

Yardeni Research, Inc.



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## **I) Introduction**

How does the current recession compare to the six previous ones? Since it just started, it's a bit early to be sure. Nevertheless, there clearly are already some significant similarities and differences. We should try to analyze them in an effort to predict whether the current business cycle downturn is likely to be a short and shallow recession (SSR) or a prolonged and deep one (PDR). I remain in the SSR camp, but will continue to assess the potential for a PDR.

## **II) Recent Recessions**

Let's get started by reviewing the past six recessions:

(1) Often in the past, recessions were caused by the Federal Reserve. The Fed tightened monetary policy to bring inflation down. This was especially the case during the inflationary 1960s, 1970s, and early 1980s. As a result of President Johnson's guns-and-butter fiscal policies, headline inflation (based on the personal consumption expenditures deflator) rose from 1.2% y/y in February 1965 to 5.1% in February 1970. Core inflation (excluding food and energy) rose about the same. The Fed raised the federal funds rate from a 1967 low of 3.79% during July to a cyclical peak of 9.19% during August 1969. That triggered a credit crunch. Money market interest rates rose above the maximum deposit rates that financial intermediaries were allowed to pay under Regulation Q. This triggered "disintermediation," reducing credit available for auto and home buyers, as well as businesses. Penn Central declared bankruptcy on June 21, 1970. It was the largest corporate bankruptcy in American history up until that time. The Fed eased, lowering the federal funds rate to 3.50% by February 1971. The recession lasted 11 months. There were several negative contributors in real GDP, including consumer spending on durable goods, residential investment, capital spending, inventories, and federal government spending. Headline inflation fell from a 1970 peak of 5.1% to a low of 3.0% during June 1972.

(2) The next three recessions were associated with the oil shocks of 1973 and 1979. During October 1973, Arab states imposed an oil embargo against the United States, Western Europe, and Japan for their support of Israel during the Yom Kippur War. By the early 1970s Western oil conglomerates suddenly faced a unified OPEC oil cartel. Headline inflation soared from 3.0% during June 1972 to a peak of 11.5% during October 1974. The Fed hiked the federal funds rate from a low of 3.50% during February 1972 to a peak of 13.0% during May-July 1974. Franklin National Bank was declared insolvent in October 1974 due to mismanagement and fraud. It was at the time the largest bank failure in the history of the country. The Fed lowered the federal funds rate to 4.75% by January 1976. The recession lasted 16 months. Contributing to the downturn were consumer spending on both durable and nondurable goods, residential investment, capital spending, and exports.

(3) The 1979 oil crisis was triggered by the revolution in Iran as the country's oil exports plunged. The Shah fled his country in early 1979, allowing Ayatollah Khomeini to gain control. The new regime resumed oil exports in fits and starts, forcing prices to go up. Saudi Arabia and other OPEC nations increased production to offset the decline. However, a widespread panic resulted, driving the price higher. In the United States, President Carter instituted price controls. However, since there were no price controls on imported oil, this had no impact on boosting the supply of gasoline in 1979. Long lines appeared at gas stations, as they had six years earlier during the 1973 oil crisis. In 1980, following the Iraqi invasion of Iran, oil production in Iran nearly stopped, and Iraq's oil production was severely cut as well. Headline inflation jumped from a 1978 low of 6.3% during February to a cyclical high of 11.5% during March 1980. The federal funds rate rose to a record 20.0% in February-March 1980. There was a very brief recession lasting six months. The federal funds rate was lowered quickly and briefly in response to the steep fall in silver prices in late March 1980, which led to a panic on commodity and futures exchanges. This happened when the Hunt brothers couldn't meet margin calls on the silver futures contracts they had amassed in a scheme to corner the silver market. Consumer spending on goods and services plunged during Q2-1980 of this short recession. So did residential and nonresidential investment.

(4) Paul Volcker, who was appointed Chairman of the Federal Reserve in August 1979, immediately reversed course and hiked the federal funds rate back up to the record high 20.0% during December 1980. The resulting recession lasted 16 months, pushing the unemployment rate to the highest level since the Great Depression. The Fed eased during the recession especially when Drysdale Securities and Penn Square failed in May and July 1982. Then came the Mexican default crisis. Enormous petroleum deposits were discovered in the Gulf of Mexico in 1978. The government recklessly borrowed abroad against future revenues, and the private sector did so too. World oil prices began to collapse in 1981. Interest rates abroad rose sharply, and a world recession reduced demand for oil. Anticipating a peso devaluation, Mexican capital poured into the US. By August 1982, the government was unable to pay even the interest on its foreign debt, which had grown to more than \$60 billion. The greatest economic boom in modern Mexican history had turned into the worst economic crisis in six decades. In the US, headline inflation plunged to 2.1% by April 1986. The federal funds rate fell to a 1982 low of 8.50% during December. Volcker reversed course again raising it to a high of 11.75% during August 1984, and then eased again in response to the Continental Illinois Bank crisis. The recession lasted 16 months, and was severe as real GDP fell 2.3% with weakness concentrated in residential and nonresidential investment, inventories, and exports.

(5) The next two recessions lasted only eight months each. They were short and shallow. Unlike the previous four contractions discussed above, they weren't caused by the Fed tightening monetary policy in response to rising inflation. Rather, they were triggered by the collapses of the savings and loan industry in the early 1990s and the implosion of the dot.com mania at the beginning of this decade. The recession at the start of the 1990s was also attributable to the jump in oil prices when Iraq invaded Kuwait in August 1990.

Thanks to lax accounting standards, “zombie” S&Ls, with negative net worth, provided plenty of mortgage loans that boosted home prices. The problem started with the Garn-St Germain Depository Institutions Act of 1982, which was designed to make S&Ls more competitive and more solvent. It eliminated ceilings on deposit rates, allowing S&Ls to pay higher market rates for deposits, borrow money from the Fed, make commercial loans, and issue credit cards. They were also allowed to take an ownership position in real estate and other projects to which they made loans. They also began to rely increasingly on brokered funds. Previously, banks and thrifts could only have five percent of their deposits in brokered deposits, but this limit was lifted. Thrifts raised their rates to attract deposits, and had to take on riskier investments. In 1989, the Resolution Trust Corporation was established as a federally-owned asset management company mandated to liquidate assets of insolvent S&Ls.

(6) The bust at the start of the current decade was mostly caused by the collapse of the information technology boom of the 1990s. The PC and the Internet were the major drivers of that boom. The boom turned into a mania as venture capital poured into proliferating dot.coms. During the late 1990s, many companies also responded to the Y2K problem by upgrading their systems. The Fed pumped up the money supply anticipating that there might be some economic disruptions caused by Y2K. The Nasdaq more than tripled after the Fed lowered the federal funds rate in reaction to the LTCM crisis during the Fall of 1998. The bubble burst when new technology companies “burned” through their cash and couldn’t raise additional funds as tech stocks tumbled. Capital spending on equipment and software also tumbled, as did exports. The government provided a large tax rebate to consumers during Q3-2001, which boosted consumer spending during the quarter. Then easier monetary policy began to boost housing activity as the Fed lowered the federal funds from 6.5% at the start of 2001 to a low of 1.0% by June 2003.

### **III) Current Recession**

So how is the current recession likely to play out? Unlike the first four recession discussed above, the Fed has been much more intent on avoiding this one since last August. That’s because inflation hasn’t been serious enough to warrant a recession to bring it down. Now that the US economy is in a recession, the Fed's policymakers seem to be as committed to keeping it short and shallow as they were during the previous recession. So are other government agencies, including the US Treasury, as well as the US Congress. All of them have been scrambling to put together the most stimulative package of monetary and fiscal policies ever, in my opinion. Why are they doing so? Because there is a growing recognition that the “negative feedback” from the current recession back to the current credit crisis, which is the worst since the Great Depression, could spiral the US into another depression. The current credit crisis is certainly much worse than any of the previous ones mentioned above. However, so far, the associated credit crunches were probably worse in the past because, this time, the Fed and other government agencies are pumping so much liquidity into the financial system.

The real issue, as the April 12, 2008 *The Economist* observed, is that the “recession may not be as severe as many fear, but the recovery could take longer...” During the eight-month recession at the start of the previous decade, payroll employment continued to decline for another 11 months. Payroll employment during the latest economic expansion was up 6.4% over the 52 months from September 2003 through its peak during December 2007. This is the weakest performance of the past four comparable expansions that lasted at least as long. This probably means that jobs may take a smaller hit this time during the recession because companies went into it with exceptionally lean payrolls, as *BusinessWeek*’s James C. Cooper observed in the April 21, 2008 issue of the magazine. However, the jobs recovery may be among the weakest too.

Of course, there is a risk that the recession will be prolonged and deep. It’s all up to American consumers. For them, this recession combines several of the most depressing aspects of previous economic downturns including falling employment and home prices, tougher lending standards, and soaring energy prices. Oh, and food prices are also rising rapidly. The latest plunge in the Consumer Sentiment Index during the first half of April suggests that consumer spending could remain weak at least until the US Treasury starts sending qualifying taxpayers the economic stimulus payments in late May. By then, they might be so depressed that they’ll spend all of their windfalls rather than save any of them.

