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Americas

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US
Strategy

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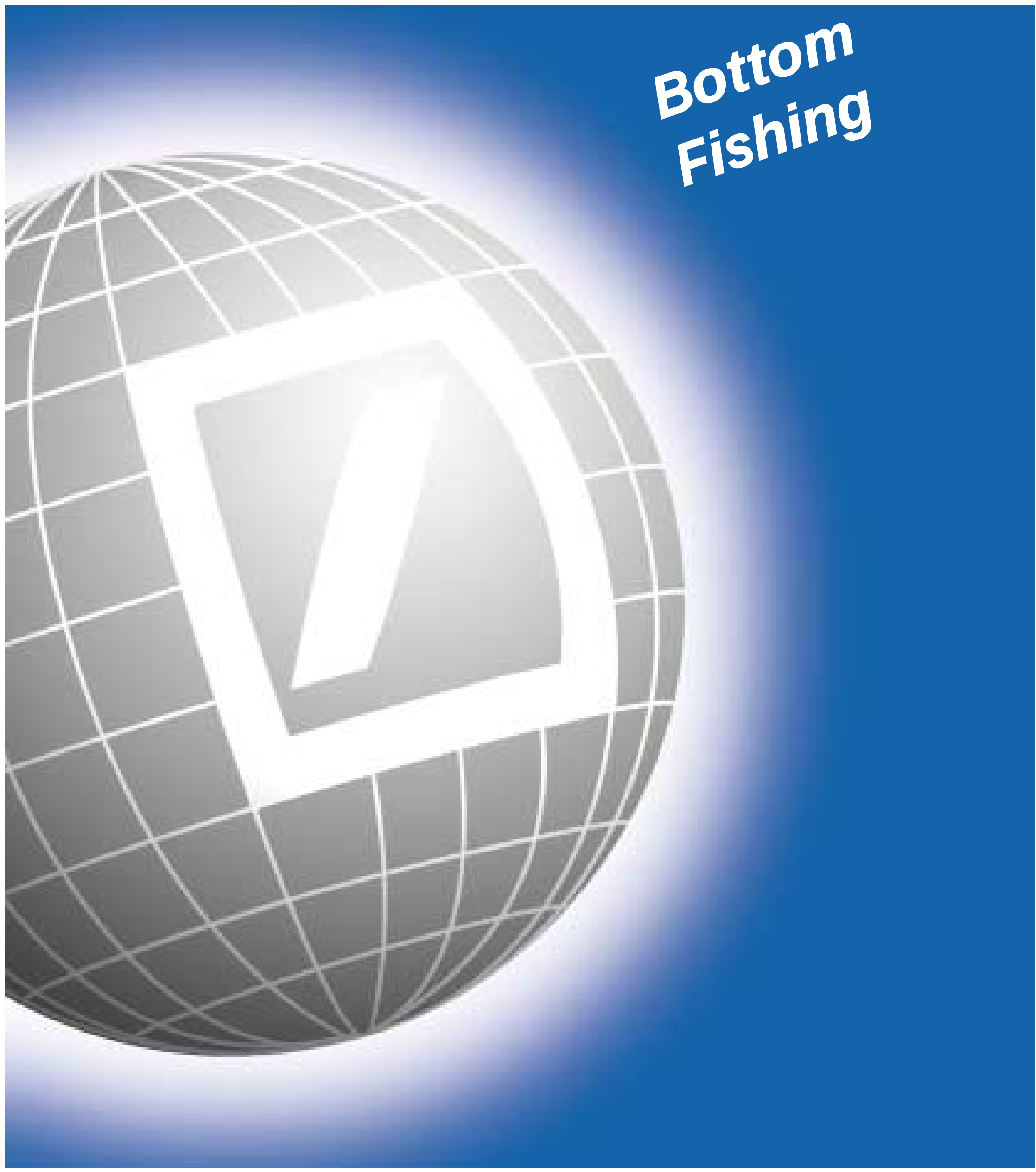
# Stock Market Cycles

## Global Strategist's Handbook

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# - Introduction -

**Buy Low.** During bear markets, stock investors and investment strategists are constantly on the lookout for the bottom. This time is no different. Indeed, many of them thought they caught it at the beginning of April this year. They were wrong. Picking the exact bottom can be very rewarding, of course. Since 1960, there have been nine major troughs in the S&P 500, following declines of 15% or more and averaging minus 24%. After these cyclical lows in stock prices, the average 6-month gain was an impressive 23% (Exhibit 1).

