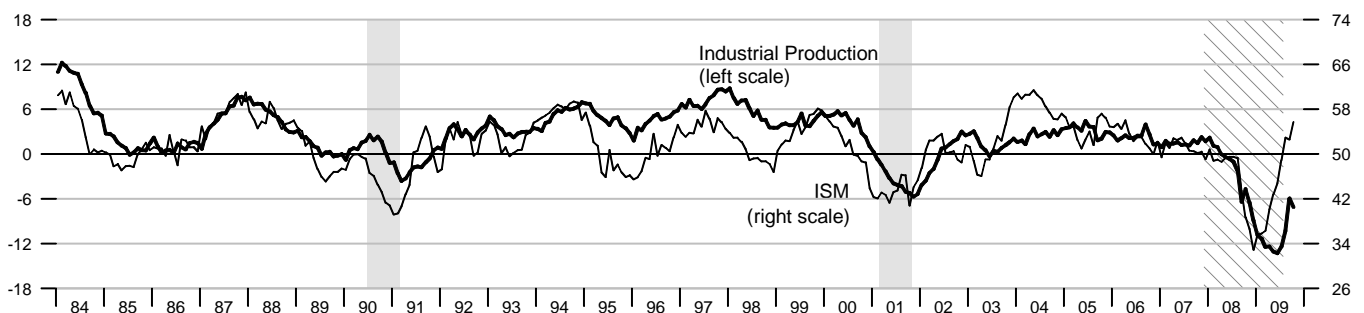
Percent change from year ago



Industrial Production and Institute for Supply Management (ISM) Indexes

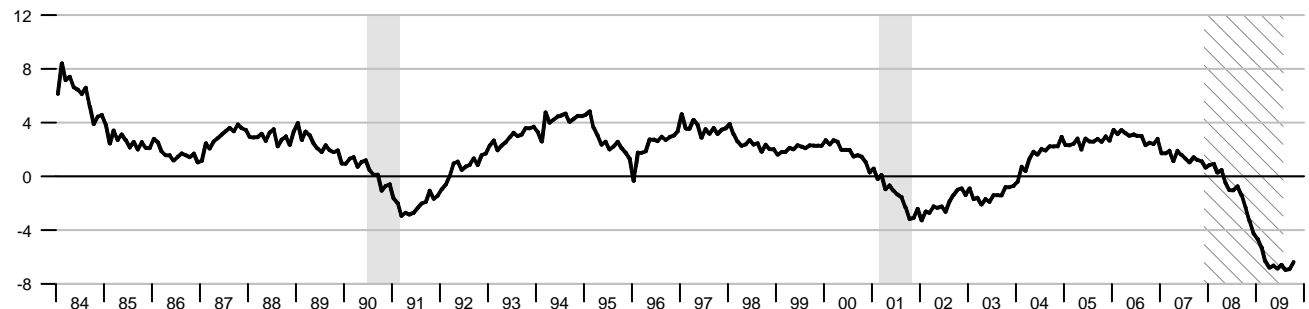
Percent change from year ago

Index



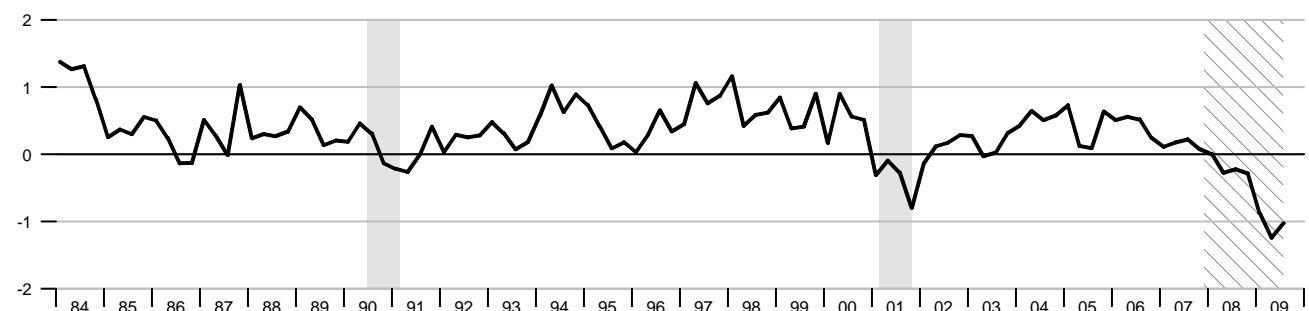
Aggregate Private Nonfarm Hours

Percent change from year ago

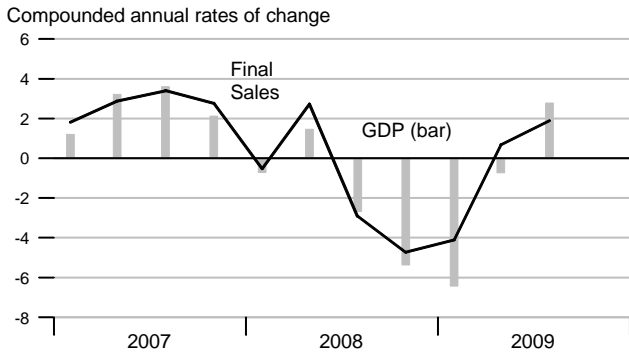


Real Change in Private Inventories

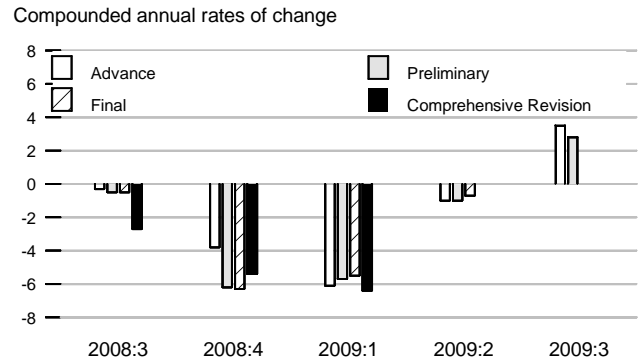
Percent of GDP



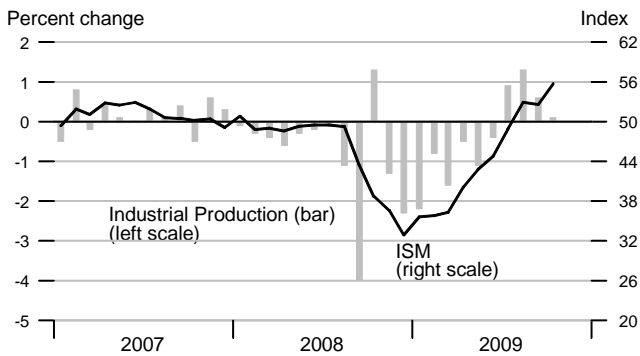
Real Final Sales and GDP



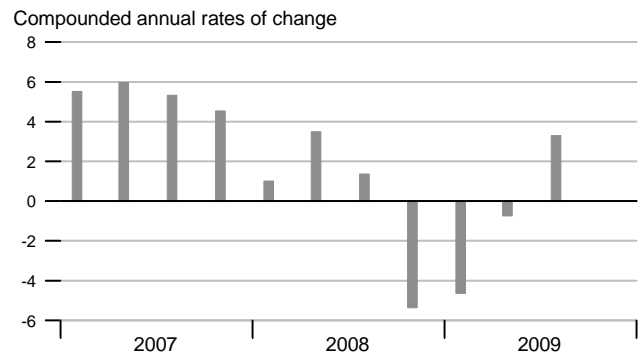
Real GDP Revisions



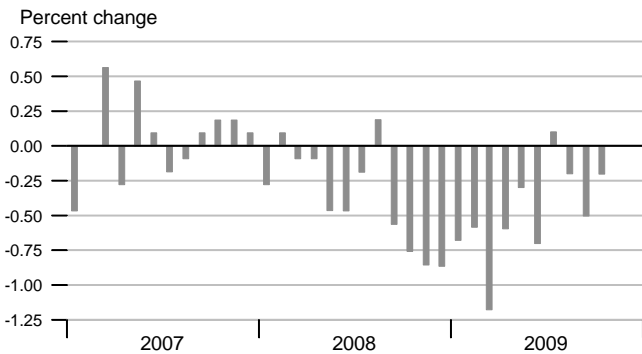
Industrial Production and ISM Index



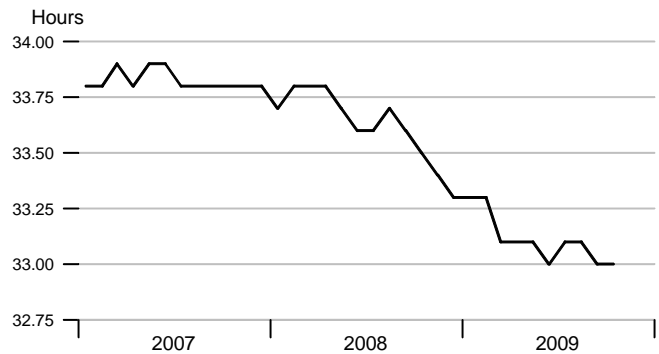
Nominal Gross Domestic Product



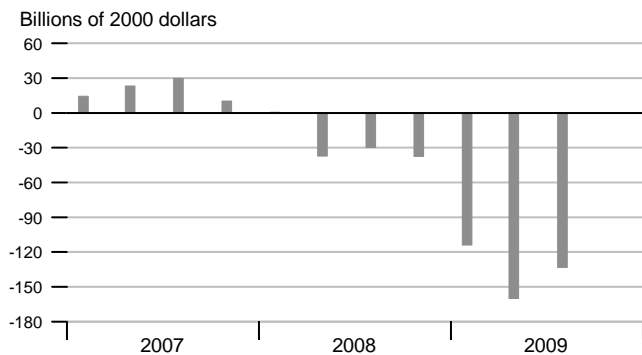
Aggregate Private Nonfarm Hours



Average Weekly Private Nonfarm Hours



Real Change in Private Inventories

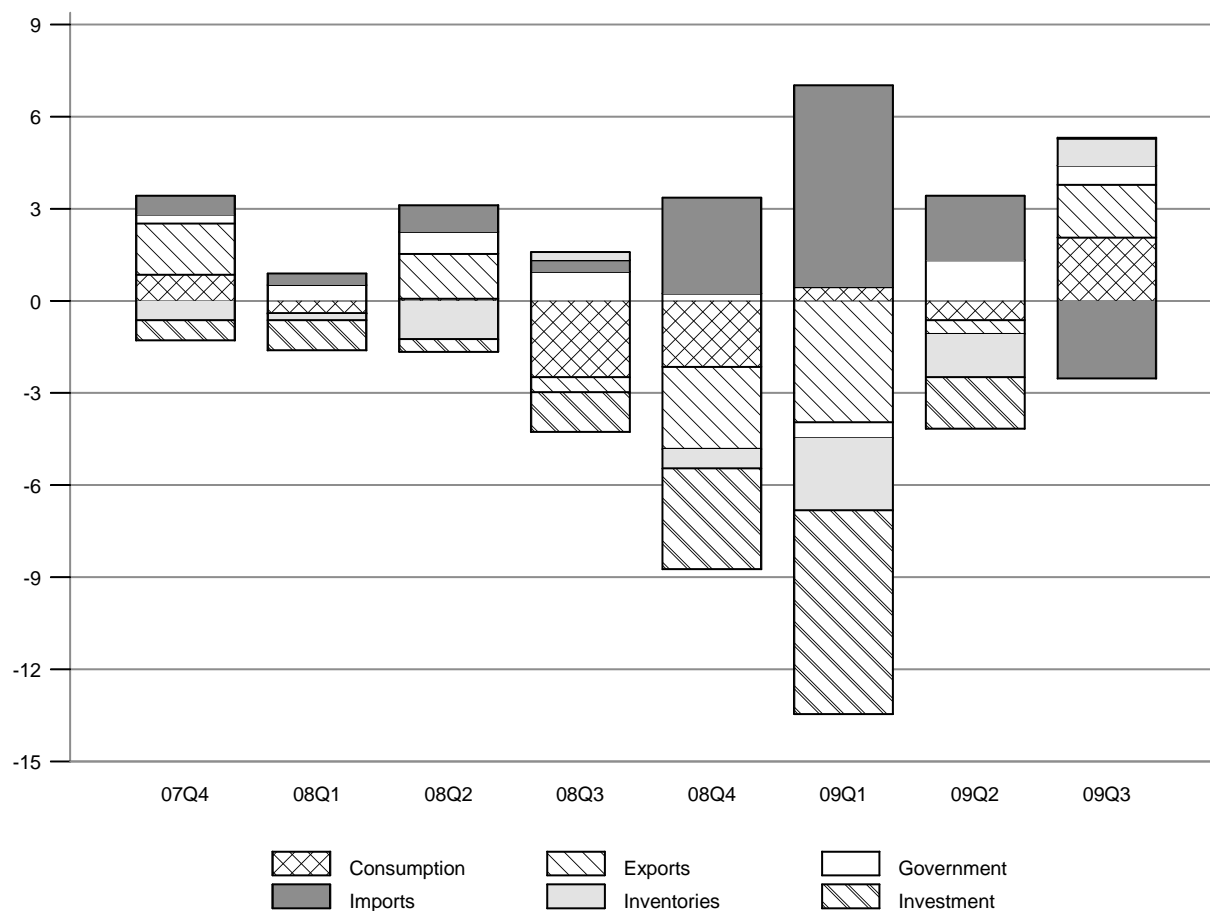


Inventory-Sales Ratio



Contribution of Components to Real GDP Growth

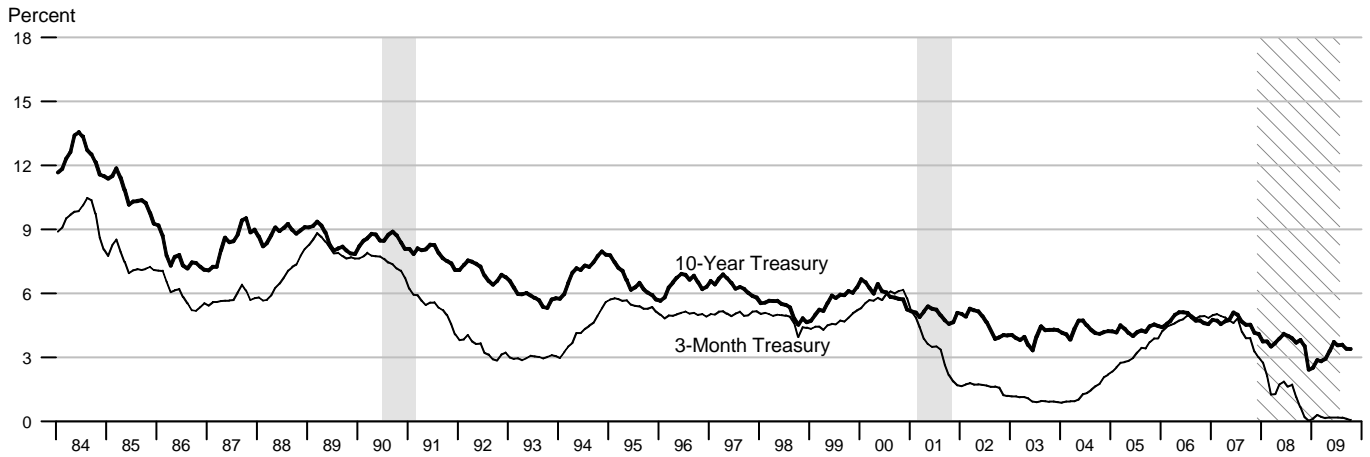
Percentage points at compounded annual rates