\* \* \*

**Figure A: US Business Cycle Expansions and Contractions\***

<u>Business Cycle Reference Dates</u>		<u>Duration In Months</u>			
Peak	Trough	Contraction	Expansion	Cycle	
Quarterly dates are in parentheses		Peak to Trough	Previous Trough to this peak	Trough from Previous Trough	Peak from Previous Peak
	December 1854 (IV)	--	--	--	--
June 1857 (II)	December 1858 (IV)	18	30	48	--
October 1860 (III)	June 1861 (III)	8	22	30	40
April 1865 (I)	December 1867 (I)	32	46	78	54
June 1869 (II)	December 1870 (IV)	18	18	36	50
October 1873 (III)	March 1879 (I)	65	34	99	52
March 1882 (I)	May 1885 (II)	38	36	74	101
March 1887 (II)	April 1888 (I)	13	22	35	60
July 1890 (III)	May 1891 (II)	10	27	37	40
January 1893 (I)	June 1894 (II)	17	20	37	30
December 1895 (IV)	June 1897 (II)	18	18	36	35
June 1899 (III)	December 1900 (IV)	18	24	42	42
September 1902 (IV)	August 1904 (III)	23	21	44	39
May 1907 (II)	June 1908 (II)	13	33	46	56
January 1910 (I)	January 1912 (IV)	24	19	43	32
January 1913 (I)	December 1914 (IV)	23	12	35	36
August 1918 (III)	March 1919 (I)	7	44	51	67
January 1920 (I)	July 1921 (III)	18	10	28	17
May 1923 (II)	July 1924 (III)	14	22	36	40
October 1926 (III)	November 1927 (IV)	13	27	40	41
August 1929 (III)	March 1933 (I)	43	21	64	34
May 1937 (II)	June 1938 (II)	13	50	63	93
February 1945 (I)	October 1945 (IV)	8	80	88	93
November 1948 (IV)	October 1949 (IV)	11	37	48	45
July 1953 (II)	May 1954 (II)	10	45	55	56
August 1957 (III)	April 1958 (II)	8	39	47	49
April 1960 (II)	February 1961 (I)	10	24	34	32
December 1969 (IV)	November 1970 (IV)	11	106	117	116
November 1973 (IV)	March 1975 (I)	16	36	52	47
January 1980 (I)	July 1980 (III)	6	58	64	74
July 1981 (III)	November 1982 (IV)	16	12	28	18
July 1990 (III)	March 1991 (I)	8	92	100	108
March 2001 (I)	November 2001 (IV)	8	120	128	128

\*Contractions (recessions) start at the peak of a business cycle and end at the trough.

Source: National Bureau of Economic Research, Inc. (NBER)

**The determination that the last contraction ended in November 2001 is the most recent decision of the Business Cycle Dating Committee of the National Bureau of Economic Research.**

The NBER does not define a recession in terms of two consecutive quarters of decline in real GDP. Rather, a recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales.

**Figure B: Yardeni Research US Forecast Table (4/11/08)**

ITEM (1)	2007				2008				2007(A)	2008(E)
	Q1(A)	Q2(A)	Q3(A)	Q4(A)	Q1(E)	Q2(E)	Q3(E)	Q4(E)	2006(A)	2007(A)
Real GDP	0.6	3.8	4.9	0.6	-1.0	-1.1	4.4	2.7	2.2	1.2
Final Sales	1.3	3.6	4.0	2.4	-0.9	-1.0	3.5	2.4	2.7	1.4
Personal Consumption Expenditures	3.7	1.4	2.8	2.3	-0.3	-0.5	5.0	2.5	2.9	1.5
Durable Goods	8.8	1.7	4.5	2.0	-7.8	-9.5	15.6	4.6	4.7	-0.8
Nondurable Goods	3.0	-0.5	2.2	1.2	-1.2	-0.7	4.1	2.2	2.4	0.7
Services	3.1	2.3	2.8	2.8	2.1	2.0	3.0	2.2	2.8	2.5
Nonresidential Fixed Investment	2.1	11.0	9.3	6.0	0.3	-0.6	0.3	2.6	4.7	3.0
Structures	6.4	26.2	16.4	12.4	-3.7	-9.7	-3.8	1.3	12.9	2.2
Producers' Durable Equipment	0.3	4.7	6.2	3.1	1.5	2.2	1.5	3.0	1.3	2.8
Residential Fixed Investment	-16.3	-11.8	-20.5	-25.2	-23.6	-22.6	-13.1	1.1	-17.0	-5.6
Inventory Investment (billion dollars)	0.1	5.8	30.6	-18.3	-20.3	-21.3	3.7	11.7	4.6	-6.6
Net Exports (billion dollars)	-612.1	-573.9	-533.1	-503.2	-501.2	-499.2	-496.7	-496.6	-555.6	-498.4
Total Government Purchases	-0.5	4.1	3.8	2.0	1.1	1.0	1.5	1.3	2.0	1.8
Federal Government	-6.3	6.0	7.1	0.5	1.8	1.7	2.1	1.8	1.7	2.5
State & Local Government	3.0	3.0	1.9	2.8	0.6	0.6	1.1	0.9	2.2	1.4
Real GDP (y/y)	1.5	1.9	2.8	2.5	2.1	0.8	0.7	1.2	2.5	1.2
Real GDP (y/y in 4Q average)	2.4	2.1	2.2	2.2	2.3	2.0	1.5	1.2	2.2	1.2
Total Light Vehicle Sales (million units)	16.5	16.3	15.8	16.1	15.3	15.2	15.4	15.5	16.2	15.4
Housing Starts (million units)	1.5	1.5	1.3	1.2	1.0	0.9	0.8	0.8	1.4	0.9
Unemployment Rate (%)	4.5	4.5	4.6	4.8	4.9	5.3	5.5	5.4	4.6	5.3
Nonfarm Productivity	1.0	2.6	6.3	1.9	0.5	0.3	2.5	2.5	1.8	2.0
PCE Core Deflator	2.4	1.4	2.0	2.5	2.5	2.2	2.2	2.0	2.0	2.2
GDP Implicit Price Deflator	4.2	2.6	1.0	2.4	3.5	3.0	2.5	2.5	2.6	2.9
Fed Funds Target Rate (%)	5.25	5.25	4.75	4.25	2.25	2.25	2.25	2.75	4.88	2.38
10-Year Government Yield (%)	4.68	4.85	4.50	4.30	3.70	3.30	3.70	4.25	4.58	3.74

A=Actual. E=Estimate

( 1 ) Quarterly and annual average percent change. Forecasts are rough estimates based on very limited information and are subject to frequent and large revisions as new information becomes available.



**Figure C: IMF World Economic Outlook Update Projections (4/11/08)**

(Annual percent change unless otherwise noted)

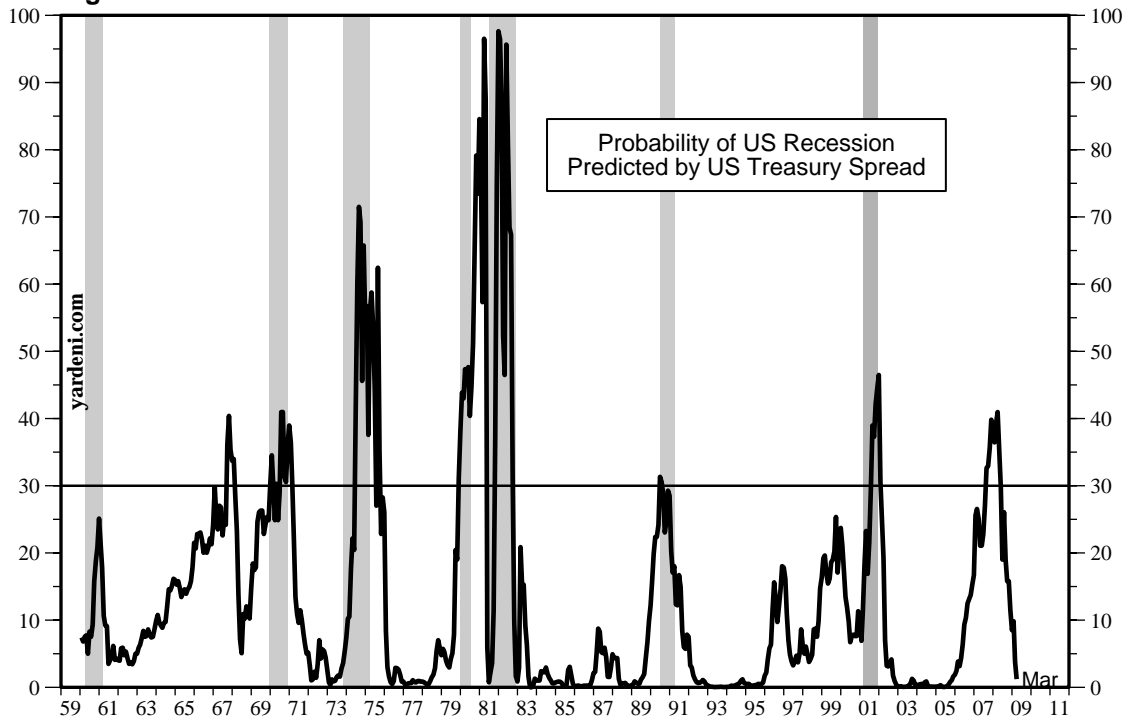
	2005	2006	<u>Estimates</u> 2007	<u>Projections</u> 2008	Difference from October 2007 Projections <sup>(1)</sup>	
					2007	2008
<b>World Output</b>	4.4	5.0	4.9	4.1	0.2	-0.3
Advanced economies	2.5	3.0	2.6	1.8	0.1	-0.4
of which						
United States	3.1	2.9	2.2	1.5	0.3	-0.4
Euro area (15)	1.5	2.8	2.6	1.6	0.1	-0.5
Japan	1.9	2.4	1.9	1.5	-0.1	-0.2
Other advanced economies	3.2	3.7	3.8	2.8	0.1	-0.2
Emerging market and developing Economies	7.0	7.7	7.8	6.9	0.2	-0.2
Africa	5.9	5.8	6.0	7.0	--	-0.2
Central and eastern Europe	5.6	6.4	5.5	4.6	-0.3	-0.6
Commonwealth of Independent States	6.6	8.1	8.2	7.0	0.5	--
Developing Asia	9.0	9.6	9.6	8.6	--	-0.1
of which						
China	10.4	11.1	11.4	10.0	-0.1	--
Middle East	5.6	5.8	6.0	5.9	0.1	-0.1
Western Hemisphere	4.6	5.4	5.4	4.3	0.5	--

Note: Real effective exchange rates are assumed to remain constant at the levels prevailing during December 4, 2007-January 2, 2008.