In this special issue of the *Global Strategist's Handbook*, I present numerous charts relating key economic and financial indicators to the cycle in stock prices with the focus on finding the ones that are most useful in picking bottoms.

My conclusion is that many of the ones that have worked best in the past are currently suggesting that the panic-selling low of September 21 was probably "the" bottom for this cycle. There are no guarantees: Past performance does not indicate future results, as we say in the investment business. The low might be retested. A lower low might still be in the cards. Moreover, even if it was the bottom, the rebound in stock prices over the next 12 months may be well below the average, in my judgment, because stocks are not as undervalued as they were at previous bottoms.

**Timing Tools.** One of the best times to buy stocks is during crises, when panic selling occurs. The crises usually trigger corrective policy responses, which prove the doomsayers wrong. So they present great buying opportunities for bargain hunters (Exhibit 2). Of course, this is easier said than done. For example, during the first week that the stock market was open for trading after the terrorist attacks, the right time to buy was on Friday, not Monday. By the end of the following week, most of the bargains were gone. Exhibits 3-32 show many of the best market timing tools, including a few that are not as useful as widely believed:

1) ***Momentum:*** Major market bottoms usually occur when the S&P 500 is more than 5% below its <u>200-day moving average</u>. Drops exceeding 10% of this average have always made bottoms, i.e., four times in the past. On September 21, the Dow was 21.2% below its 200-day moving average. On a <u>year-over-year percent change basis</u>, declines of 15% or more in the S&P 500 have always marked the bottoms. The market was down 8.9% in November from a year ago.

2) ***Valuation***: Historically, over the period examined in this report, major stock market bottoms often coincided with cyclical troughs in the <u>price-to-earnings (p/e) ratio</u>. This time, the p/e based on four-quarter trailing earnings was at an all-time high of 33.5 during the second quarter. Based on 52-week forward consensus expected earnings for the S&P 500, the p/e is currently 20, down from the record 25 in early 1999, but still relatively high. I don't believe this rules out a September bottom, but I do think it limits the upside return over the next 12 months compared to the historical average. This is because some

of the historical 12-month average return was attributable to the rebound in the p/e from its cyclical lows (Exhibit 5). Another useful valuation tool, the Fed's Stock Valuation Model, shows that stocks were undervalued during each of the previous four market bottoms. They appear to have been undervalued again in September, according to the model (Exhibit 6).

3) ***Interest Rates***. Stock market bottoms usually occur after the Fed has started to ease monetary policy. They have occurred between zero and 40 months after the peak in the federal funds rate, with an average of 12 months during the previous seven easing cycles. This time, the Fed cut the federal funds rate ten times over the first ten months of 2001 and only now are there mounting signs of a significant bottom for stock prices (Exhibit 7). The 10-year Treasury bond yield has a better record as a timing tool having peaked almost exactly at the same time as stocks troughed on six occasions. However, these are now deflationary times, and the trough in stock prices is more likely to coincide with the upturn in bond yields as happened in 1998 (Exhibit 8). Other useful interest rate tools are yield curve spreads and credit-quality corporate bond yield spreads. The federal funds rate dropped below the 10-year Treasury yield at the start of the year, usually a necessary condition for a stock market bottom (Exhibit 9). The spread between A-rated corporate bond yields and the 10-year Treasury usually spikes up to a cyclical peak just as stock prices start to rebound (Exhibit 10).

4) ***Earnings***. In the past, stock prices started to recover three to 15 months before the bottom in reported earnings, on a four-quarter trailing basis. There is less of a lead time relative to 52-week forward consensus expected earnings, which started to bottom during the summer. But now, after the terrorist attacks, the bottom for earnings is likely to occur at the beginning of next year (Exhibit 11). This outlook is confirmed by my Weekly Profits Proxy—i.e., *Business Week's* industrial production index multiplied by the CRB raw industrials spot price index. It has been falling steeply since the attacks (Exhibit 12).