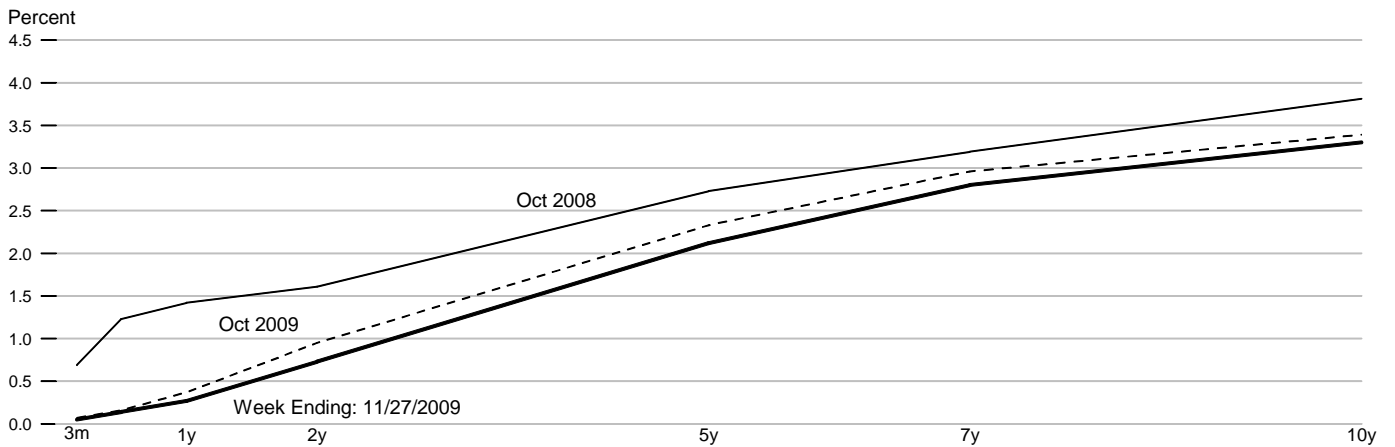
Contributions to Real GDP Growth Rate

	2007	2008				2009		
	4th	1st	2nd	3rd	4th	1st	2nd	3rd
Final Sales	2.75	-0.51	2.71	-2.94	-4.73	-4.07	0.68	1.91
Consumption	0.86	-0.39	0.06	-2.49	-2.15	0.44	-0.62	2.07
Fixed Investment	-0.66	-0.99	-0.41	-1.30	-3.28	-6.62	-1.68	0.04
Nonresidential	0.78	0.25	0.19	-0.73	-2.47	-5.29	-1.01	-0.40
Residential	-1.44	-1.24	-0.60	-0.57	-0.81	-1.33	-0.67	0.45
Government	0.31	0.51	0.71	0.95	0.24	-0.52	1.33	0.63
Federal	0.19	0.56	0.55	0.93	0.49	-0.33	0.85	0.65
State and Local	0.12	-0.05	0.15	0.01	-0.25	-0.19	0.48	-0.02
Net Exports	2.24	0.36	2.35	-0.10	0.45	2.64	1.65	-0.83
Exports	1.65	-0.02	1.47	-0.48	-2.67	-3.95	-0.45	1.71
Imports	0.60	0.38	0.88	0.38	3.12	6.58	2.09	-2.53
Change in Inventory	-0.63	-0.21	-1.25	0.26	-0.64	-2.36	-1.42	0.87
Residual	-0.01	0.12	0.06	0.07	-0.22	0.02	0.02	0.02
Real GDP Growth	2.12	-0.72	1.46	-2.68	-5.37	-6.43	-0.74	2.78

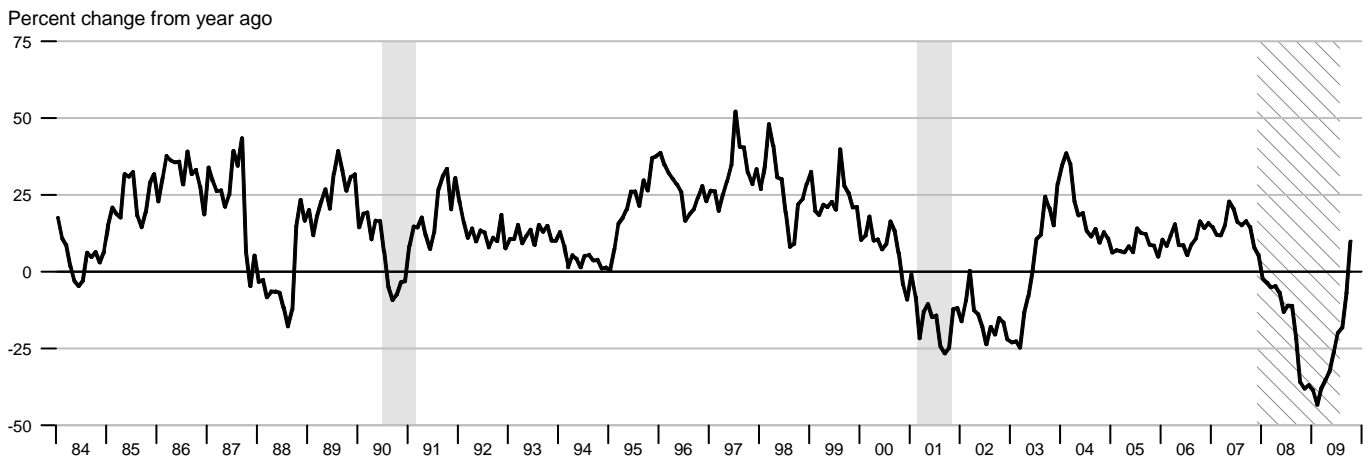
Interest Rates



Treasury Yield Curve

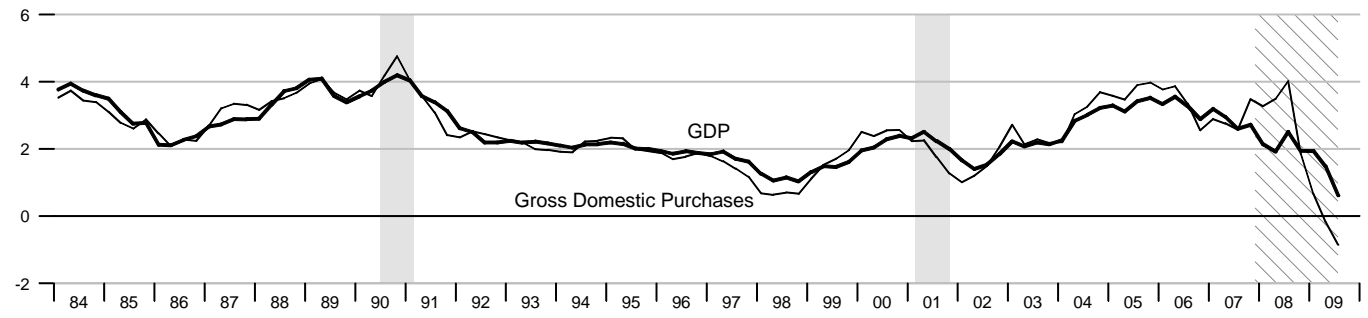


Standard and Poor's 500 Index with Reinvested Dividends



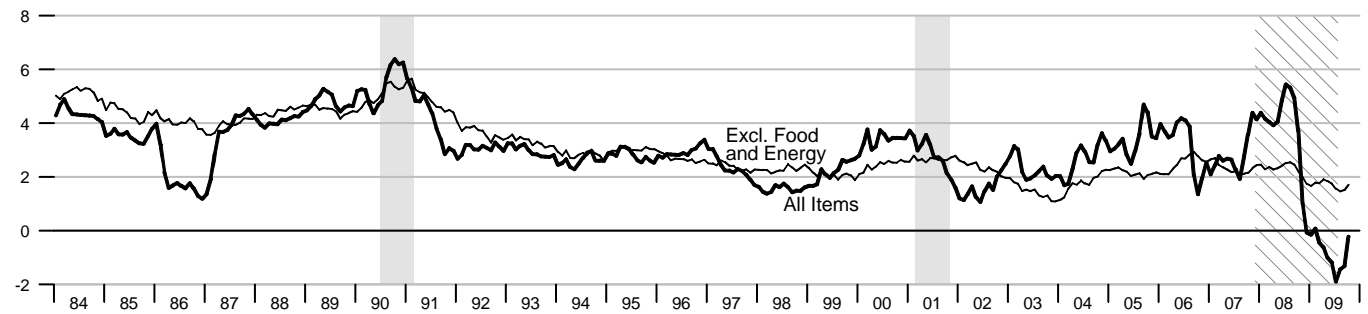
NIPA Chain Price Indexes

Percent change from year ago



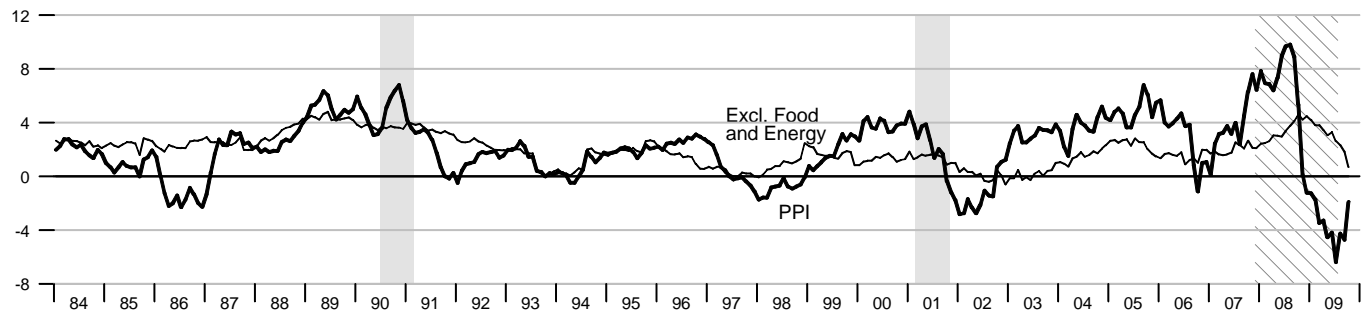
Consumer Price Index

Percent change from year ago



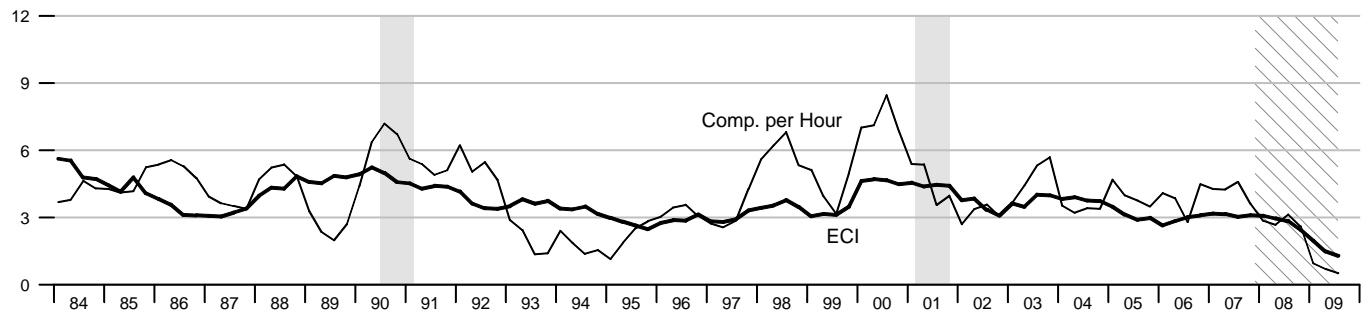
Producer Price Index, Finished Goods

Percent change from year ago

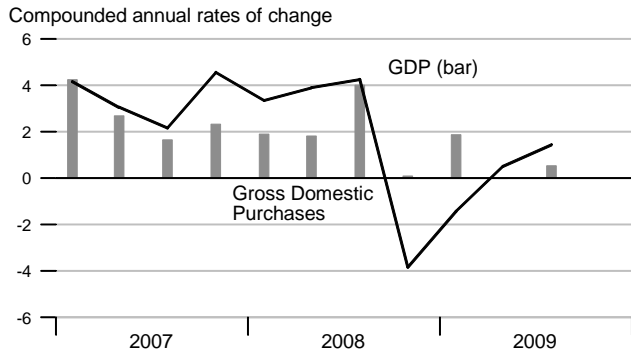


Employment Cost Index and Compensation per Hour

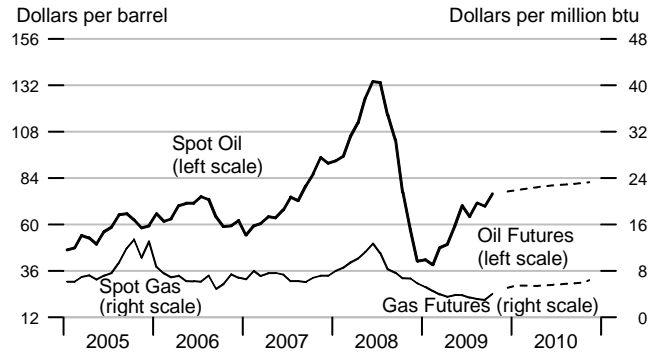
Percent change from year ago



NIPA Chain Price Indexes

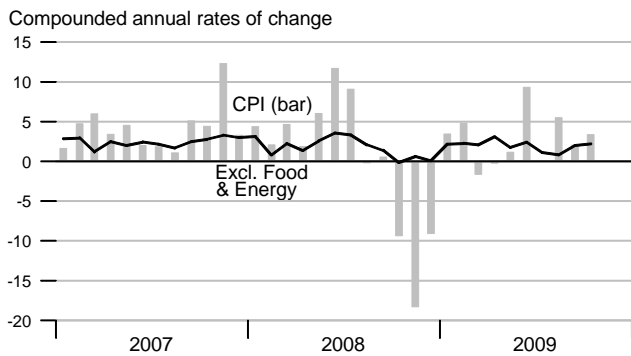


Oil & Natural Gas Prices: Spot & Futures

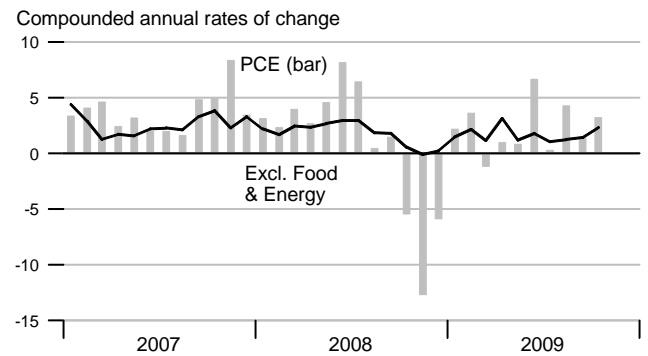


Note: Futures prices as of 11/2/2009.