<sup>(1)</sup> Country weights used to construct aggregate growth rates for groups of countries were revised from those reported in the October 2007 World Economic Outlook to incorporate updated PPP exchange rates released by the World Bank

# - NYFRB Recession Probability Model -

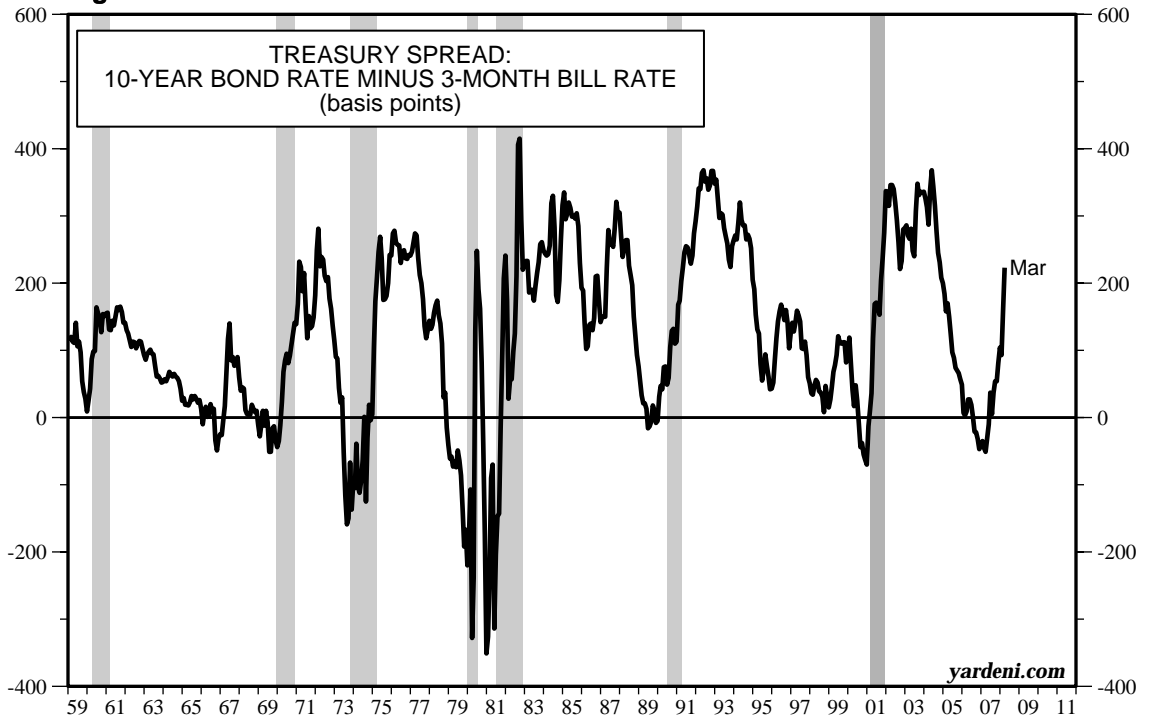
Figure 1.



Source: New York Federal Reserve Bank.  
 Note: Shaded areas are recessions according to the National Bureau of Economic Research, which determined that a peak in business activity occurred in the U.S. economy in March 2001.

NY Fed tracks a recession probability model based on yield curve spread. It is projecting a relatively short and mild recession in 2008. The odds of the recession continuing into 2009 are near zero.

Figure 2.

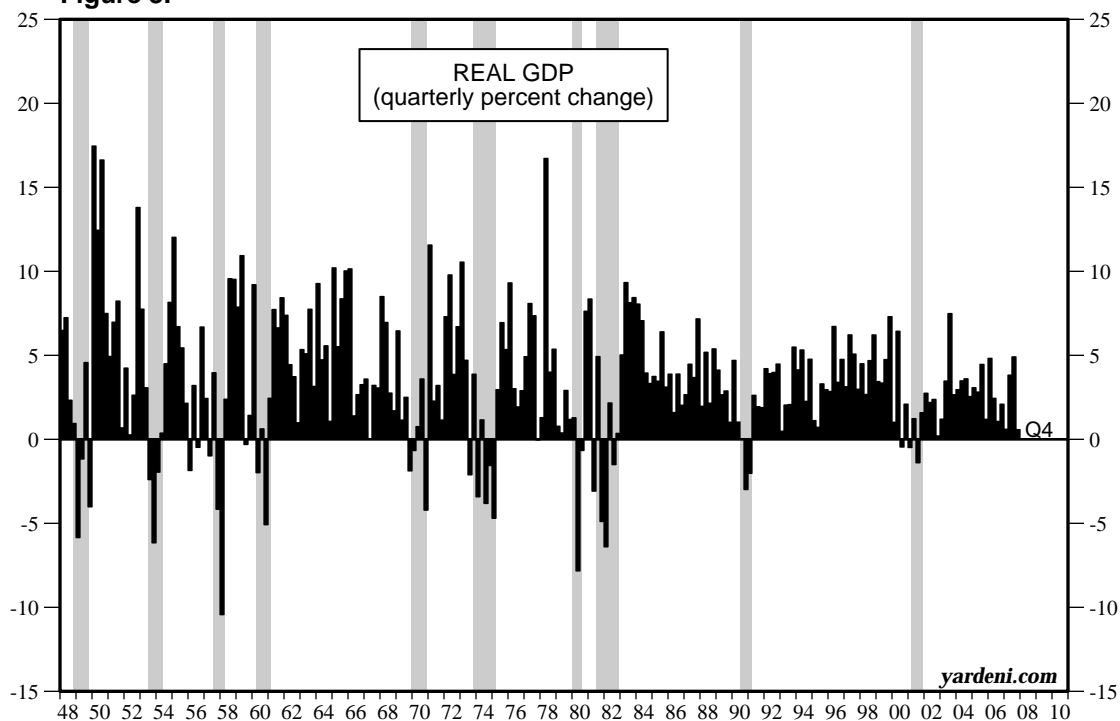


Source: New York Federal Reserve Bank.  
 Note: Shaded areas are recessions according to the National Bureau of Economic Research, which determined that a peak in business activity occurred in the U.S. economy in March 2001.

# - Real GDP -

Figure 3.

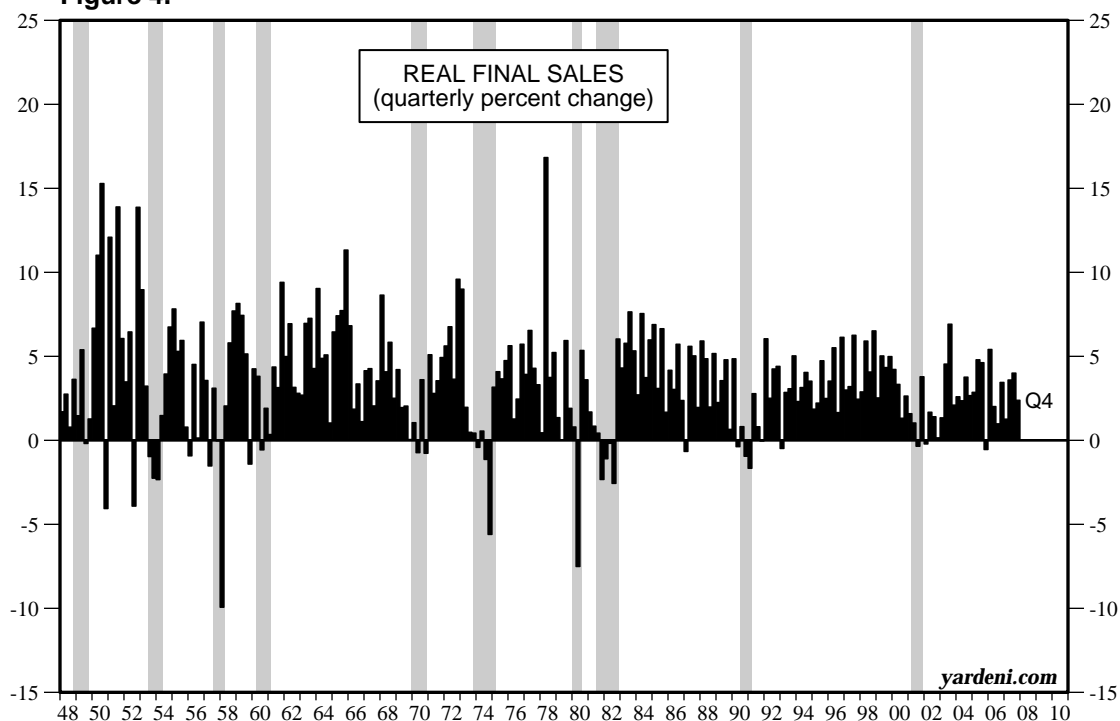
Real GDP usually falls 2 or more quarters during recessions.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: US Department of Commerce, Bureau of Economic Analysis.