5) ***Economic Indicators.*** Stock prices tend to trough before production indicators do so. The lead time has been three to nine months for industrial production (Exhibit 13). A tighter relationship is with the National Association of Purchasing Management's (NAPM) Production Index. It is a diffusion index and has almost always bottomed at the same time or very shortly after stock prices did so (Exhibit 14). An even better coincident indicator of stock market bottoms is a composite NAPM index of "nominal" activity that I construct by adding the association's production and pricing indexes and dividing by two. It should bottom before the end of the year, in my opinion (Exhibits 15 and 16). I also like to track the yearly percent change in industrial commodity prices (Exhibit 17). Sustained stock market rebounds and rallies rarely happen when these prices are falling (Exhibit 18). Stock market bottoms often coincide with peaks in initial unemployment claims and our Boom-Bust Barometer (Exhibits 19 and 20).

The "expectations" component of the Consumer Sentiment Index has a better track record of calling stock market bottoms than does the "present" component (Exhibits 21, 22, 23, 24, 25, and 26). Finally, there doesn't seem to be any useful predictive relationship between key employment indicators and the stock market (Exhibits 27 and 28). There is also very little correlation between the turning points in the monetary and stock market cycles (Exhibits 31 and 32).

**Sector Bets.** Most institutional investors can't raise a great deal of cash while waiting for the next crisis to create buying opportunities. Most tend to be always fully invested, so market timing may not be a very relevant exercise for them. Nevertheless, market timing can help boost performance by identifying sectors and industries that tend to either under perform or outperform during a cyclical recovery in stock prices. Exhibits 33-60 are designed to provide some insights for the selected industries where relative performance data are available for several years.

1) **Basic Industries.** Paper & Forest Products and Chemicals were underperformers during the late 1990s and are now starting to show some relative strength again. There have been a few instances where they outperformed before the trough in stock prices. They rarely do so after major stock market bottoms (Exhibits 33 and 34). Aluminum and Iron & Steel have been underachievers since the 1960s. In a few instances, Aluminum has outperformed before the trough in the S&P 500, but this rarely continues past the trough (Exhibits 35 and 36). Metals Mining shows the same historical pattern of often performing relatively well before, but not after, S&P 500 troughs (Exhibit 37). Containers & Packaging has occasionally outperformed for a brief period after major cyclical lows in stock prices (Exhibit 38).

2) **Capital Goods** stock prices tend to trough relative to the S&P 500 near market bottoms (Exhibit 39). Computers tend to outperform around stock market troughs. Currently, they are underperforming (Exhibit 40).

3) **Consumers.** In the past, Retail Department Stores often either were market performers or above-average performers following stock market troughs (Exhibit 41). The same can be said for Consumer Finance, though the record is more mixed for this industry (Exhibit 41). Autos have tended to outperform the market around S&P 500 troughs, though they are currently underperforming. Auto Parts lag Autos on the way down, but often lead on the way up (Exhibit 42). Entertainment was a very volatile outperformer during the 1970s and 1980s. It has been a volatile market performer since the early 1990s (Exhibit 43). Homebuilding stocks sometimes bottom when the market does (Exhibit 44). Beverages, Foods, and Personal Care tend to outperform going into market troughs and underperform coming out, though there have been exceptions to the rule (Exhibits 45-48).

4) **Energy.** International Integrated Oils tend to be very volatile market performers. The volatility is driven by oil prices. Relative to the S&P 500, Domestic Integrated Oils have been driven entirely by the trend in oil prices (Exhibits 49 and 50). There also isn't much of a relationship between the stock market's cycle and Oil & Gas Drilling & Equipment and Natural Gas Utilities (Exhibits 51 and 52).

5) **Financials.** Banks often underperform after stock market bottoms. They are outperforming currently because the yield curve is quite bullish for this industry (Exhibit

53). Property Casualty Insurance and Savings & Loan Companies tend to underperform after the trough in the S&P 500 (Exhibits 53 and 54).