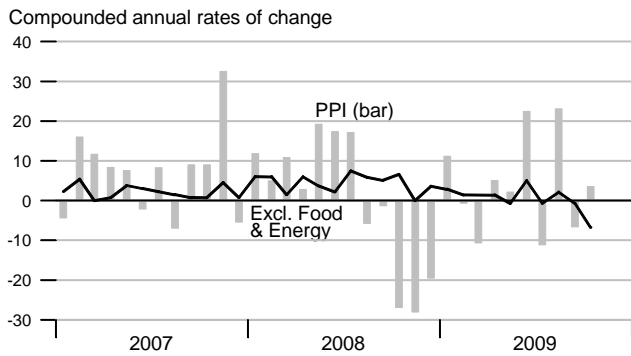
Consumer Price Index



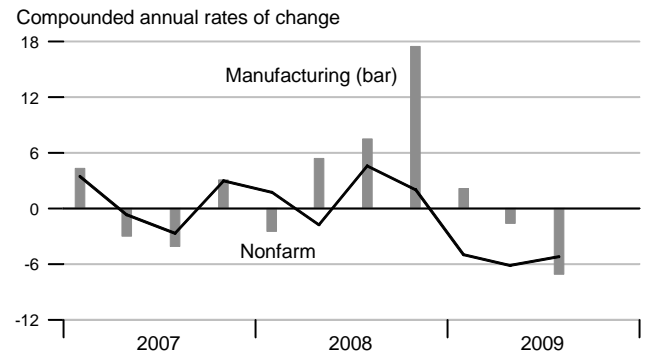
Consumption Chain Price Index



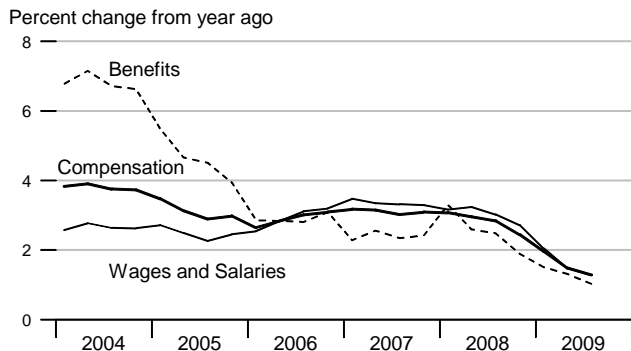
Producer Price Index, Finished Goods



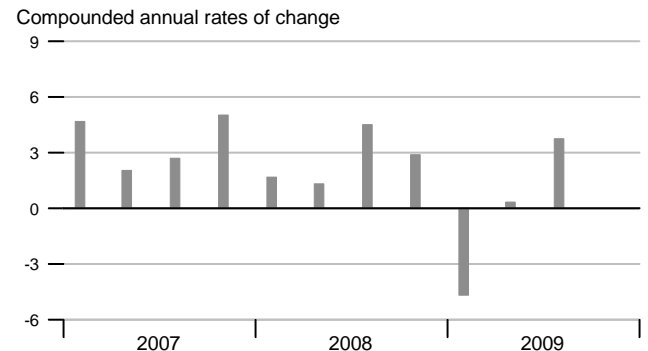
Unit Labor Cost



Employment Cost Index

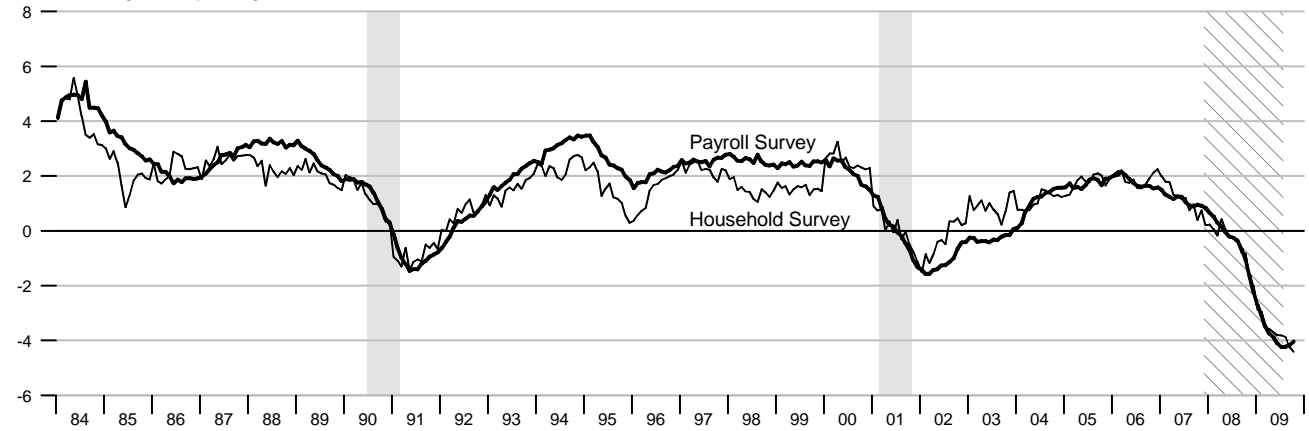


Compensation per Hour



Employment

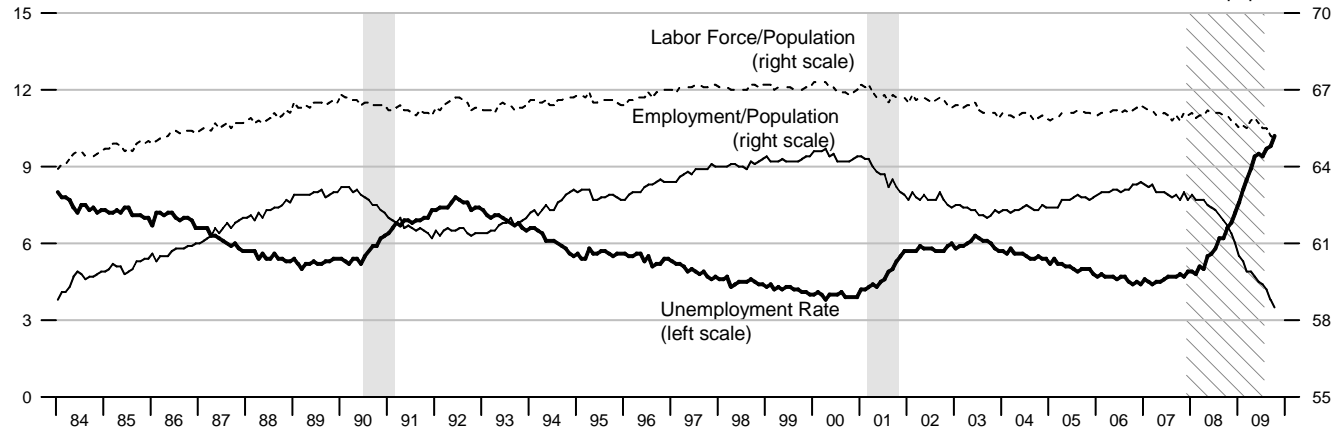
Percent change from year ago



Unemployment, Labor Force Participation, and Employment Rates

Percent of labor force

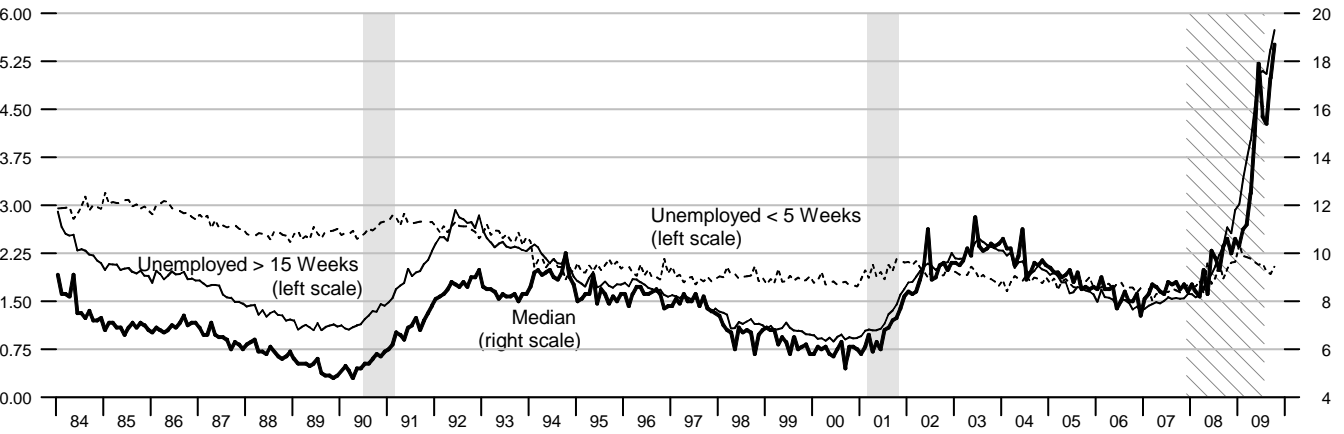
Percent of population



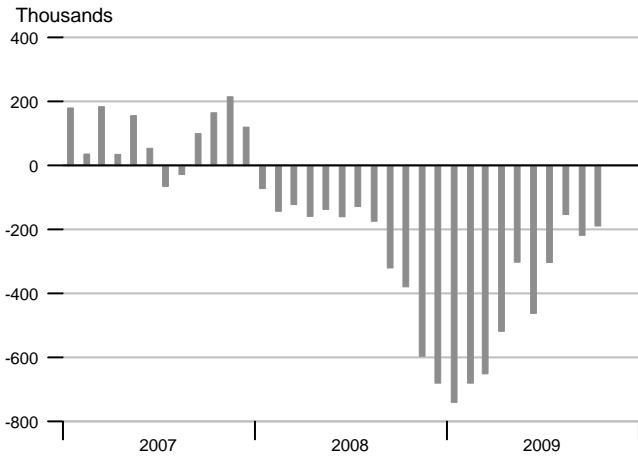
Duration of Unemployment

Percent of labor force

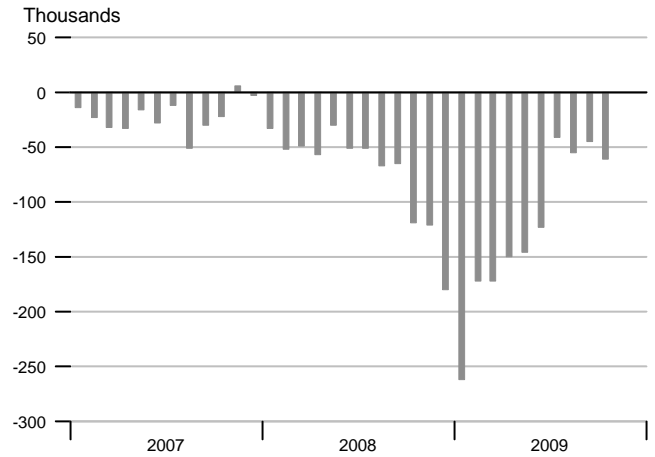
Weeks



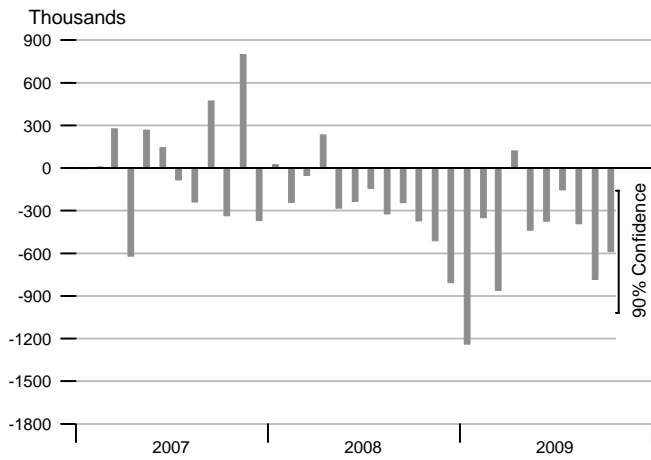
Change in Nonfarm Payrolls



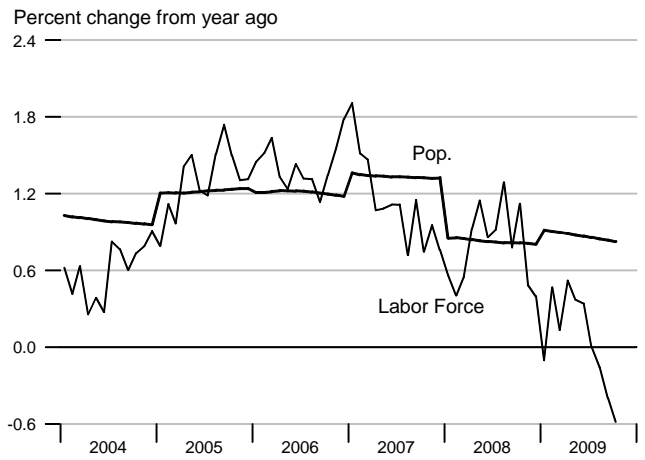
Change in Manufacturing Payrolls



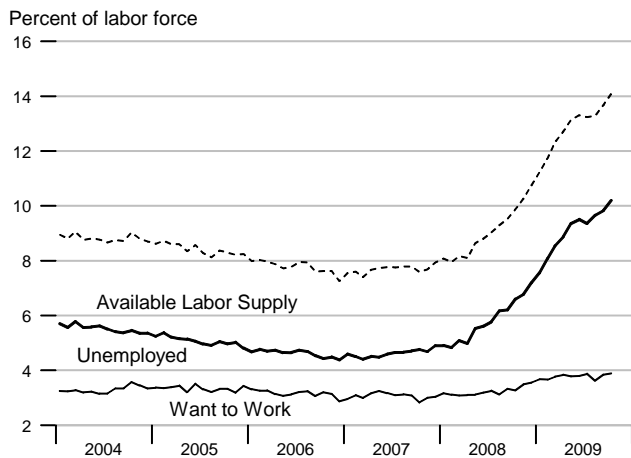
Change in Household Employment



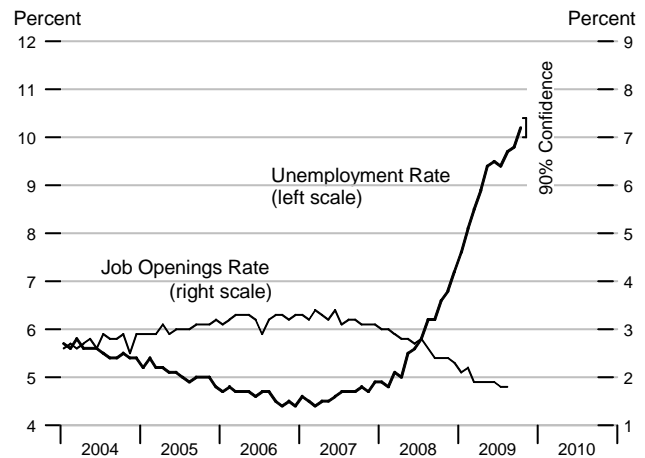
Labor Force and Population



Available Labor Supply and Components

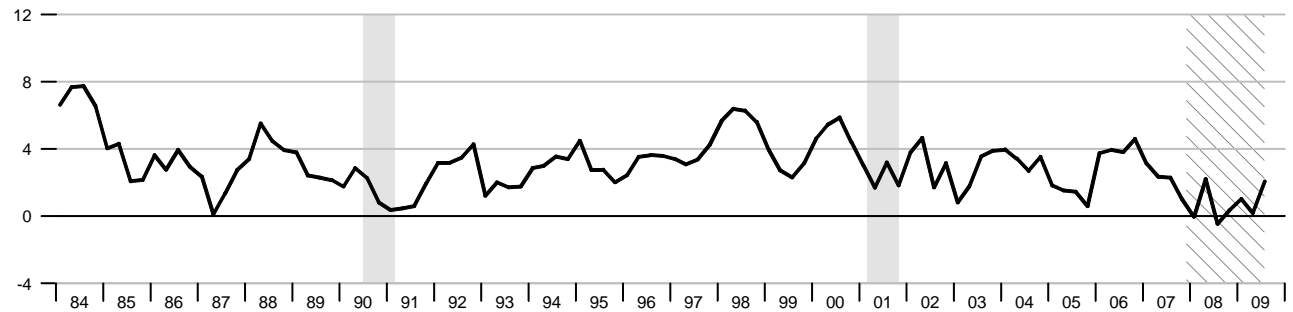


Unemployment Rate & Job Openings Rate



Real Disposable Personal Income

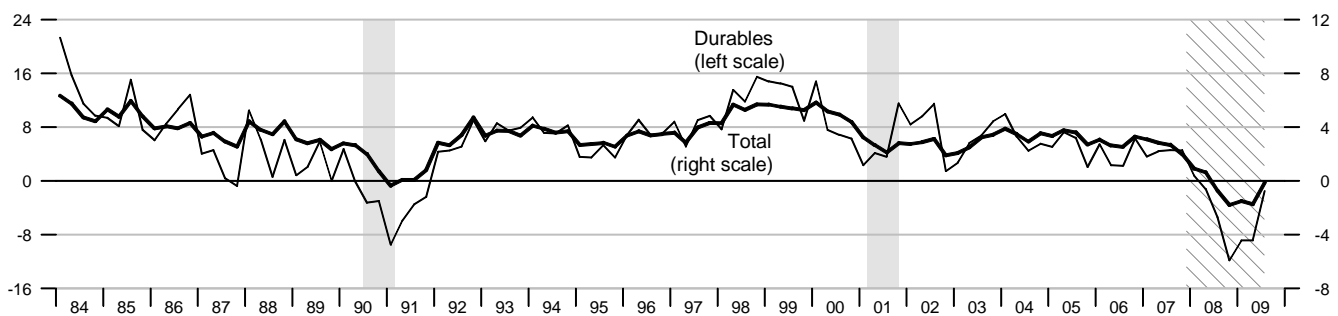
Percent change from year ago, quarterly data