Figure 4.

There have been four recessions since 1948 during which real final sales fell during only one quarter.

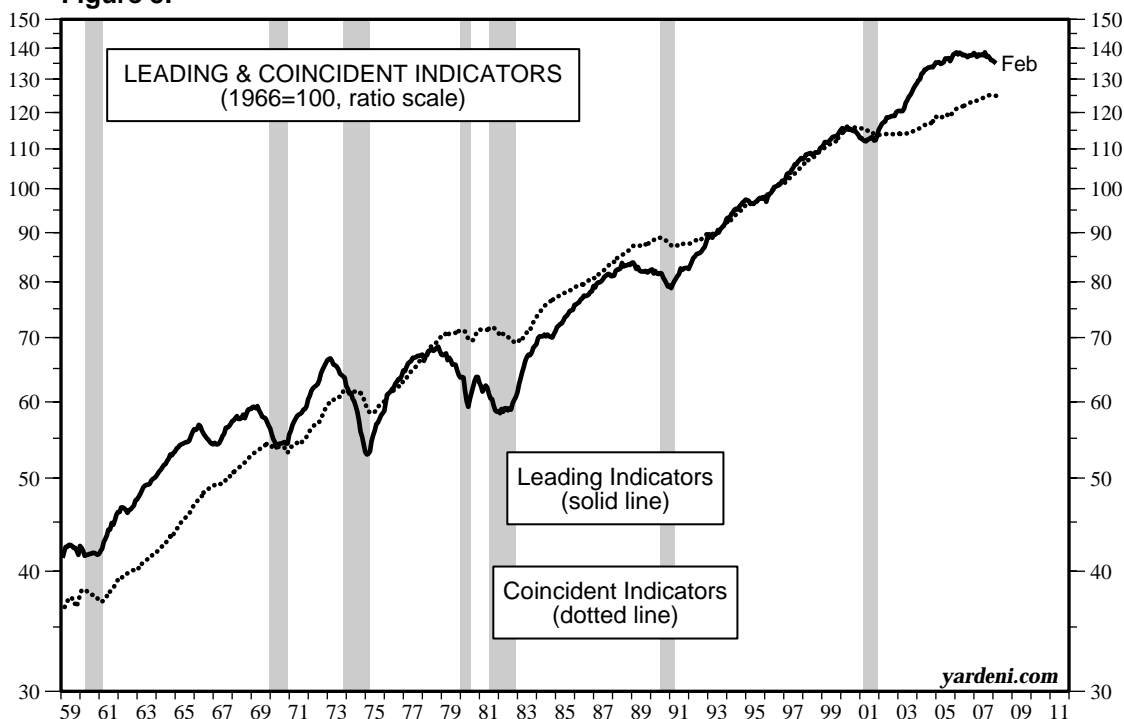


Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: US Department of Commerce, Bureau of Economic Analysis.

# - Leading Economic Indicators -

Figure 5.

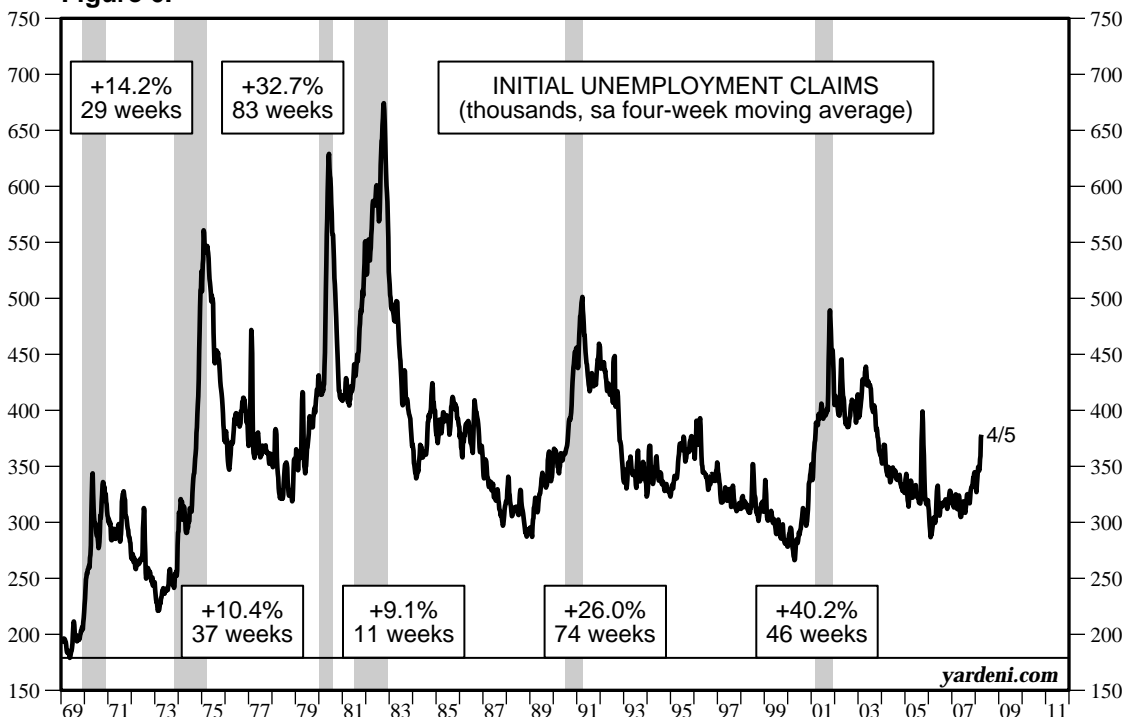
Leading indicators suggest that the economy is heading into a recession. Coincident indicators suggest it may have started in February.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: The Conference Board.

Figure 6.

Weekly initial unemployment claims among the most sensitive, real-time indicators of the business cycle.

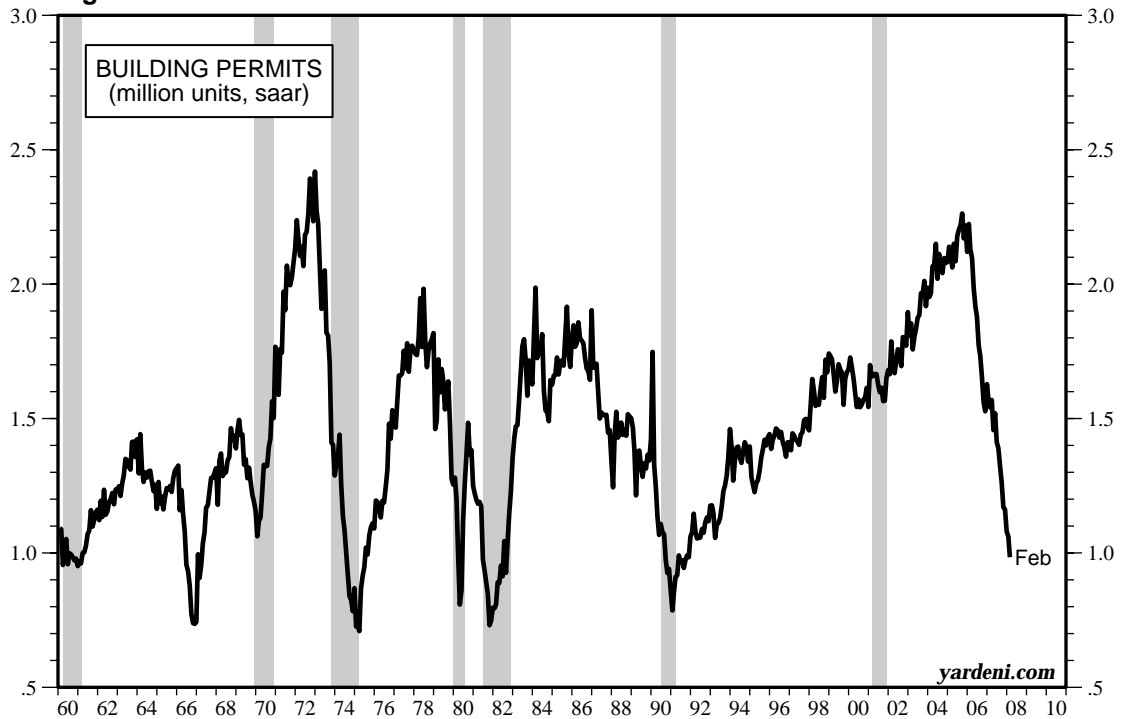


Note: Shaded areas denote recessions according to the National Bureau of Economic Research. Boxes show the percent increase in claims from trough to start of recession and number of weeks between trough in claims and start of recession.  
Source: US Department of Labor.

# - Leading Economic Indicators -

Figure 7.