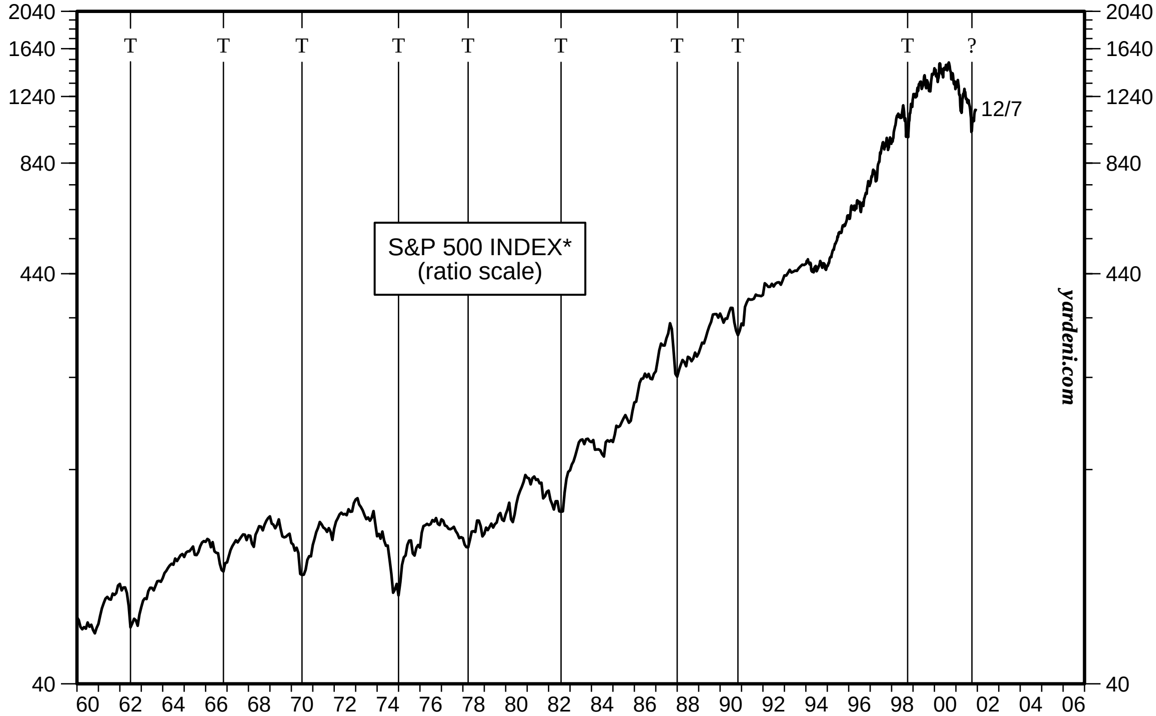
6) **Health Care**, including Drugs and Medical Products & Supplies, often underperforms after S&P 500 troughs (Exhibits 55 and 56).

7) **Transportation.** Truckers and Railroads often outperform the market for several months after S&P 500 troughs (Exhibits 57 and 58).

8) **Miscellaneous.** Electric Utilities have been long-term underperformers. They tend to outperform for short periods prior to S&P 500 troughs (Exhibit 59). Gold & Precious Metals Mining has often spiked relative to the S&P 500 near stock market troughs (Exhibit 60).