Real Consumption

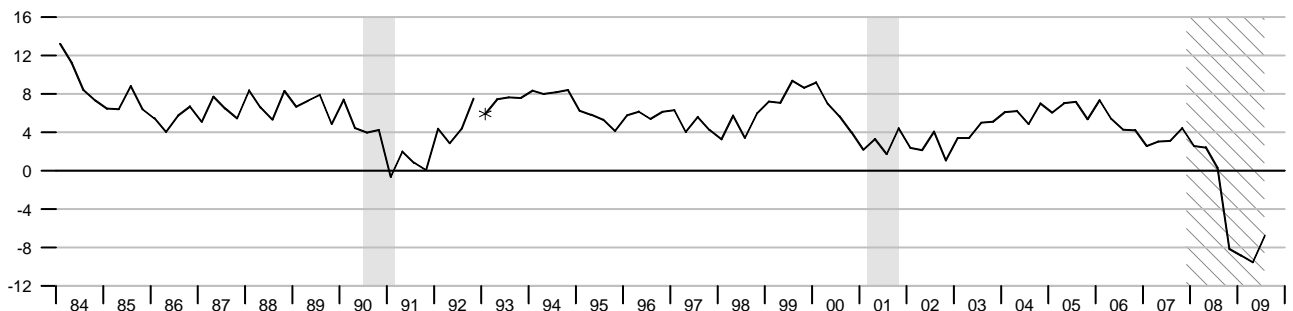
Percent change from year ago, quarterly data

Percent change from year ago, quarterly data



Retail and Food Services Sales

Percent change from year ago, quarterly average

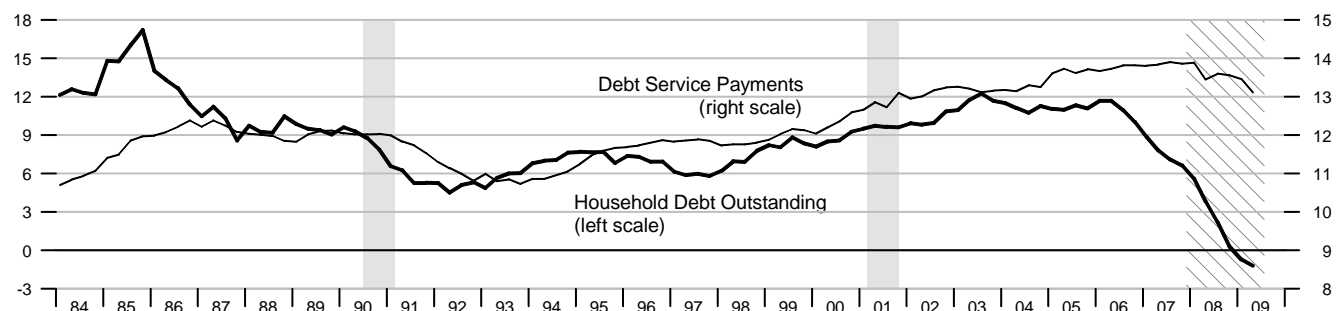


*Data from Jan. 1992 to the present are on a NAICS basis; data prior to Jan. 1992 are on an SIC basis and are not strictly comparable (see End Note).

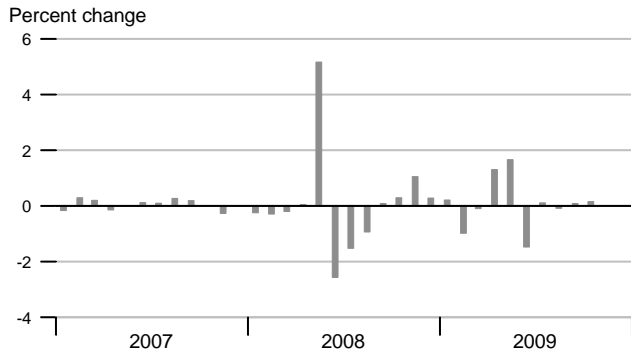
Debt Service Payments and Household Debt Outstanding

Percent change from year ago, quarterly data

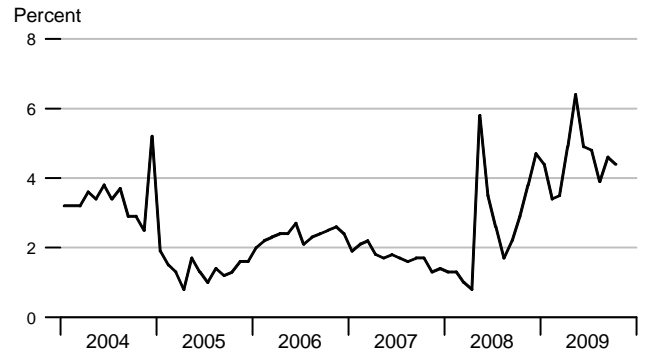
Percent of disposable personal income



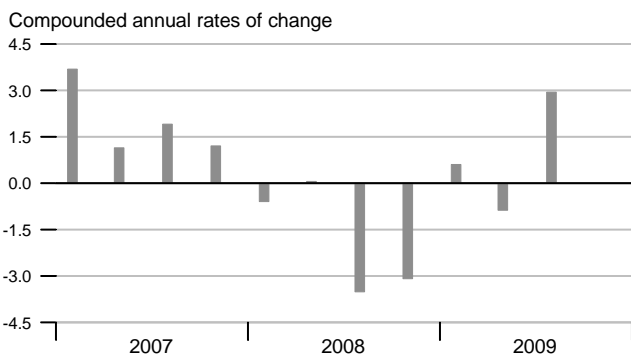
Real Disposable Personal Income



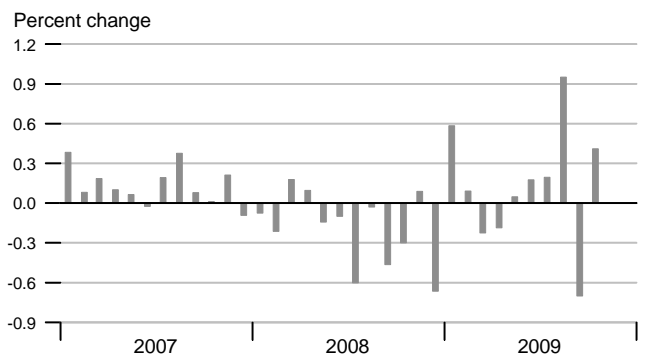
Personal Saving Rate



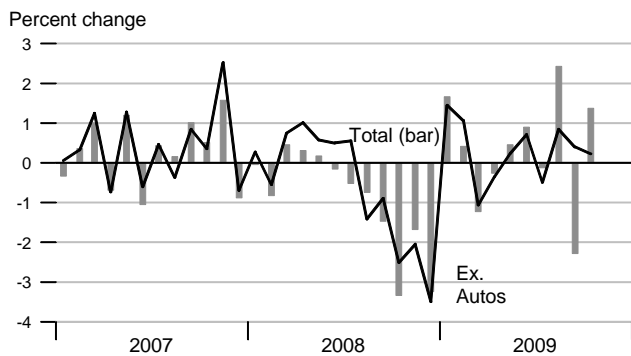
Real Consumption



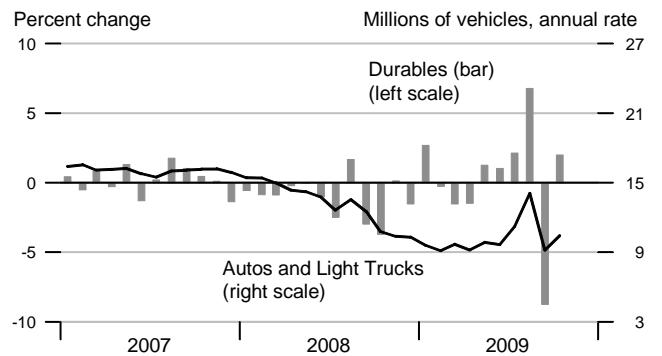
Real Consumption



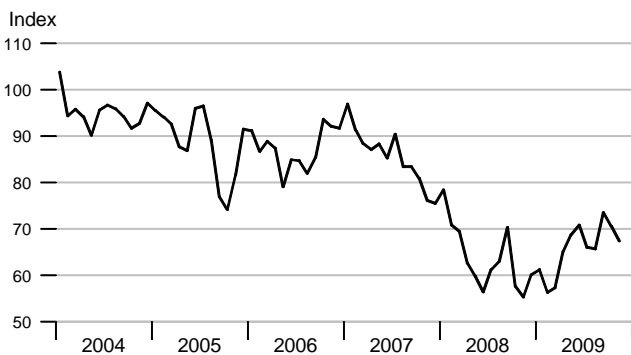
Retail & Food Services



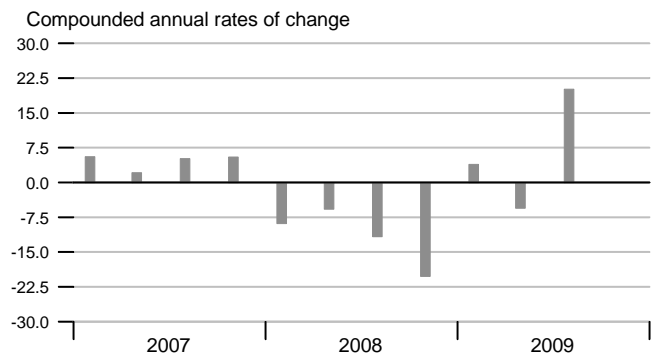
Real Durables Consumption & Vehicle Sales



Consumer Sentiment (U. of Michigan)

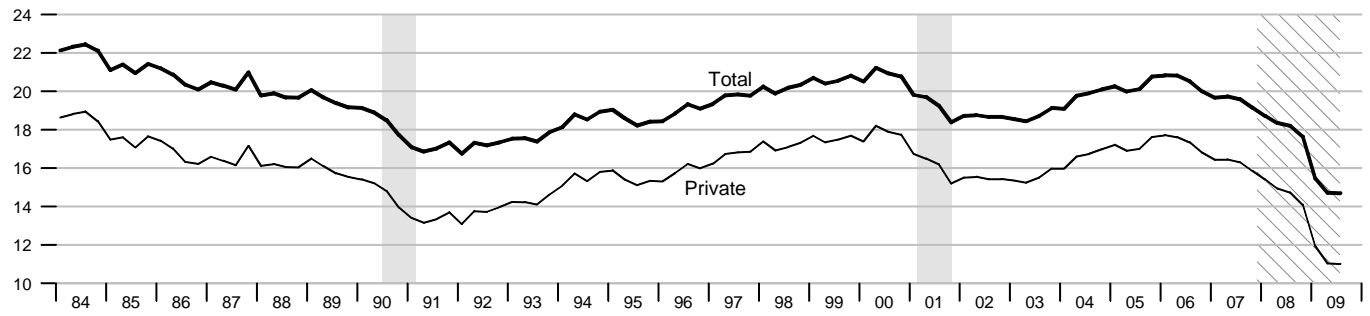


Real Durables Consumption



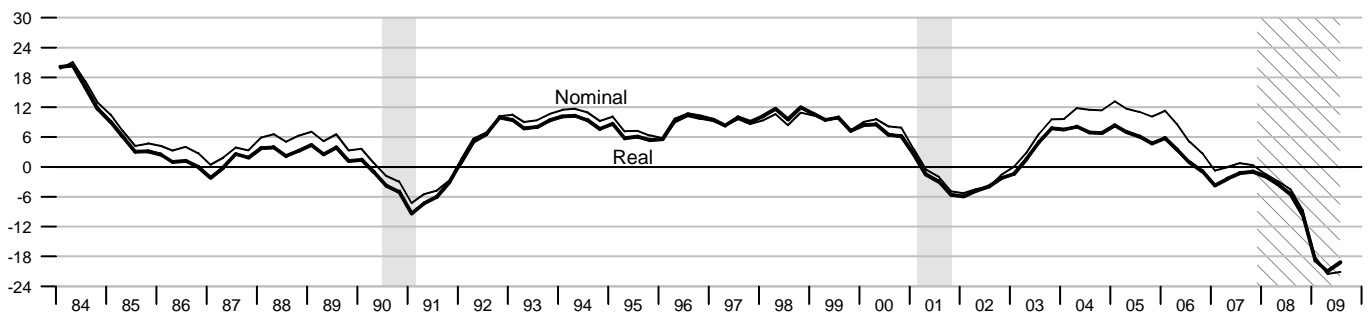
Investment

Percent of nominal GDP



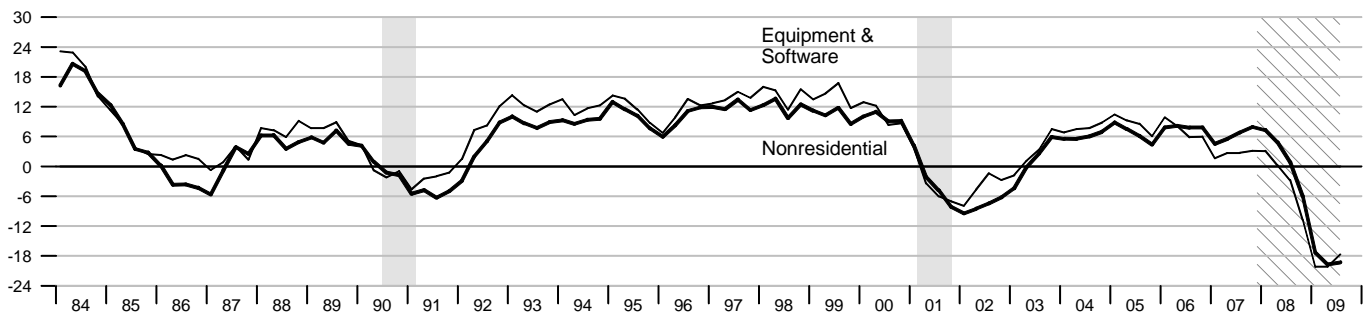
Private Fixed Investment

Percent change from year ago



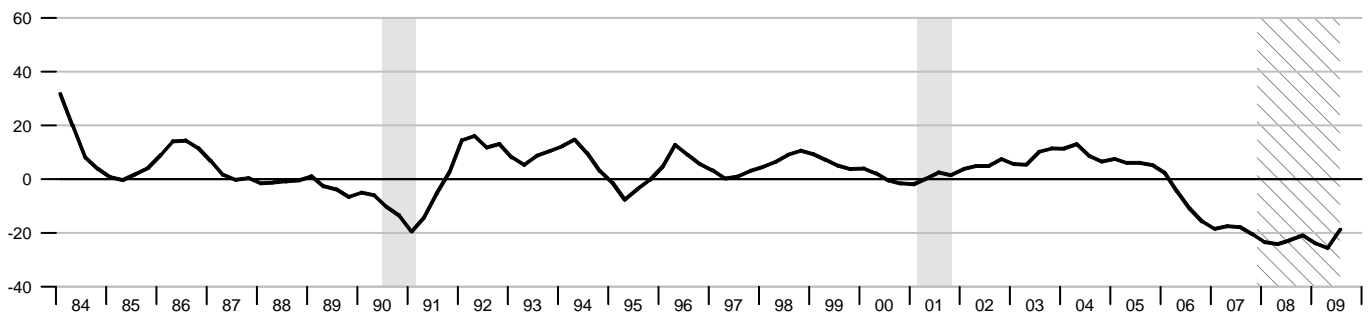
Real Nonresidential Fixed and Equipment & Software Investment