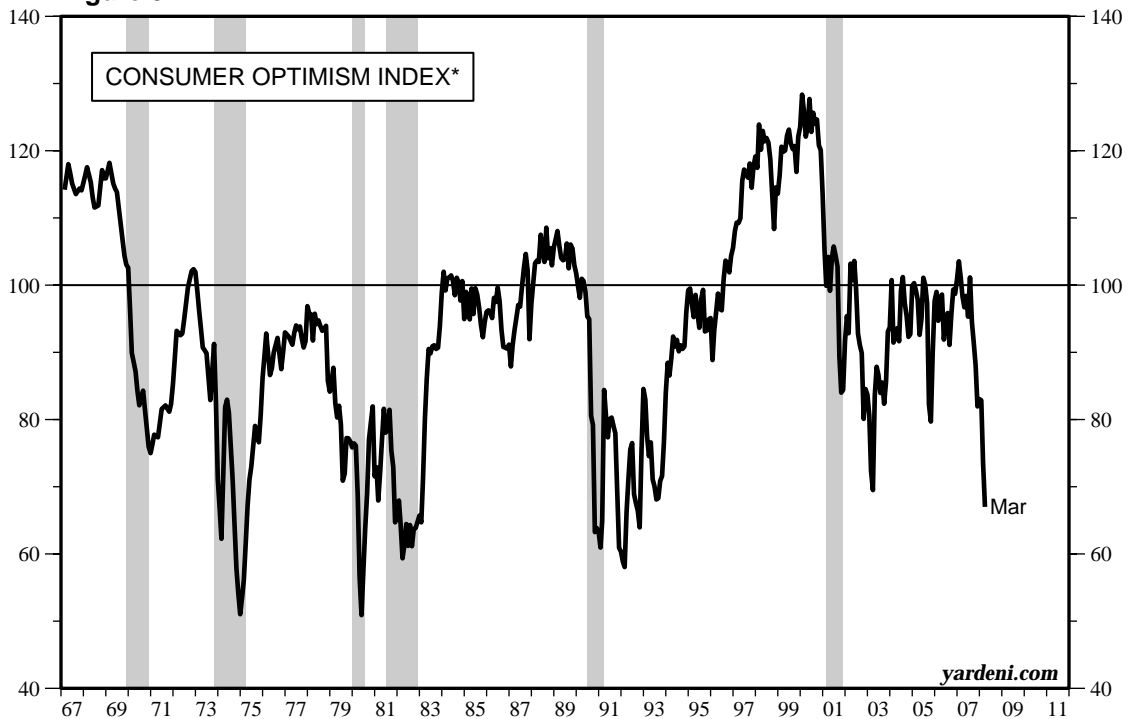
Building permits is another leading indicator. It shows that the housing recession has yet to hit bottom.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: US Department of Commerce, Bureau of the Census.

Figure 8.

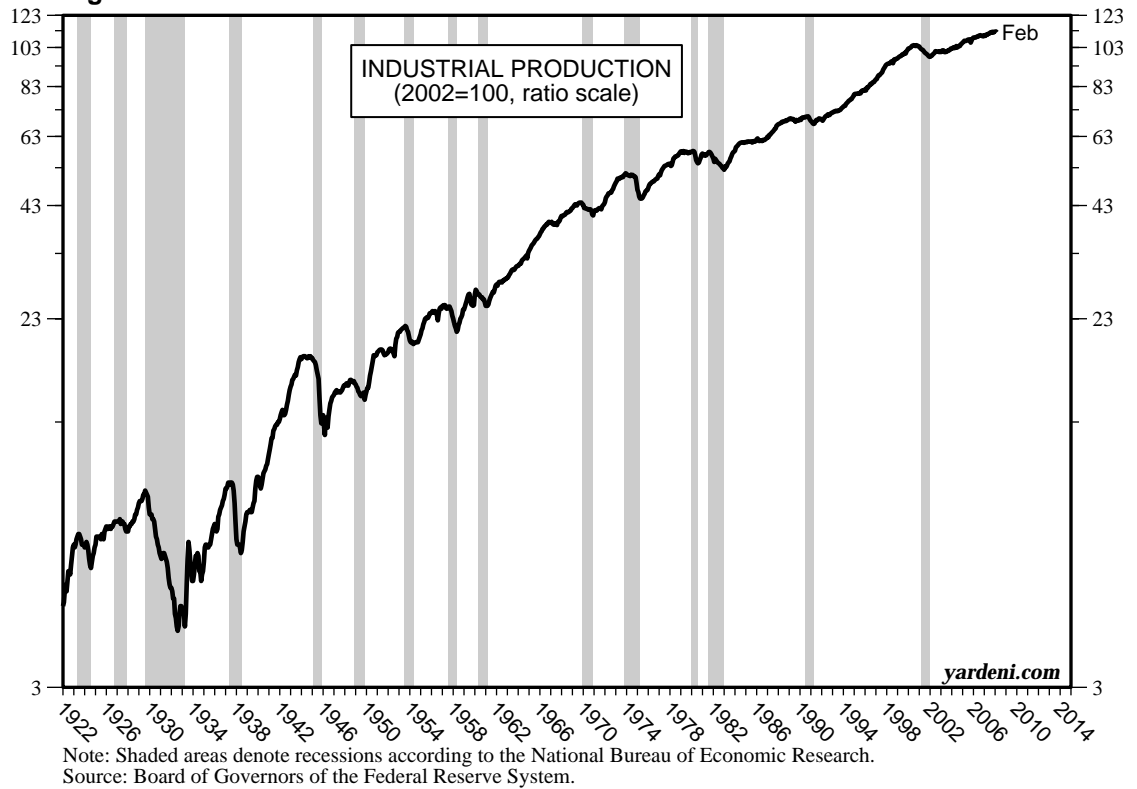
The average of the Consumer Sentiment Index and the Consumer Confidence Index is another useful business cycle indicator. It is in recession territory.



\* Average of Consumer Sentiment Index and Consumer Confidence Index.  
Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: The Conference Board and the University of Michigan Survey Research Center.

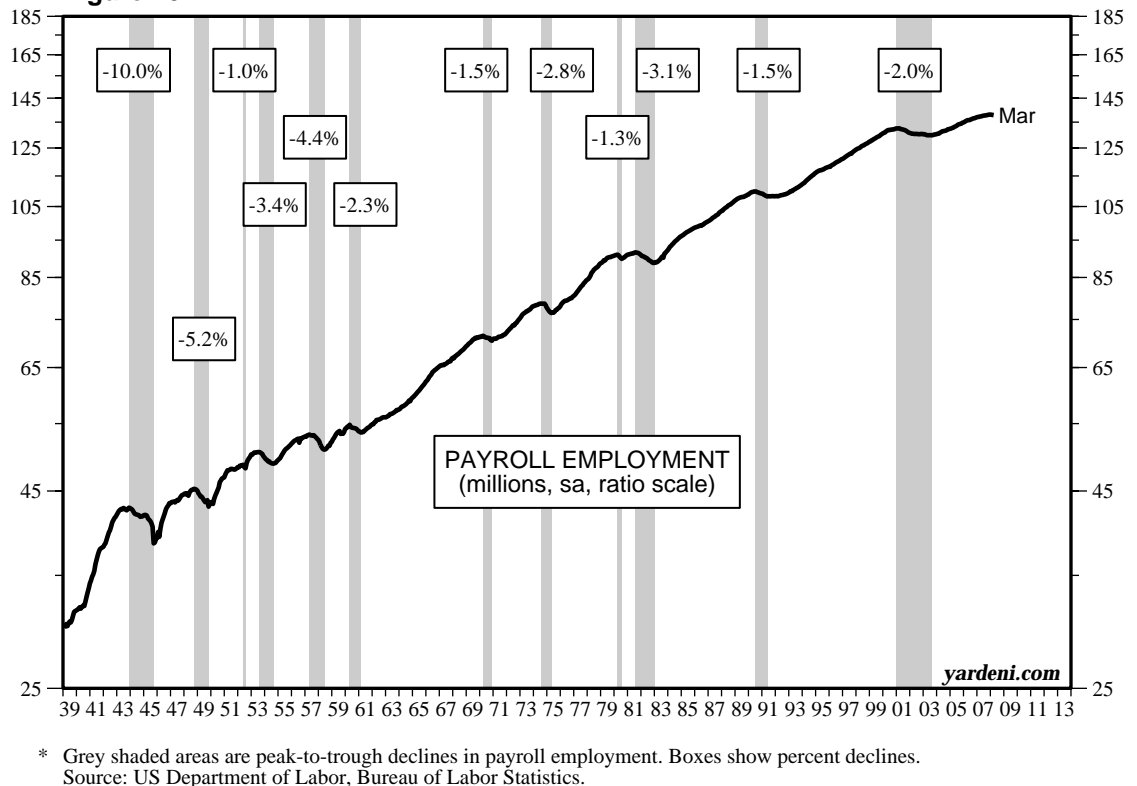
# - Coincident Economic Indicators -

Figure 9.



There are four components to the Index of Coincident Economic Indicators: (1) Industrial production fell in February....

Figure 10.