# - S&P 500 -

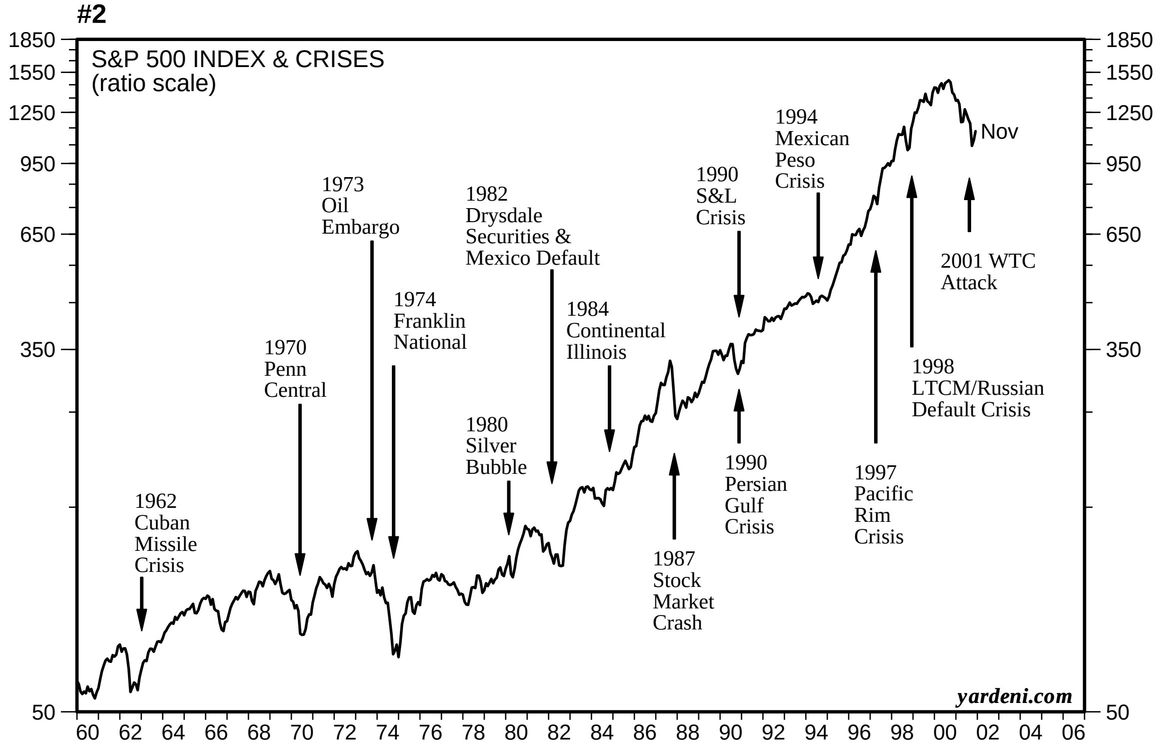
#1




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

The T-lines shown in all of the following charts designate the major cyclical troughs in the S&P 500 following declines of 15% or more from the previous cyclical peaks. There have been 10 such bear markets since 1960, with an average decline of 24% (including the current 37% drop). The average 6-month gain after the past nine troughs has been 23%.

#2

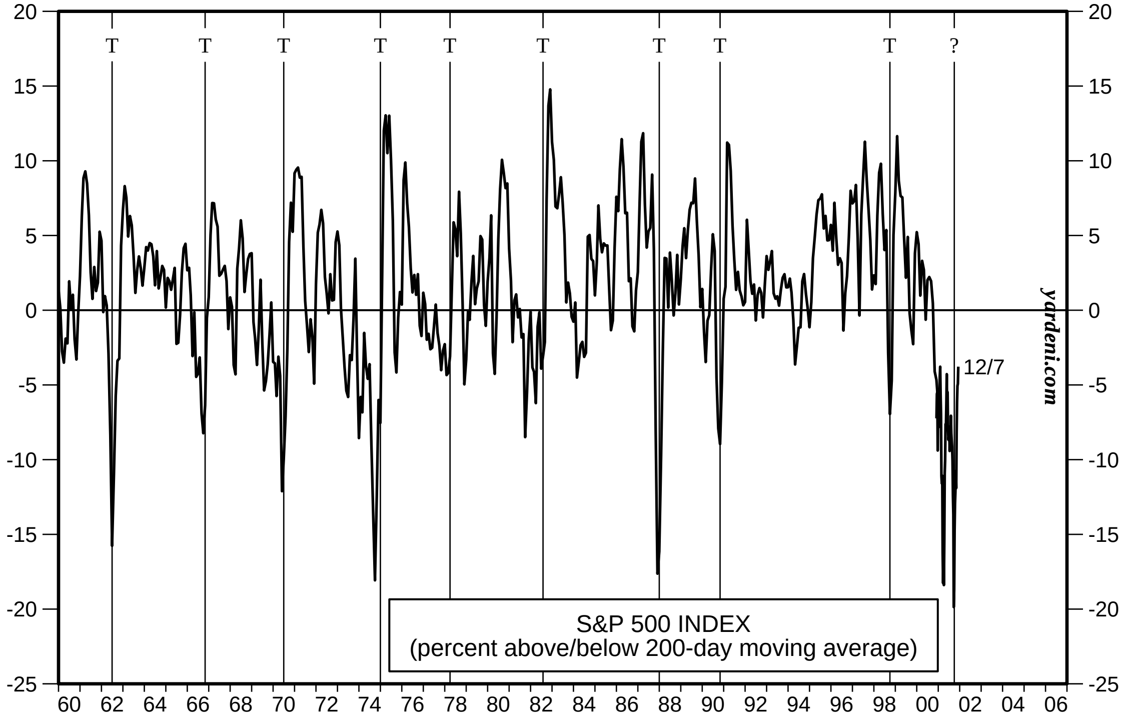



More often than not, major bottoms coincide with financial crises, which trigger panic selling. The crises, in turn, usually trigger corrective policy responses, which prove the doomsayers wrong. So they present great buying opportunities for bargain hunters.