Percent change from year ago

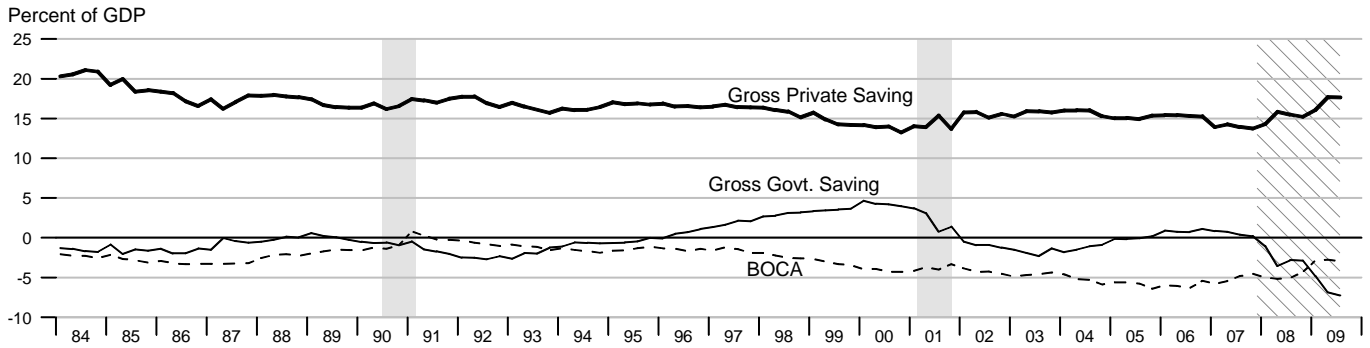


Real Residential Fixed Investment

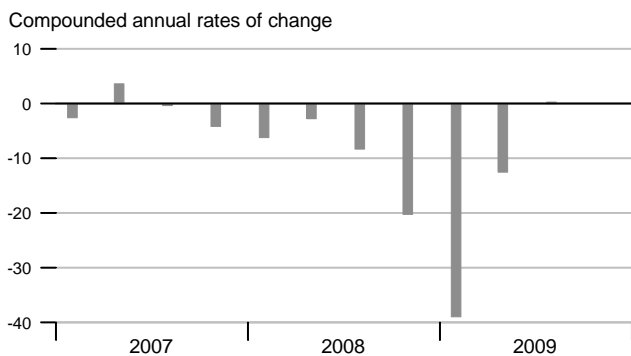
Percent change from year ago



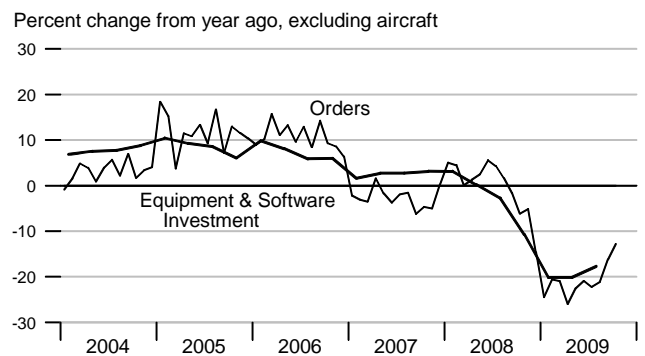
Gross Saving Rates and Balance on Current Account (NIPA)



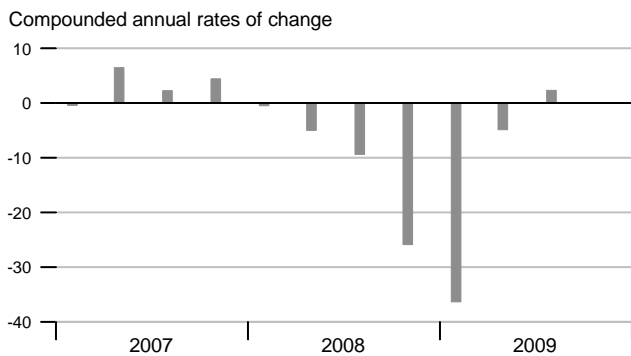
Real Private Fixed Investment



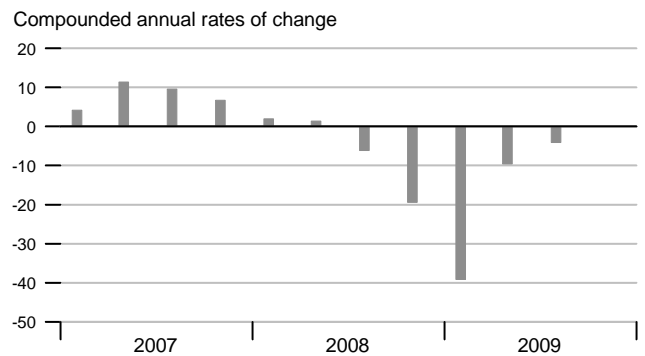
Nondefense Capital Goods Orders



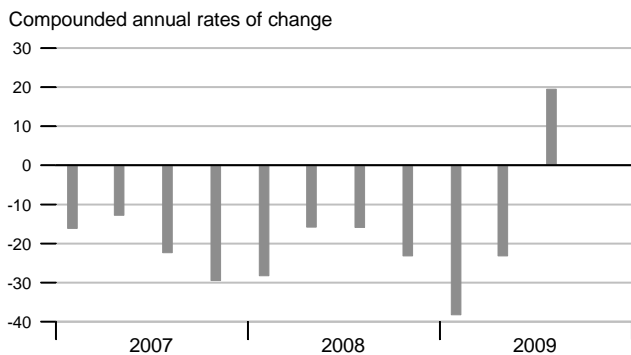
Real Equipment & Software Investment



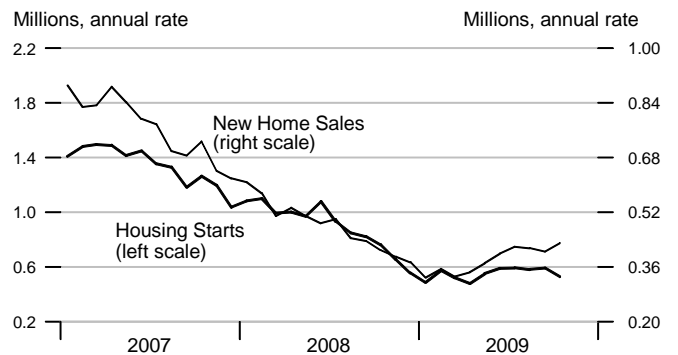
Real Nonresidential Fixed Investment



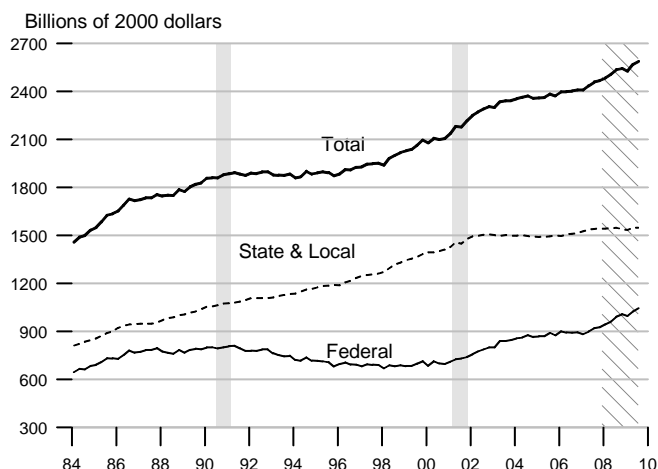
Real Residential Fixed Investment



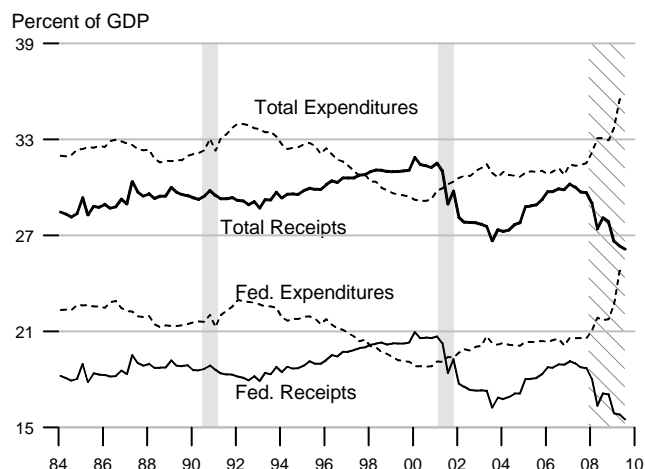
Housing Starts and New Home Sales



Govt. Consumption and Investment



Govt. Current Receipts and Expenditures



Government Budgets

Billions of dollars

National Income Accounts

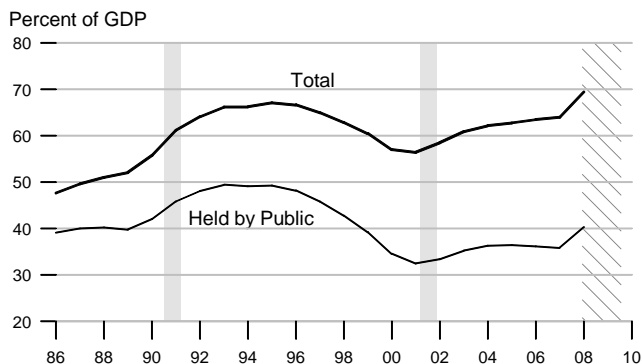
Calendar Years

Unified Budget

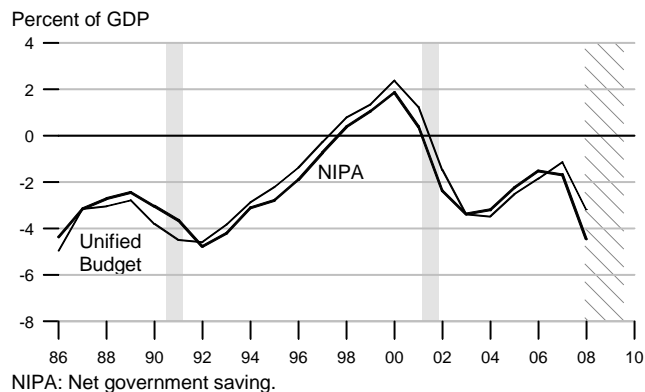
Fiscal Years

	State and Local			Federal			Federal		
	Receipts	Expenditures	Surplus or Deficit (-)	Receipts	Expenditures	Surplus or Deficit (-)	Receipts	Outlays	Surplus or Deficit (-)
1996	1045.1	1022.1	23.0	1526.4	1674.7	-148.3	1453.2	1560.6	-107.4
1997	1099.5	1063.2	36.3	1656.2	1716.3	-60.1	1579.4	1601.3	-21.9
1998	1164.5	1117.6	46.9	1777.9	1744.3	33.6	1722.0	1652.7	69.3
1999	1240.4	1198.6	41.8	1895.0	1796.2	98.8	1827.6	1702.0	125.6
2000	1322.6	1281.3	41.3	2057.1	1871.9	185.2	2025.5	1789.2	236.2
2001	1374.0	1389.9	-15.9	2020.3	1979.8	40.5	1991.4	1863.2	128.2
2002	1412.7	1466.8	-54.1	1859.3	2112.1	-252.8	1853.4	2011.2	-157.8
2003	1496.3	1535.1	-38.8	1885.1	2261.5	-376.4	1782.5	2160.1	-377.6
2004	1601.0	1609.3	-8.3	2013.9	2393.4	-379.5	1880.3	2293.0	-412.7
2005	1730.4	1704.5	25.9	2290.1	2573.1	-283.0	2153.9	2472.2	-318.3
2006	1829.7	1778.6	51.1	2524.5	2728.3	-203.8	2407.3	2655.4	-248.2
2007	1927.3	1905.6	21.7	2660.8	2897.2	-236.4	2568.2	2728.9	-160.7
2008	1974.2	2014.4	-40.2	2475.0	3117.6	-642.6	2524.3	2982.9	-458.6
2007Q4	1951.6	1952.9	-1.3	2682.9	2947.9	-265.0	606.2	713.0	-106.8
2008Q1	1963.7	1983.8	-20.1	2590.7	3024.2	-433.5	539.8	745.7	-205.9
2008Q2	1994.2	2019.8	-25.6	2372.1	3169.0	-796.9	787.9	761.0	26.9
2008Q3	1987.5	2046.5	-59.0	2489.5	3155.2	-665.7	590.0	758.9	-169.0
2008Q4	1951.4	2007.5	-56.1	2447.8	3121.9	-674.1	547.4	879.9	-332.5
2009Q1	1961.4	1998.0	-36.6	2251.3	3220.3	-969.0	442.4	891.3	-448.9
2009Q2	1989.3	2013.9	-24.6	2237.0	3505.9	-1269	598.8	903.7	-304.9
2009Q3	2002.4	2019.3	-16.9	2211.7	3554.6	-1343	515.9	846.7	-330.8

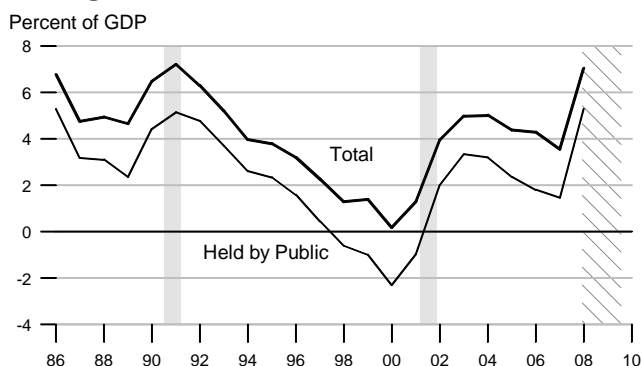
Federal Debt



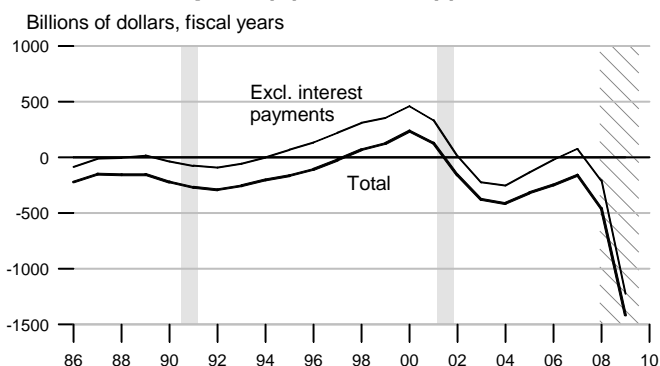
Federal Surplus (+) / Deficit (-)