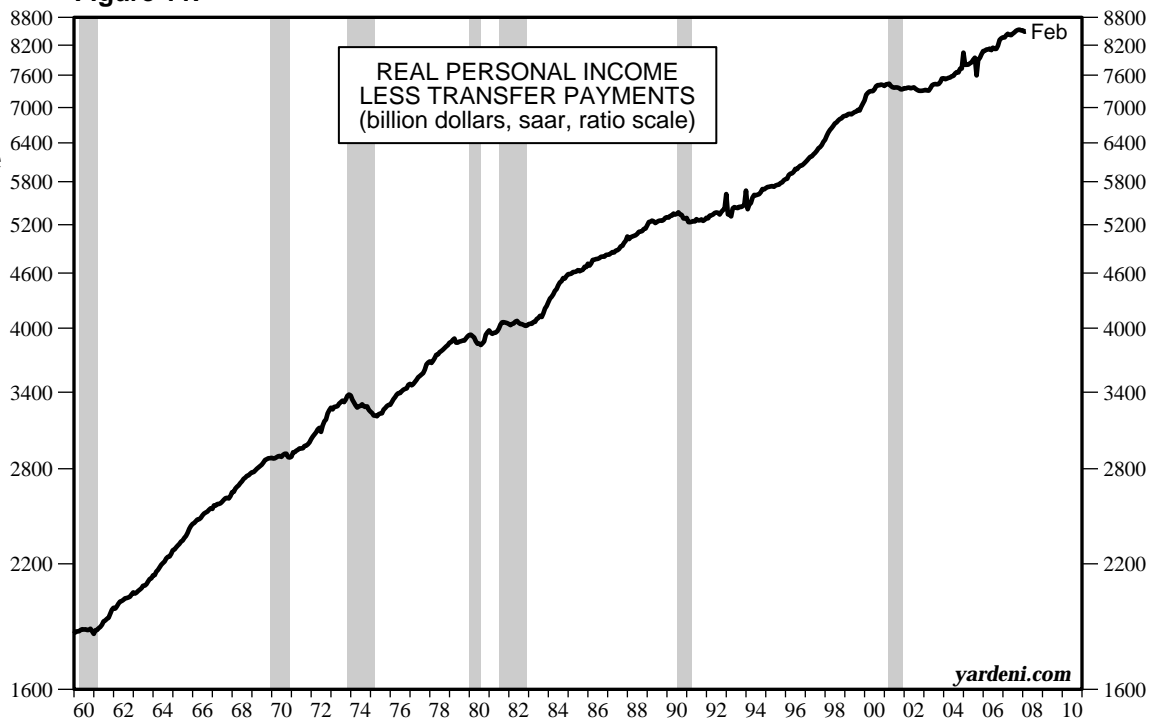


(2) Payroll employment has been falling since January....

# - Coincident Economic Indicators -

Figure 11.

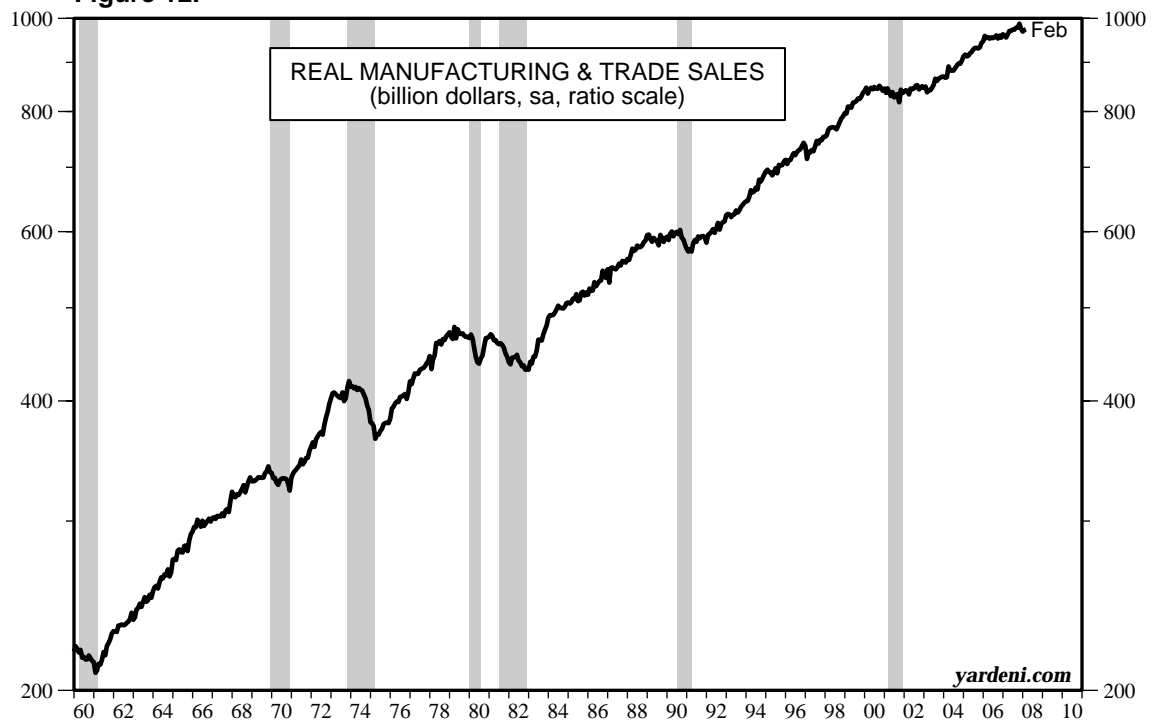
(3) Real personal income dropped in February....



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: The Conference Board.

Figure 12.

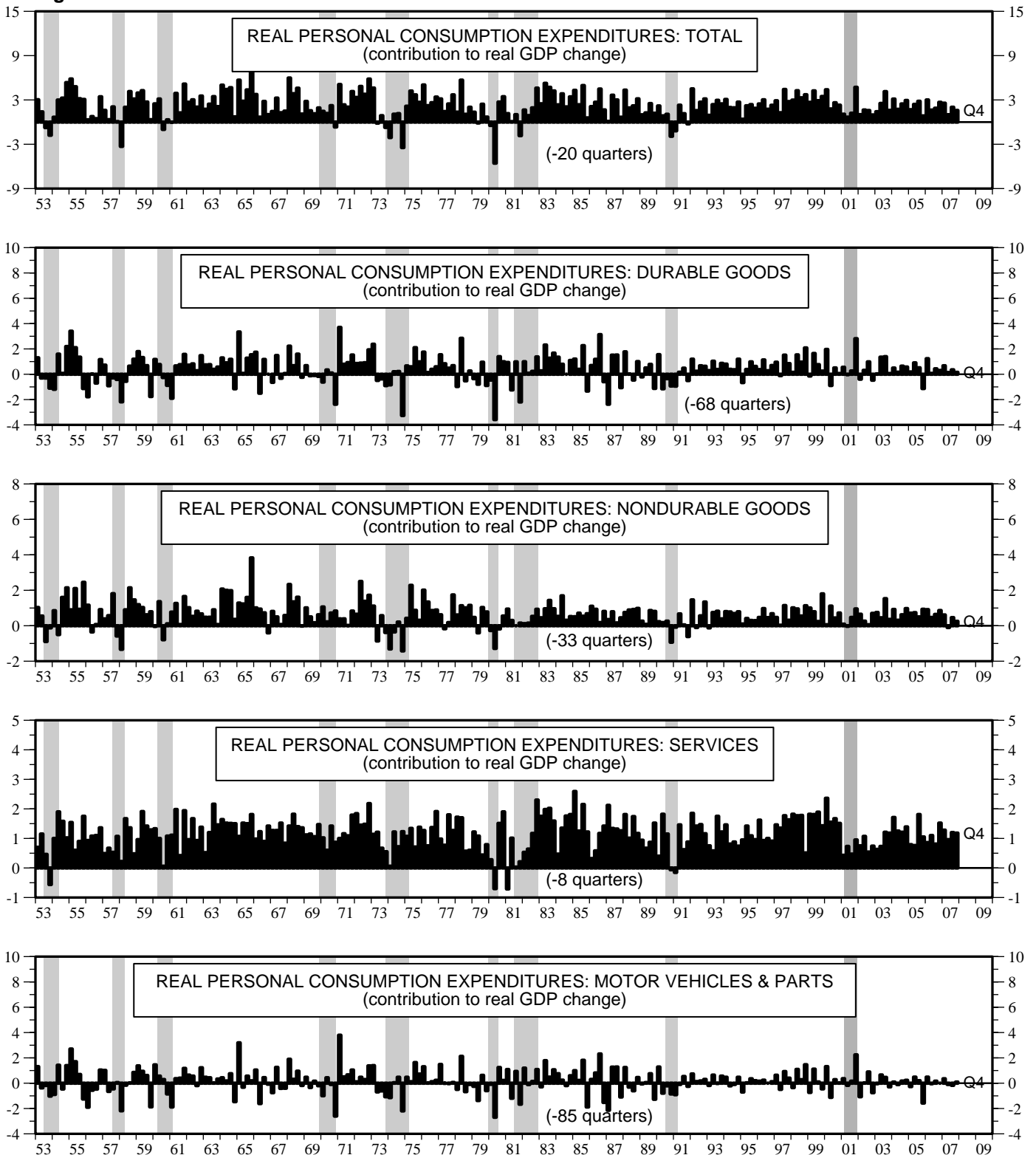
(4) Real business sales also fell in February.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: The Conference Board.