# - Momentum -

Major market bottoms usually occur when the S&P 500 is more than 5% below its 200-day moving average. Drops exceeding 10% of this average have always made bottoms, i.e., four times in the past.

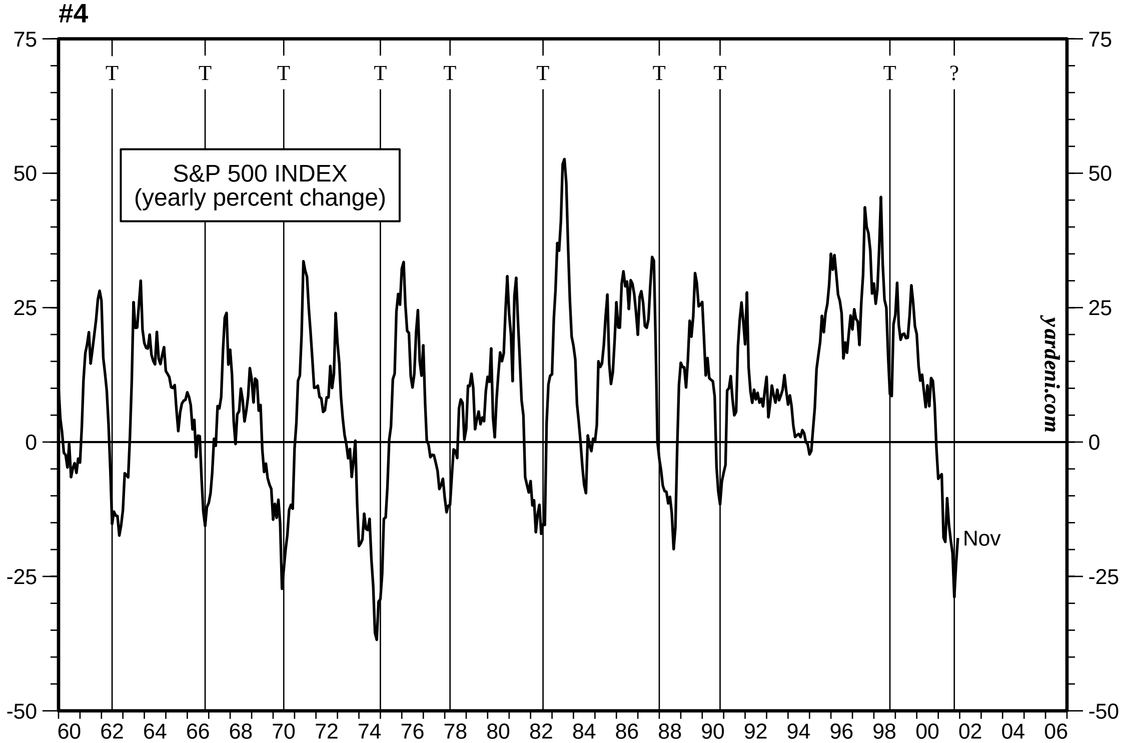
#3




T = S&P 500 major cyclical trough
Monthly through 2000, weekly thereafter.