Change in Federal Debt



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

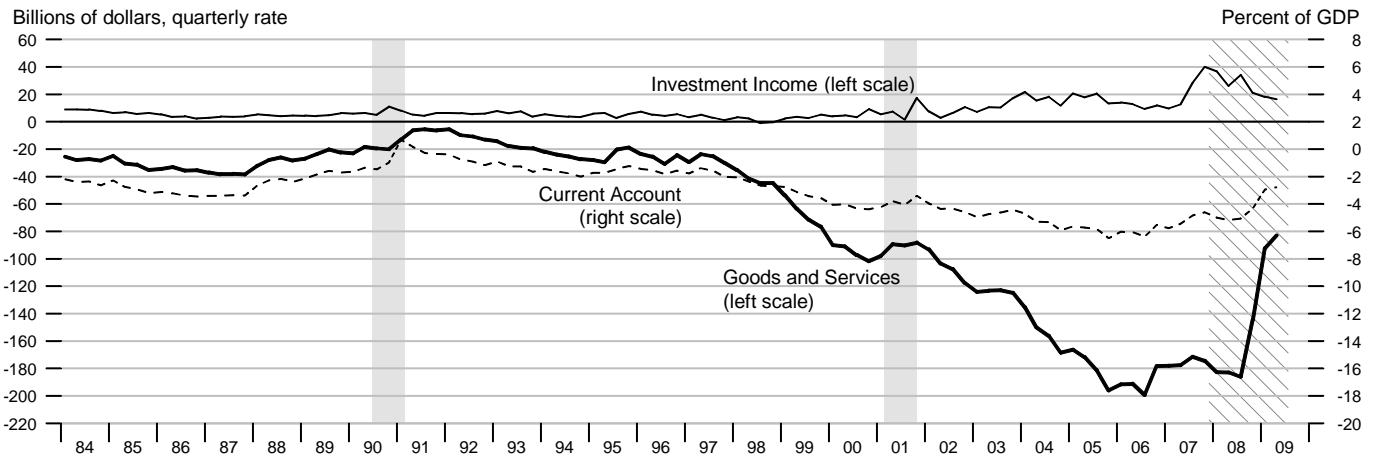


Federal Government Debt

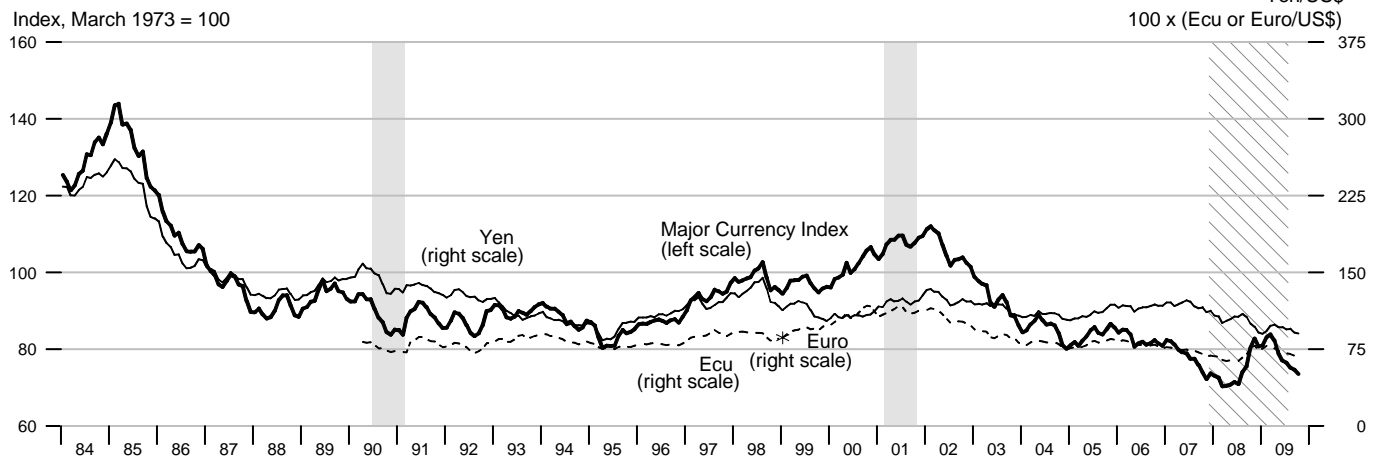
Billions of dollars, end of month or fiscal year
Excludes Agency-issued debt

		Total Public Debt	Held by Agencies and Trusts	Held by Public		Held by Private Investors	
				Total	Federal Reserve Banks	Total	Foreign and International
2006		8507.0	3663.8	4843.2	768.9	4074.2	2027.3
2007		9007.7	3958.4	5049.2	779.6	4269.7	2237.2
2008		10024.7	4210.5	5814.2	476.6	5332.0	2801.9
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	2193.9
	September	9007.7	3958.4	5049.2	779.6	4269.7	2237.2
	December	9229.2	4092.9	5136.3	740.6	4395.7	2352.9
2008	March	9437.6	4103.6	5334.0	591.2	4742.9	2507.5
	June	9492.0	4207.0	5285.0	478.8	4806.2	2635.3
	September	10024.7	4210.5	5814.2	476.6	5332.0	2801.9
	December	10699.8	4327.2	6372.7	475.9	5893.4	3078.7
2009	March	11126.9	4290.6	6836.3	492.3	6341.7	3267.0
	June	11545.3	4368.8	7176.5	656.5	6518.5	3384.0

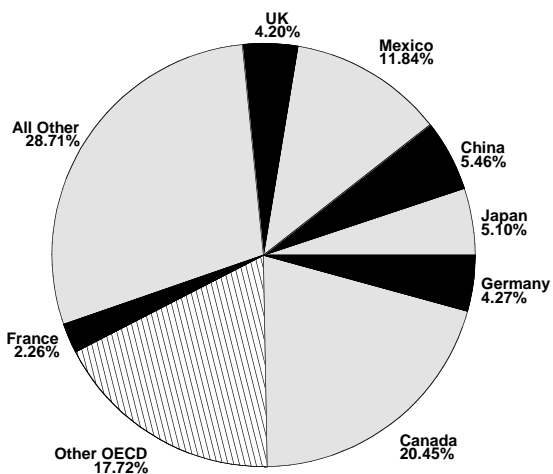
Current Account, Trade and Investment Income Balances



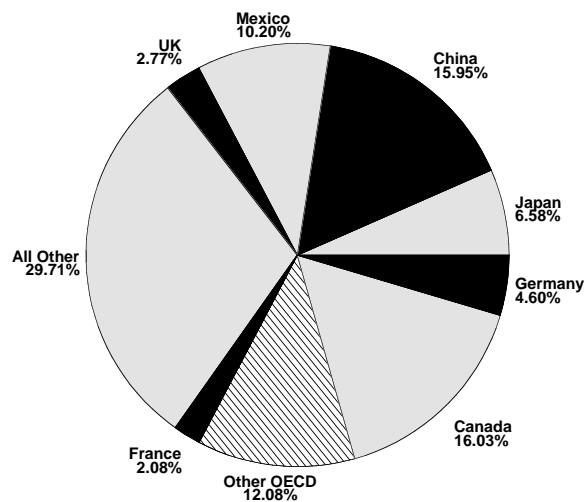
Exchange Rates



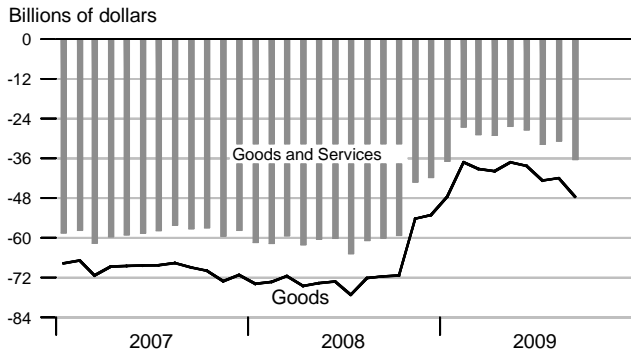
Goods Export Shares, 2008



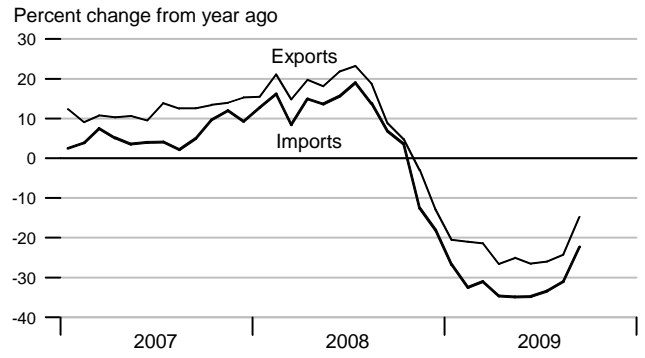
Goods Import Shares, 2008



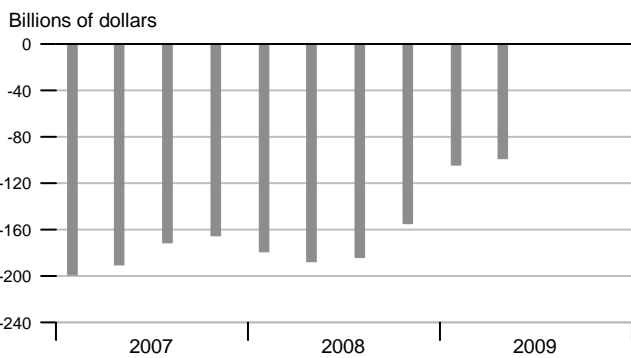
Trade Balance



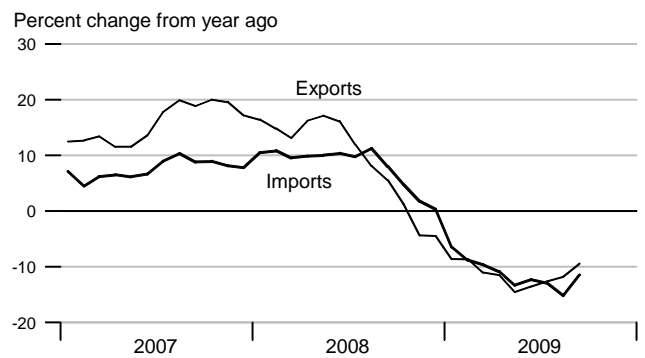
Goods Trade



Current Account Balance

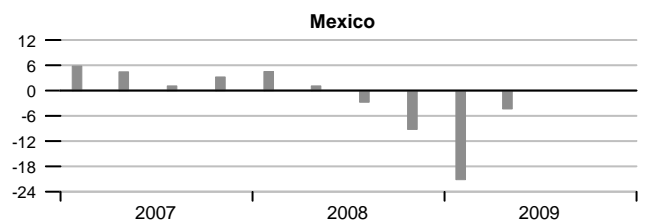
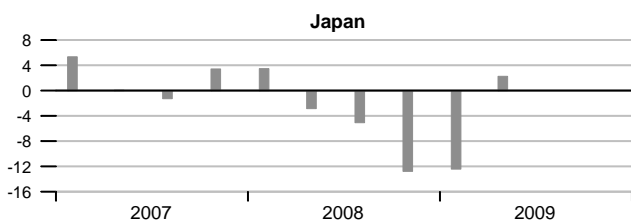
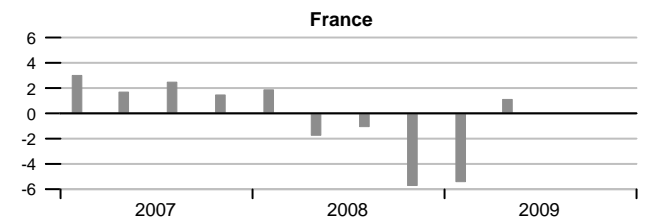
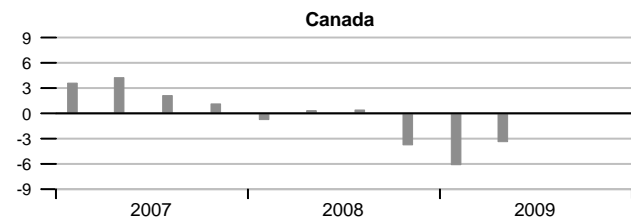
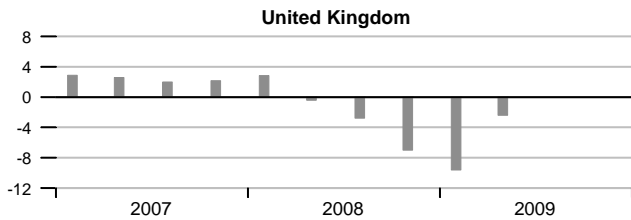