# - Real GDP Components Analysis -

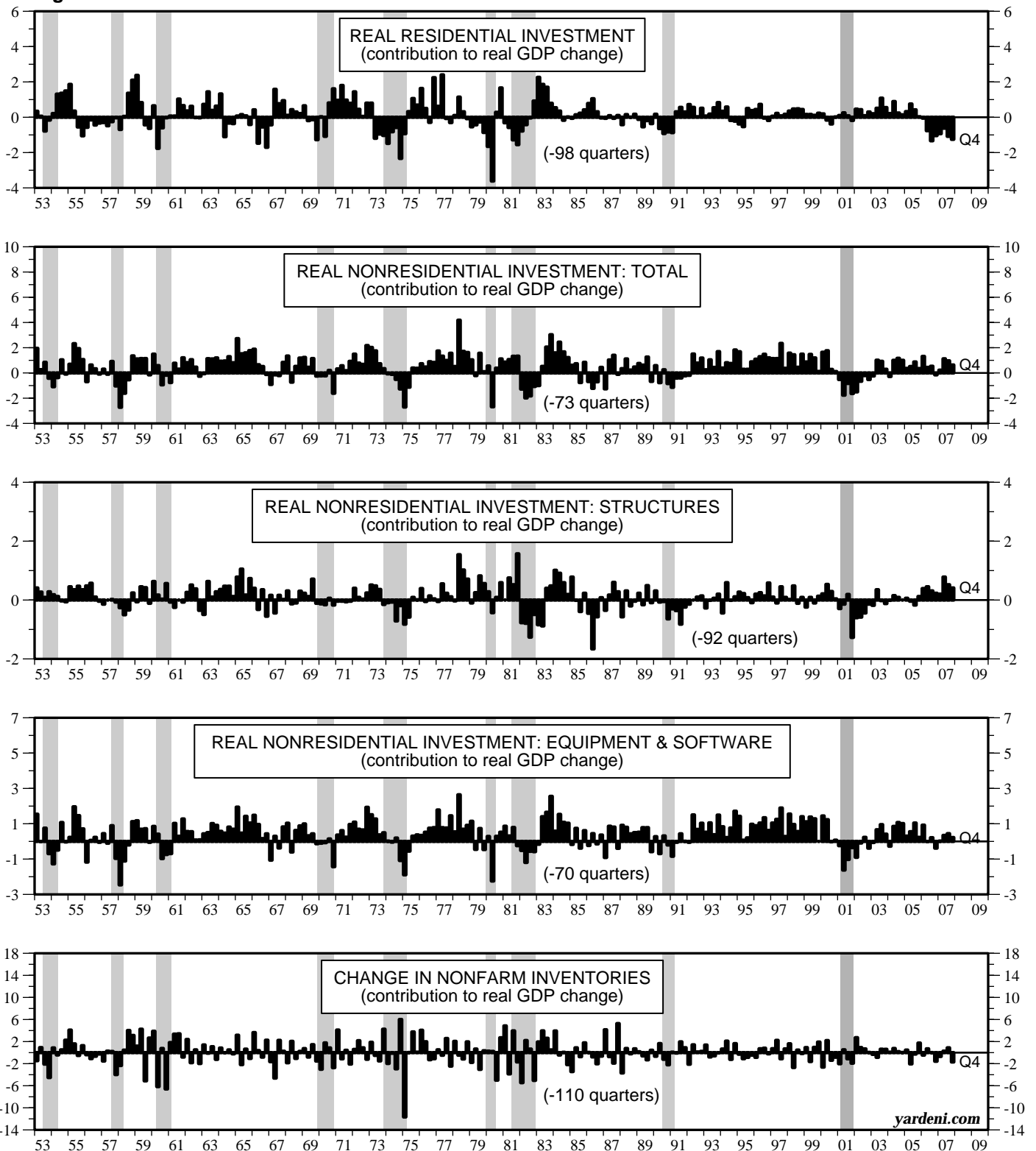
Figure 13.





# - Real GDP Components Analysis -

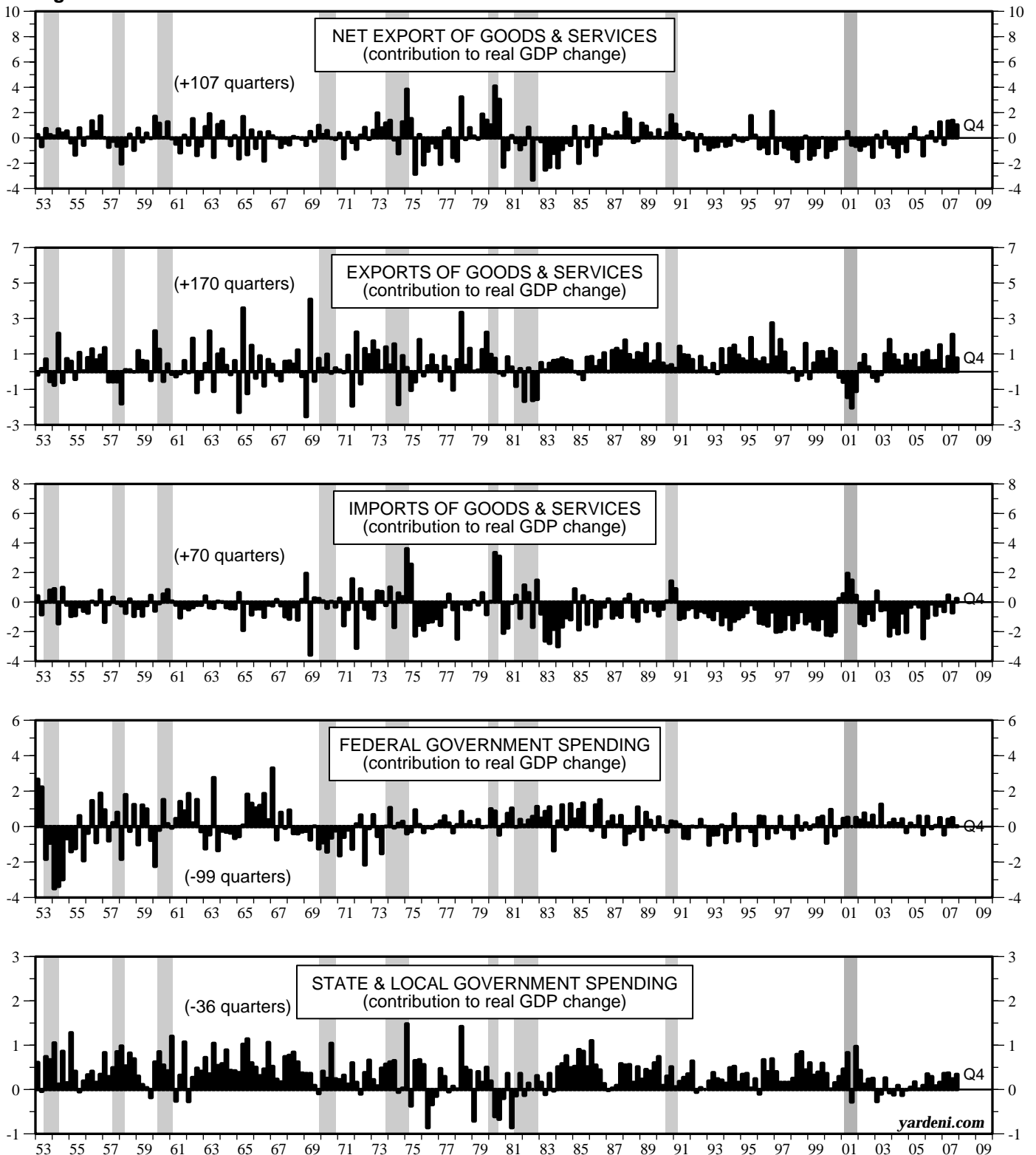
Figure 14.



Source: Bureau of Economic Analysis.

# - Real GDP Components Analysis -

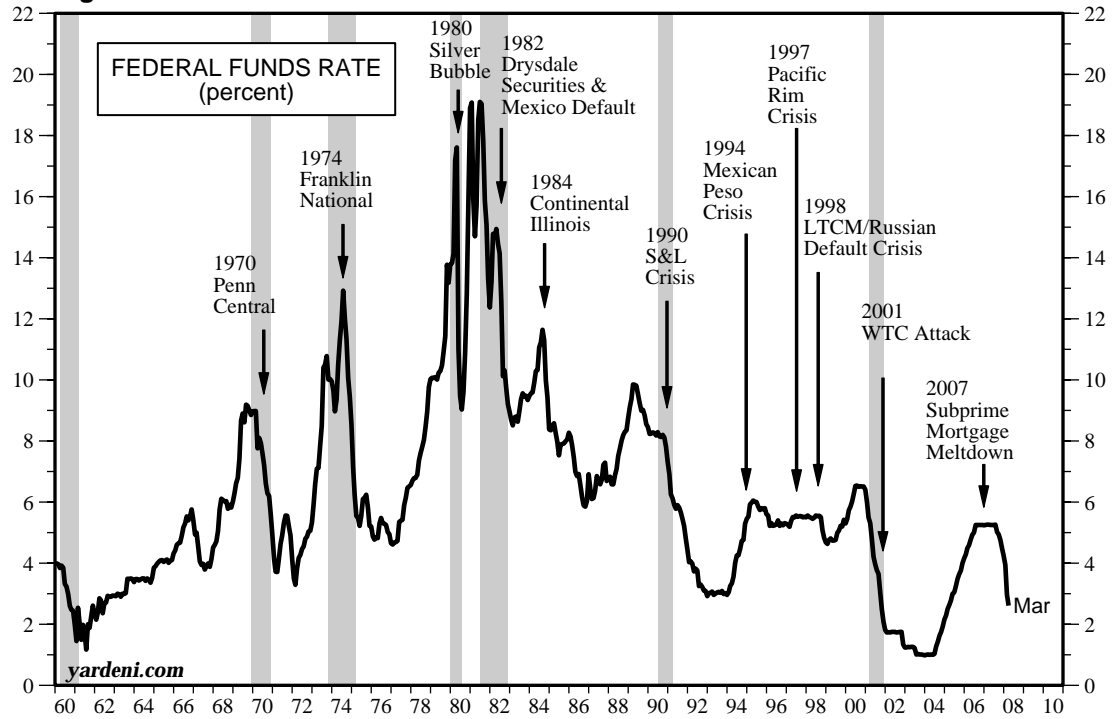
Figure 15.