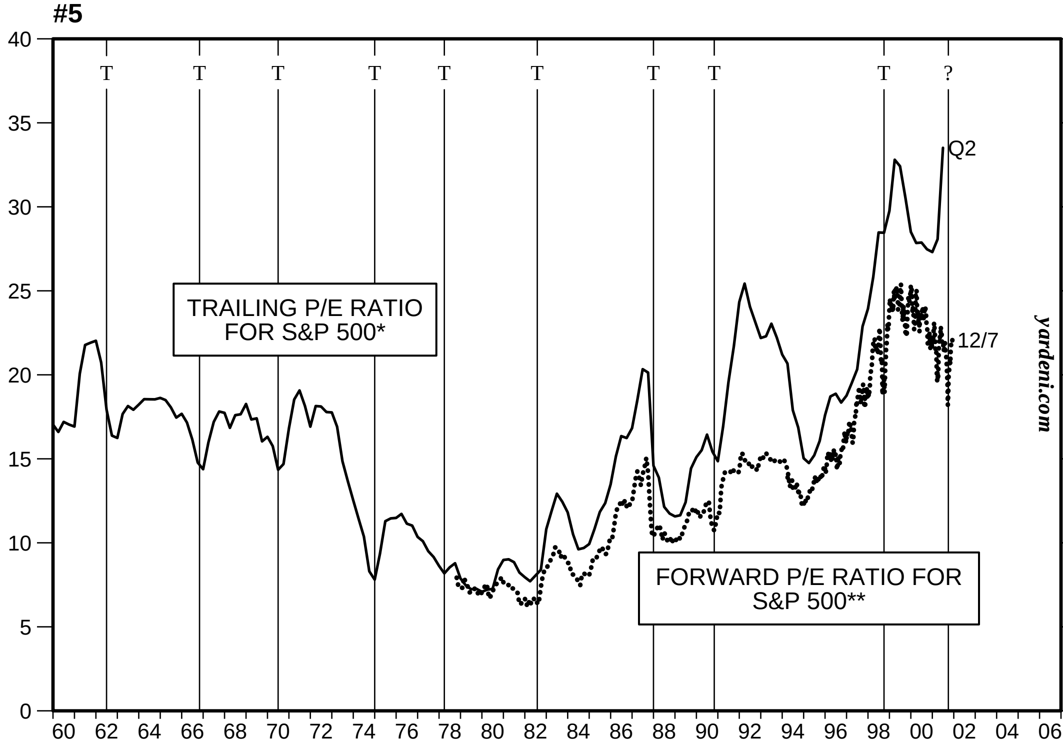
On a year-over-year basis, declines of 15% or more in S&P 500 Index have always marked the bottoms.