Services Trade

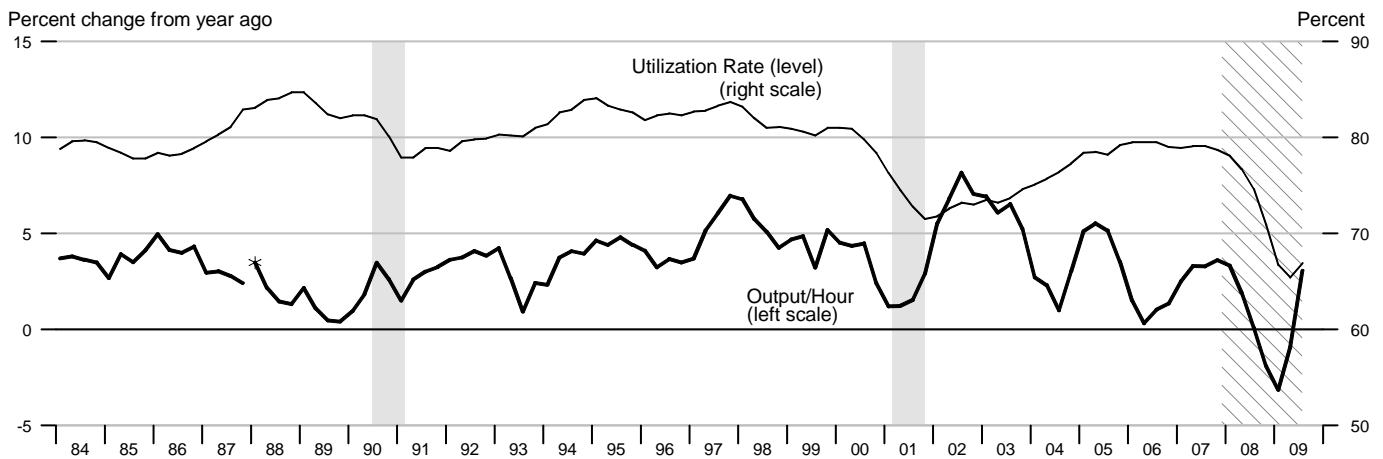


Real GDP Growth of Major Trading Partners

Compounded annual rates of change

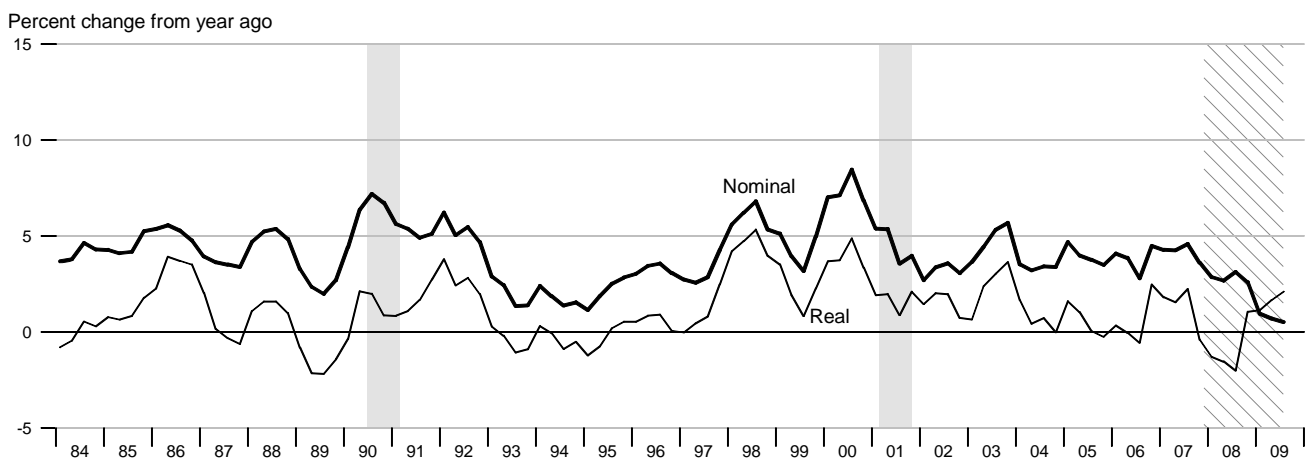


Output per Hour and Capacity Utilization, Manufacturing

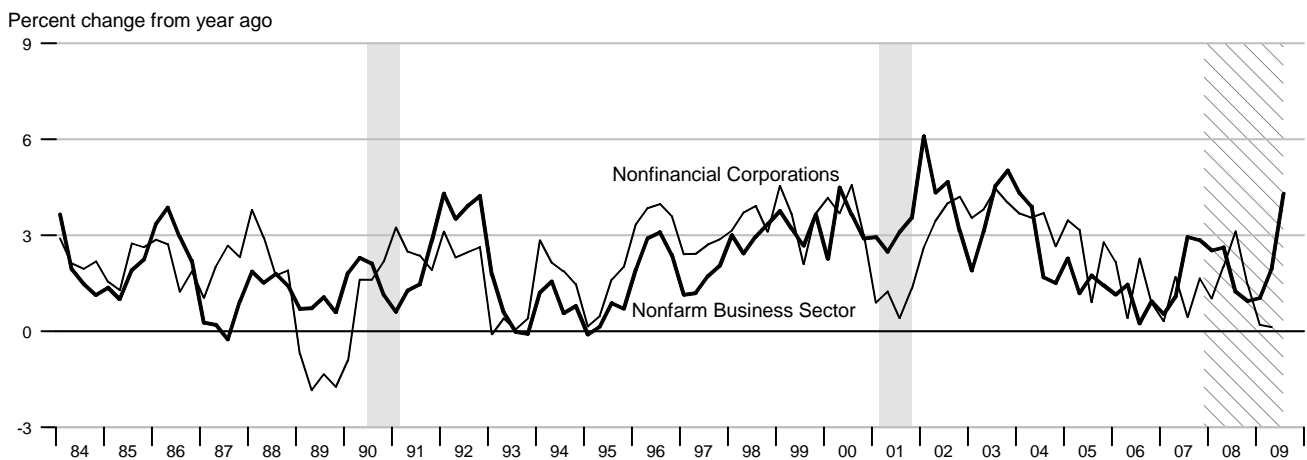


*Data from 1987 to the present are on a NAICS basis; data prior to 1987 are on an SIC basis and are not strictly comparable (see End Note).

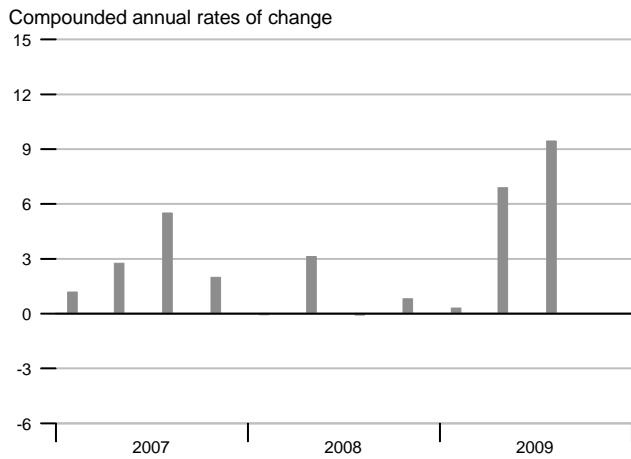
Nonfarm Compensation per Hour



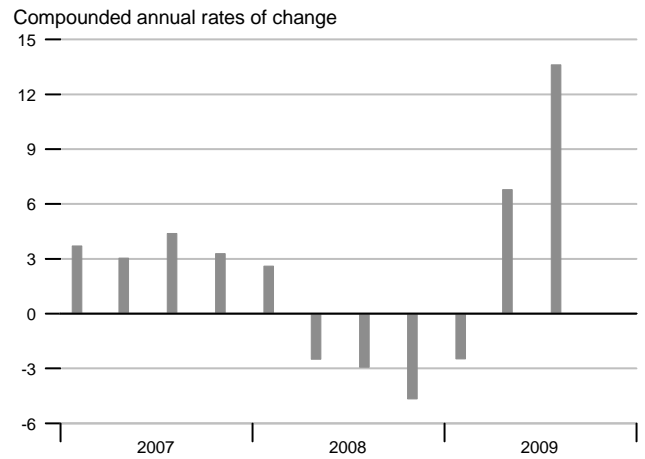
Output per Hour, Nonfarm Business and Nonfinancial Corporations



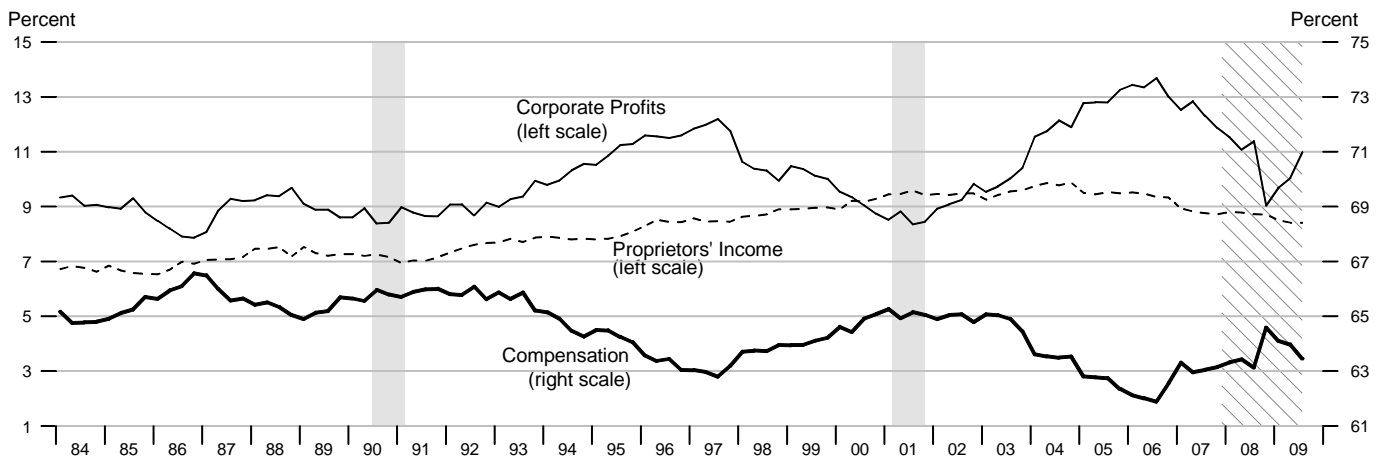
Nonfarm Output per Hour



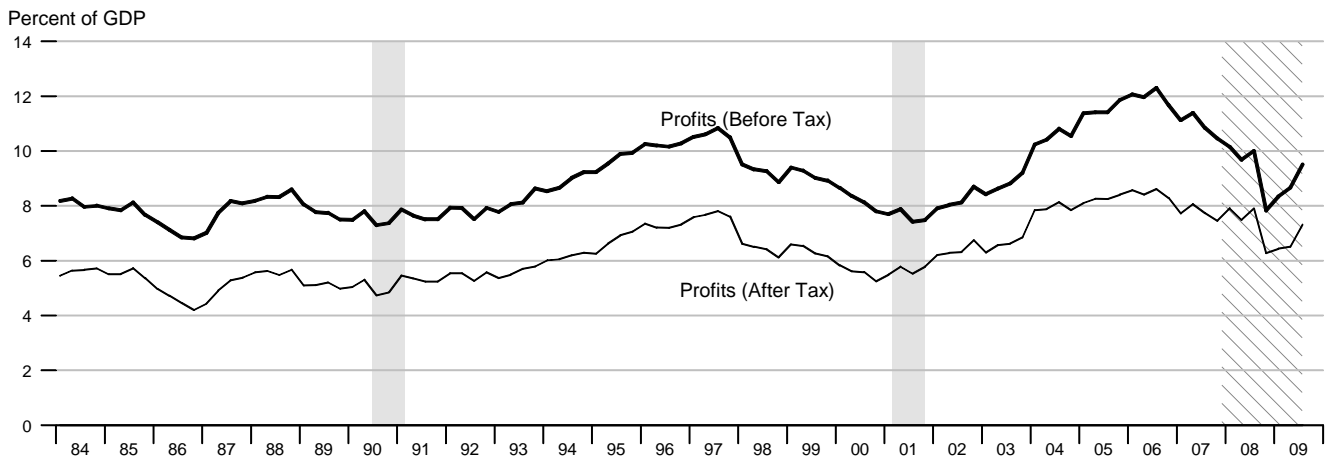
Manufacturing Output per Hour



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
2005	100.000		3.3	99.2		3.1	99.2		2.5	99.2		4.6
2006	103.263		3.3	102.1		2.9	102.1		2.9	102.1		2.9
2007	106.221		2.9	105.2		3.1	105.5		3.4	104.5		2.4
2008	108.481		2.1	108.2		2.8	108.7		3.0	107.2		2.6
2006 1	102.071	3.0	3.3	100.8	2.4	2.6	100.8	2.8	2.5	100.8	2.0	2.9
2	102.980	3.6	3.6	101.6	3.2	2.8	101.6	3.2	2.8	101.6	3.2	2.8
3	103.763	3.1	3.3	102.5	3.6	3.0	102.5	3.6	3.1	102.5	3.6	2.8
4	104.237	1.8	2.9	103.3	3.2	3.1	103.3	3.2	3.2	103.4	3.6	3.1
2007 1	105.327	4.2	3.2	104.0	2.7	3.2	104.3	3.9	3.5	103.1	-1.2	2.3
2	106.026	2.7	3.0	104.8	3.1	3.1	105.0	2.7	3.3	104.2	4.3	2.6
3	106.460	1.6	2.6	105.6	3.1	3.0	105.9	3.5	3.3	104.9	2.7	2.3
4	107.072	2.3	2.7	106.5	3.5	3.1	106.7	3.1	3.3	105.9	3.9	2.4
2008 1	107.577	1.9	2.1	107.2	2.7	3.1	107.6	3.4	3.2	106.5	2.3	3.3
2	108.061	1.8	1.9	107.9	2.6	3.0	108.4	3.0	3.2	106.9	1.5	2.6
3	109.130	4.0	2.5	108.6	2.6	2.8	109.1	2.6	3.0	107.5	2.3	2.5
4	109.155	0.1	1.9	109.1	1.9	2.4	109.6	1.8	2.7	107.9	1.5	1.9
2009 1	109.661	1.9	1.9	109.3	0.7	2.0	109.8	0.7	2.0	108.1	0.7	1.5
2	109.656	-0.0	1.5	109.5	0.7	1.5	110.0	0.7	1.5	108.3	0.7	1.3
3	109.801	0.5	0.6	110.0	1.8	1.3	110.5	1.8	1.3	108.6	1.1	1.0
	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
2005	1305.057		6.7	2027.790		6.1	136.233		1.7	162.793		4.0
2006	1422.020		9.0	2151.204		6.1	137.520		0.9	168.985		3.8
2007	1546.124		8.7	2193.827		2.0	140.063		1.8	176.041		4.2
2008	1629.262		5.4	2123.523		-3.2	142.611		1.8	180.965		2.8
2006 1	1388.773	16.5	8.8	2121.325	7.8	6.5	137.507	2.8	1.2	167.102	5.5	4.1
2	1412.067	6.9	8.3	2144.880	4.5	6.6	137.702	0.6	1.5	167.980	2.1	3.9
3	1414.069	0.6	8.5	2170.548	4.9	7.2	137.031	-1.9	0.2	168.567	1.4	2.8
4	1473.171	17.8	10.2	2168.061	-0.5	4.1	137.839	2.4	0.9	172.266	9.1	4.5
2007 1	1485.881	3.5	7.0	2190.837	4.3	3.3	138.246	1.2	0.5	174.247	4.7	4.3
2	1504.758	5.2	6.6	2188.125	-0.5	2.0	139.187	2.8	1.1	175.133	2.0	4.3
3	1569.896	18.5	11.0	2208.336	3.7	1.7	141.067	5.5	2.9	176.302	2.7	4.6
4	1623.961	14.5	10.2	2188.007	-3.6	0.9	141.761	2.0	2.8	178.478	5.0	3.6
2008 1	1623.423	-0.1	9.3	2174.293	-2.5	-0.8	141.737	-0.1	2.5	179.222	1.7	2.9
2	1670.431	12.1	11.0	2146.478	-5.0	-1.9	142.834	3.1	2.6	179.813	1.3	2.7
3	1655.183	-3.6	5.4	2134.428	-2.2	-3.3	142.807	-0.1	1.2	181.809	4.5	3.1
4	1568.010	-19.5	-3.4	2038.891	-16.7	-6.8	143.099	0.8	0.9	183.107	2.9	2.6
2009 1	1434.549	-29.9	-11.6	1821.043	-36.4	-16.2	143.209	0.3	1.0	180.921	-4.7	0.9
2	1419.458	-4.1	-15.0	1749.826	-14.7	-18.5	145.617	6.9	1.9	181.073	0.3	0.7
3	1476.407	17.0	-10.8	1834.428	20.8	-14.1	148.942	9.5	4.3	182.751	3.8	0.5