Source: Bureau of Economic Analysis.

# - Fed Funds Rate & Inflation -

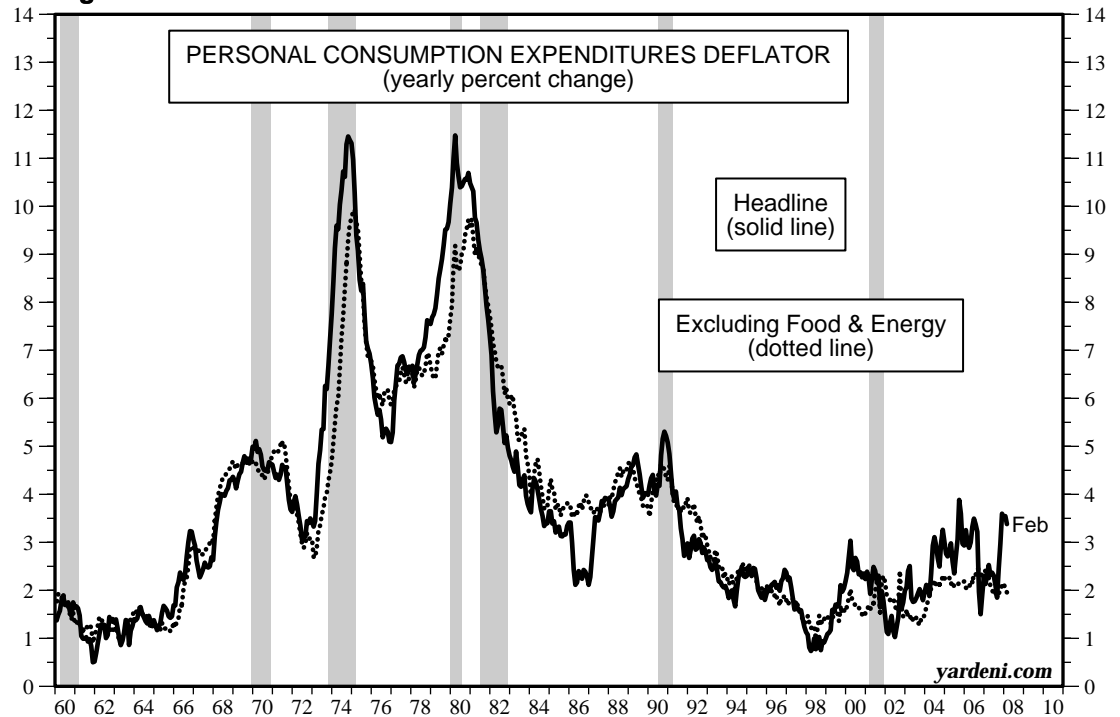
Figure 16.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: Board of Governors of the Federal Reserve System.

In the past, the Fed often caused recessions to bring inflation down. More recently, the Fed allowed speculative bubbles to inflate in stocks and housing. When the bubbles burst, the economy fell into recessions. The Fed always eases in response to financial crisis.

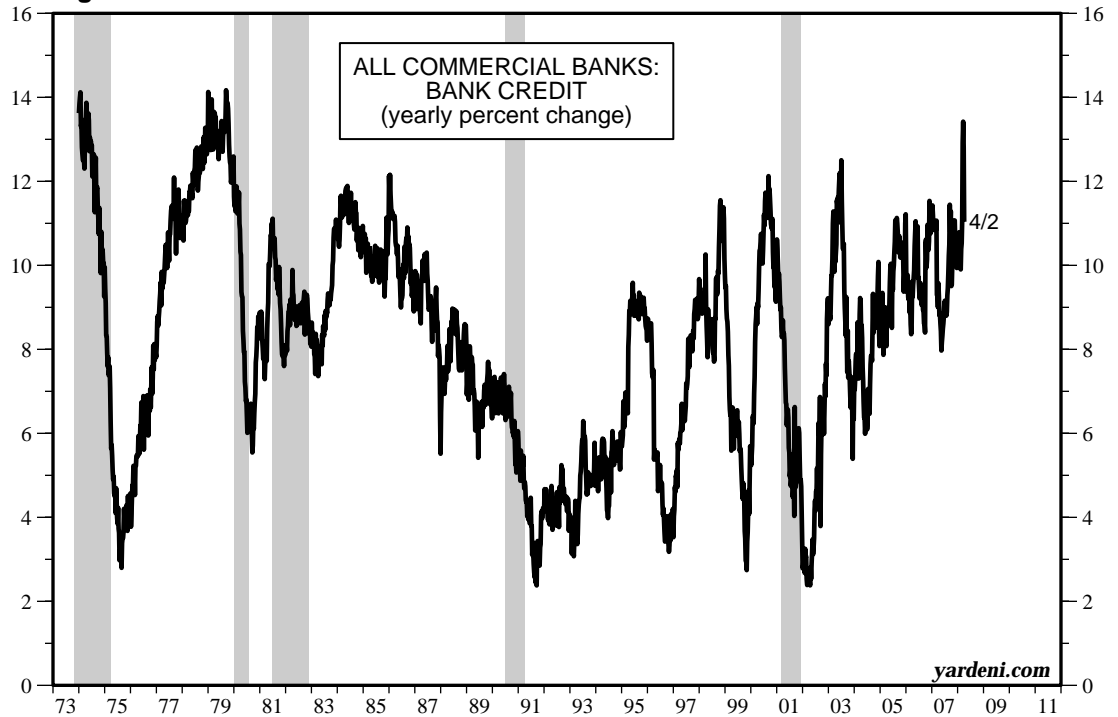
Figure 17.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: Board of Governors of the Federal Reserve System.

# - Bank Credit -

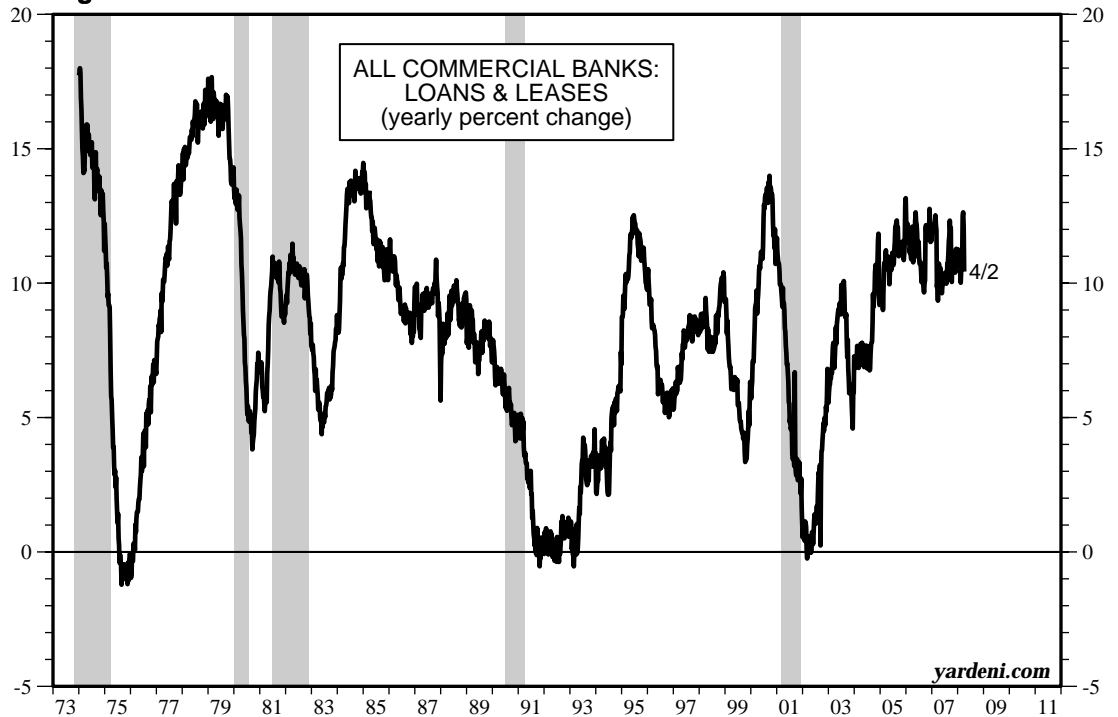
Figure 18.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: Board of Governors of the Federal Reserve System.

Recessions are usually exacerbated by credit crunches. There is a credit crisis now, but bank credit is still growing.

Figure 19.



Note: Shaded areas denote recessions according to the National Bureau of Economic Research.  
Source: Board of Governors of the Federal Reserve System.

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