		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
2004		139240	1511		1.1	131419	1423		1.1	100.2			1.6
2005		141714	2474		1.8	133699	2280		1.7	102.7			2.6
2006		144420	2707		1.9	136098	2398		1.8	105.8			3.0
2007		146050	1629		1.1	137604	1507		1.1	107.3			1.4
2008		145368	-681		-0.5	137046	-558		-0.4	106.2			-1.0
2007	1	146081	459	1.3	1.9	137265	498	1.5	1.4	106.8	0.2	0.8	1.8
	2	145873	-208	-0.6	1.3	137557	292	0.9	1.2	107.3	0.4	1.8	1.5
	3	145969	96	0.3	1.0	137595	38	0.1	1.0	107.3	0.0	0.0	1.3
	4	146275	306	0.8	0.4	138000	406	1.2	0.9	107.7	0.4	1.5	1.0
2008	1	146138	-137	-0.4	0.0	137943	-57	-0.2	0.5	107.5	-0.1	-0.5	0.7
	2	145990	-149	-0.4	0.1	137509	-434	-1.3	-0.0	106.9	-0.6	-2.3	-0.3
	3	145299	-690	-1.9	-0.5	137004	-505	-1.5	-0.4	106.1	-0.7	-2.8	-1.1
	4	144046	-1253	-3.4	-1.5	135727	-1277	-3.7	-1.6	104.1	-1.9	-7.4	-3.3
2009	1	141578	-2468	-6.7	-3.1	133662	-2065	-5.9	-3.1	101.7	-2.3	-8.9	-5.4
	2	140591	-987	-2.8	-3.7	132125	-1537	-4.5	-3.9	99.7	-2.0	-7.8	-6.8
	3	139518	-1073	-3.0	-4.0	131235	-889	-2.7	-4.2	98.9	-0.8	-3.0	-6.8
2007	Oct	145867	-336	-2.7	0.4	137817	165	1.4	1.0	107.5	0.2	2.3	1.2
	Nov	146665	798	6.8	0.7	138032	215	1.9	0.9	107.7	0.2	2.3	1.1
	Dec	146294	-371	-3.0	0.2	138152	120	1.0	0.8	107.8	0.1	1.1	0.7
2008	Jan	146317	23	0.2	0.2	138080	-72	-0.6	0.7	107.5	-0.3	-3.3	0.8
	Feb	146075	-242	-2.0	0.1	137936	-144	-1.2	0.5	107.6	0.1	1.1	0.9
	Mar	146023	-52	-0.4	-0.2	137814	-122	-1.1	0.3	107.5	-0.1	-1.1	0.3
	Apr	146257	234	1.9	0.4	137654	-160	-1.4	0.2	107.4	-0.1	-1.1	0.5
	May	145974	-283	-2.3	0.0	137517	-137	-1.2	-0.1	106.9	-0.5	-5.4	-0.5
	Jun	145738	-236	-1.9	-0.2	137356	-161	-1.4	-0.2	106.4	-0.5	-5.5	-1.0
	Jul	145596	-142	-1.2	-0.3	137228	-128	-1.1	-0.3	106.2	-0.2	-2.2	-1.0
	Aug	145273	-323	-2.6	-0.3	137053	-175	-1.5	-0.4	106.4	0.2	2.3	-0.7
	Sep	145029	-244	-2.0	-0.8	136732	-321	-2.8	-0.7	105.8	-0.6	-6.6	-1.4
	Oct	144657	-372	-3.0	-0.8	136352	-380	-3.3	-1.1	105.0	-0.8	-8.7	-2.3
	Nov	144144	-513	-4.2	-1.7	135755	-597	-5.1	-1.6	104.1	-0.9	-9.8	-3.3
	Dec	143338	-806	-6.5	-2.0	135074	-681	-5.9	-2.2	103.2	-0.9	-9.9	-4.3
2009	Jan	142099	-1239	-9.9	-2.9	134333	-741	-6.4	-2.7	102.5	-0.7	-7.8	-4.7
	Feb	141748	-351	-2.9	-3.0	133652	-681	-5.9	-3.1	101.9	-0.6	-6.8	-5.3
	Mar	140887	-861	-7.1	-3.5	133000	-652	-5.7	-3.5	100.7	-1.2	-13.3	-6.3
	Apr	141007	120	1.0	-3.6	132481	-519	-4.6	-3.8	100.1	-0.6	-6.9	-6.8
	May	140570	-437	-3.7	-3.7	132178	-303	-2.7	-3.9	99.8	-0.3	-3.5	-6.6
	Jun	140196	-374	-3.1	-3.8	131715	-463	-4.1	-4.1	99.1	-0.7	-8.1	-6.9
	Jul	140041	-155	-1.3	-3.8	131411	-304	-2.7	-4.2	99.2	0.1	1.2	-6.6
	Aug	139649	-392	-3.3	-3.9	131257	-154	-1.4	-4.2	99.0	-0.2	-2.4	-7.0
	Sep	138864	-785	-6.5	-4.3	131038	-219	-2.0	-4.2	98.5	-0.5	-5.9	-6.9
	Oct	138275	-589	-5.0	-4.4	130848	-190	-1.7	-4.0	98.3	-0.2	-2.4	-6.4

		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
2004		5.5	3833.094			6.1	103.8293			2.5	1.37	4.27
2005		5.1	4078.223			6.4	107.2289			3.3	3.15	4.29
2006		4.6	4294.467			5.3	109.6790			2.3	4.73	4.79
2007		4.6	4435.842			3.3	111.3193			1.5	4.35	4.63
2008		5.8	4402.028			-0.8	108.8185			-2.2	1.37	3.67
2007	1	4.5	1095.943	1.3	5.2	2.6	110.4694	0.5	1.8	1.3	4.98	4.68
	2	4.5	1101.816	0.5	2.2	3.0	111.1307	0.6	2.4	1.4	4.74	4.85
	3	4.7	1108.003	0.6	2.3	3.1	111.7206	0.5	2.1	1.4	4.30	4.73
	4	4.8	1130.080	2.0	8.2	4.4	111.9566	0.2	0.8	1.8	3.39	4.26
2008	1	4.9	1124.247	-0.5	-2.0	2.6	112.0106	0.0	0.2	1.4	2.04	3.66
	2	5.4	1128.726	0.4	1.6	2.4	110.7109	-1.2	-4.6	-0.4	1.63	3.89
	3	6.1	1111.269	-1.5	-6.0	0.3	108.1232	-2.3	-9.0	-3.2	1.49	3.86
	4	6.9	1037.786	-6.6	-23.9	-8.2	104.4294	-3.4	-13.0	-6.7	0.30	3.25
2009	1	8.1	1024.683	-1.3	-5.0	-8.9	99.0679	-5.1	-19.0	-11.6	0.21	2.74
	2	9.3	1021.129	-0.3	-1.4	-9.5	96.4074	-2.7	-10.3	-12.9	0.17	3.31
	3	9.6	1036.072	1.5	6.0	-6.8	97.7347	1.4	5.6	-9.6	0.16	3.52
2007	Oct	4.8	373.893	0.5	6.3	4.5	111.4196	-0.5	-6.1	1.5	3.90	4.53
	Nov	4.7	379.767	1.6	20.6	5.6	112.0541	0.6	7.1	2.3	3.27	4.15
	Dec	4.9	376.420	-0.9	-10.1	3.3	112.3962	0.3	3.7	1.7	3.00	4.10
2008	Jan	4.9	376.262	-0.0	-0.5	3.6	112.3389	-0.1	-0.6	2.2	2.75	3.74
	Feb	4.8	373.140	-0.8	-9.5	2.4	112.0435	-0.3	-3.1	1.1	2.12	3.74
	Mar	5.1	374.845	0.5	5.6	1.8	111.6495	-0.4	-4.1	0.9	1.26	3.51
	Apr	5.0	376.009	0.3	3.8	2.8	111.0012	-0.6	-6.7	-0.0	1.29	3.68
	May	5.5	376.662	0.2	2.1	1.8	110.6820	-0.3	-3.4	-0.4	1.73	3.88
	Jun	5.6	376.055	-0.2	-1.9	2.7	110.4494	-0.2	-2.5	-0.7	1.86	4.10
	Jul	5.8	374.103	-0.5	-6.1	1.7	110.3760	-0.1	-0.8	-1.0	1.63	4.01
	Aug	6.2	371.311	-0.7	-8.6	0.8	109.1570	-1.1	-12.5	-2.2	1.72	3.89
	Sep	6.2	365.855	-1.5	-16.3	-1.7	104.8367	-4.0	-38.4	-6.4	1.13	3.69
	Oct	6.6	353.641	-3.3	-33.5	-5.4	106.1626	1.3	16.3	-4.7	0.67	3.81
	Nov	6.8	347.707	-1.7	-18.4	-8.4	104.7607	-1.3	-14.7	-6.5	0.19	3.53
	Dec	7.2	336.438	-3.2	-32.7	-10.6	102.3650	-2.3	-24.2	-8.9	0.03	2.42
2009	Jan	7.6	342.017	1.7	21.8	-9.1	100.1154	-2.2	-23.4	-10.9	0.13	2.52
	Feb	8.1	343.438	0.4	5.1	-8.0	99.3397	-0.8	-8.9	-11.3	0.30	2.87
	Mar	8.5	339.228	-1.2	-13.8	-9.5	97.7486	-1.6	-17.6	-12.5	0.21	2.82
	Apr	8.9	338.344	-0.3	-3.1	-10.0	97.2344	-0.5	-6.1	-12.4	0.16	2.93
	May	9.4	339.873	0.5	5.6	-9.8	96.2033	-1.1	-12.0	-13.1	0.18	3.29
	Jun	9.5	342.912	0.9	11.3	-8.8	95.7844	-0.4	-5.1	-13.3	0.18	3.72
	Jul	9.4	342.489	-0.1	-1.5	-8.5	96.6784	0.9	11.8	-12.4	0.18	3.56
	Aug	9.7	350.800	2.4	33.3	-5.5	97.9478	1.3	16.9	-10.3	0.17	3.59
	Sep	9.8	342.783	-2.3	-24.2	-6.3	98.5778	0.6	8.0	-6.0	0.12	3.40
	Oct	10.2	347.483	1.4	17.8	-1.7	98.6271	0.1	0.6	-7.1	0.07	3.39

		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
2004		188.908			2.7		196.642			1.8		148.5			3.6
2005		195.292			3.4		200.883			2.2		155.8			4.9
2006		201.583			3.2		205.933			2.5		160.3			2.9
2007		207.348			2.9		210.730			2.3		166.6			3.9
2008		215.224			3.8		215.570			2.3		177.3			6.4
2007	1	204.426	1.0	3.9	2.4	3.9	208.993	0.6	2.3	2.6	2.3	162.6	1.6	6.4	1.9
	2	206.542	1.0	4.2	2.6	4.0	210.097	0.5	2.1	2.3	2.2	166.0	2.0	8.5	3.4
	3	207.747	0.6	2.4	2.3	3.5	211.204	0.5	2.1	2.1	2.2	166.9	0.6	2.4	3.6
	4	210.679	1.4	5.8	4.0	4.0	212.627	0.7	2.7	2.3	2.3	171.0	2.4	10.1	6.8
2008	1	213.007	1.1	4.5	4.2	4.5	213.942	0.6	2.5	2.4	2.5	174.4	2.0	8.1	7.2
	2	215.358	1.1	4.5	4.3	4.5	215.007	0.5	2.0	2.3	2.3	178.5	2.4	9.9	7.6
	3	218.620	1.5	6.2	5.2	5.1	216.493	0.7	2.8	2.5	2.4	182.7	2.4	9.7	9.5
	4	213.910	-2.2	-8.3	1.5	1.5	216.836	0.2	0.6	2.0	2.0	173.4	-5.1	-19.0	1.4
2009	1	212.632	-0.6	-2.4	-0.2	-2.4	217.659	0.4	1.5	1.7	1.5	170.6	-1.6	-6.2	-2.2
	2	213.335	0.3	1.3	-0.9	-0.5	218.949	0.6	2.4	1.8	2.0	171.4	0.4	1.8	-4.0
	3	215.229	0.9	3.6	-1.6	0.8	219.763	0.4	1.5	1.5	1.8	173.4	1.2	4.8	-5.1
2007	Oct	209.133	0.4	4.4	3.6	3.5	212.070	0.2	2.8	2.2	2.3	168.6	0.7	8.9	6.3
	Nov	211.166	1.0	12.3	4.4	4.2	212.644	0.3	3.3	2.3	2.4	172.6	2.4	32.5	7.6
	Dec	211.737	0.3	3.3	4.2	4.2	213.166	0.2	3.0	2.4	2.4	171.8	-0.5	-5.4	6.4
2008	Jan	212.495	0.4	4.4	4.4	4.4	213.714	0.3	3.1	2.5	3.1	173.4	0.9	11.8	7.8
	Feb	212.860	0.2	2.1	4.2	3.2	213.859	0.1	0.8	2.3	2.0	174.1	0.4	5.0	6.9
	Mar	213.667	0.4	4.6	4.1	3.7	214.252	0.2	2.2	2.4	2.1	175.6	0.9	10.8	6.9
	Apr	213.997	0.2	1.9	3.9	3.2	214.496	0.1	1.4	2.3	1.9	176.0	0.2	2.8	6.4
	May	215.044	0.5	6.0	4.0	3.8	214.950	0.2	2.6	2.3	2.0	178.6	1.5	19.2	7.3
	Jun	217.034	0.9	11.7	4.8	5.1	215.575	0.3	3.5	2.4	2.3	181.0	1.3	17.4	9.0
	Jul	218.610	0.7	9.1	5.4	5.6	216.162	0.3	3.3	2.5	2.4	183.4	1.3	17.1	9.7
	Aug	218.576	-0.0	-0.2	5.3	4.9	216.534	0.2	2.1	2.5	2.4	182.5	-0.5	-5.7	9.8
	Sep	218.675	0.0	0.5	4.9	4.4	216.784	0.1	1.4	2.5	2.3	182.3	-0.1	-1.3	8.9
	Oct	216.889	-0.8	-9.4	3.7	2.9	216.758	-0.0	-0.1	2.2	2.0	177.6	-2.6	-26.9	5.3
	Nov	213.263	-1.7	-18.3	1.0	0.8	216.868	0.1	0.6	2.0	1.9	172.8	-2.7	-28.0	0.1
	Dec	211.577	-0.8	-9.1	-0.1	-0.1	216.882	0.0	0.1	1.7	1.7	169.7	-1.8	-19.5	-1.2
2009	Jan	212.174	0.3	3.4	-0.2	3.4	217.265	0.2	2.1	1.7	2.1	171.2	0.9	11.1	-1.3
	Feb	213.007	0.4	4.8	0.1	4.1	217.670	0.2	2.3	1.8	2.2	171.1	-0.1	-0.7	-1.7
	Mar	212.714	-0.1	-1.6	-0.4	2.2	218.042	0.2	2.1	1.8	2.2	169.5	-0.9	-10.7	-3.5
	Apr	212.671	-0.0	-0.2	-0.6	1.6	218.594	0.3	3.1	1.9	2.4	170.2	0.4	5.1	-3.3
	May	212.876	0.1	1.2	-1.0	1.5	218.910	0.1	1.7	1.8	2.3	170.5	0.2	2.1	-4.5
	Jun	214.459	0.7	9.3	-1.2	2.7	219.344	0.2	2.4	1.7	2.3	173.4	1.7	22.4	-4.2
	Jul	214.469	0.0	0.1	-1.9	2.4	219.543	0.1	1.1	1.6	2.1	171.7	-1.0	-11.2	-6.4
	Aug	215.428	0.4	5.5	-1.4	2.7	219.692	0.1	0.8	1.5	1.9	174.7	1.7	23.1	-4.3
	Sep	215.791	0.2	2.0	-1.3	2.7	220.053	0.2	2.0	1.5	2.0	173.7	-0.6	-6.7	-4.7
	Oct	216.385	0.3	3.4	-0.2	2.7	220.453	0.2	2.2	1.7	2.0	174.2	0.3	3.5	-1.9

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 2005 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. **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 (± 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/. 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 CCAdj (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 (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, 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).