#4




T = S&P 500 major cyclical trough

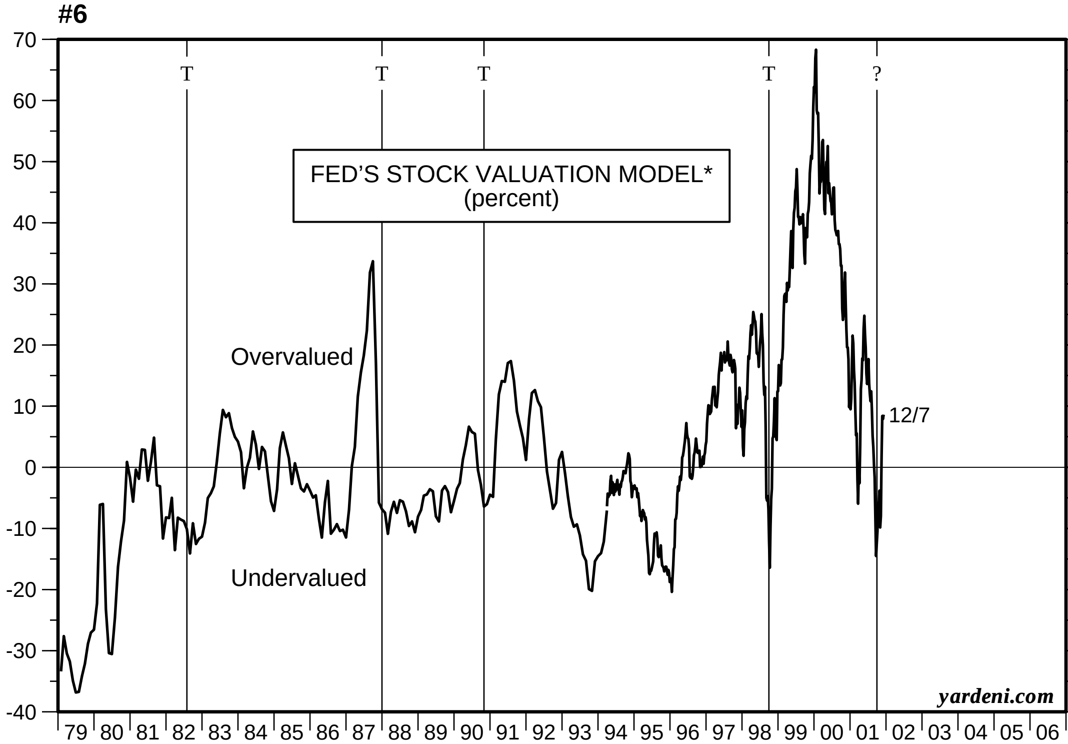
#5




T = S&P 500 major cyclical trough
* Using four-quarter trailing reported earnings.
** Using 52-week forward consensus expected operating earnings per share (mid-month data). Monthly through April 1994, weekly thereafter.

Major stock market bottoms often coincide with cyclical troughs in the P/E ratio, i.e when stocks are relatively cheap.

#6

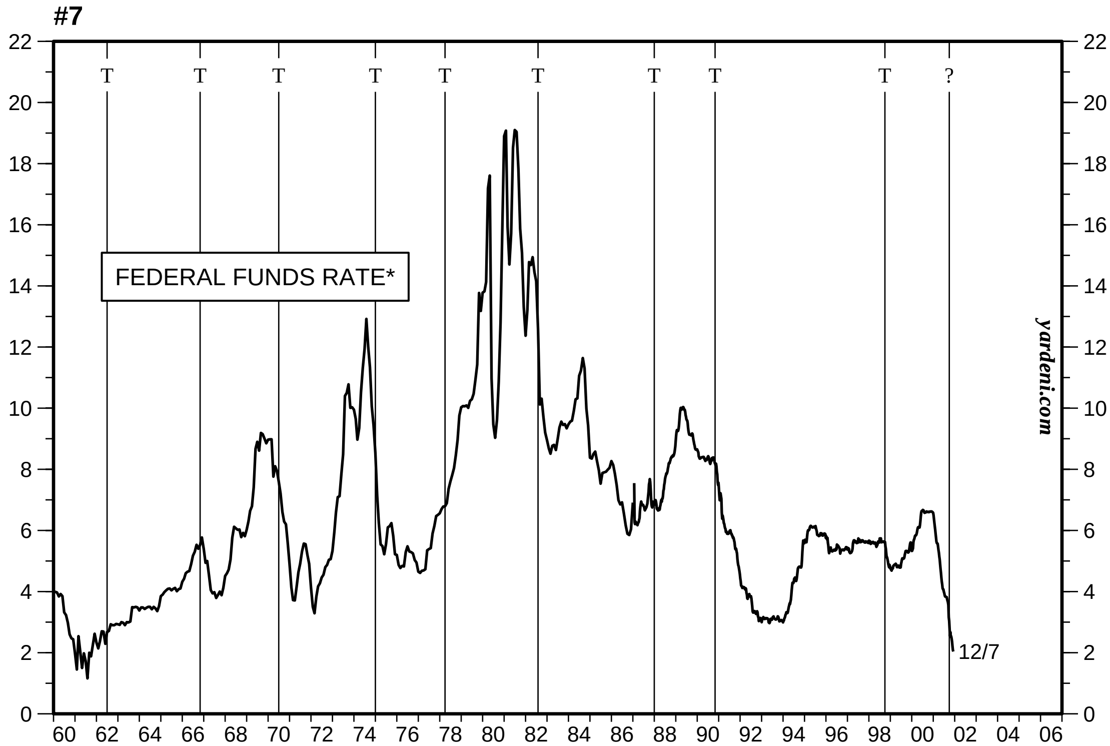



T = S&P 500 major cyclical trough
* Ratio of S&P 500 Index to its Fair-Value (52-week forward consensus expected S&P 500 operating earnings per share divided by the 10-year US Treasury bond yield) minus 100. Monthly through April 1994, weekly thereafter.
Source: Thomson Financial

The Fed's Stock Valuation Model shows that stocks were undervalued during each of the bottoms since 1979.

# - Interest Rates -

Stock market bottoms usually occur after the Fed has started to ease monetary policy. Most recently, the Fed started easing in early January 2001 and it has taken longer to make a stock market bottom.

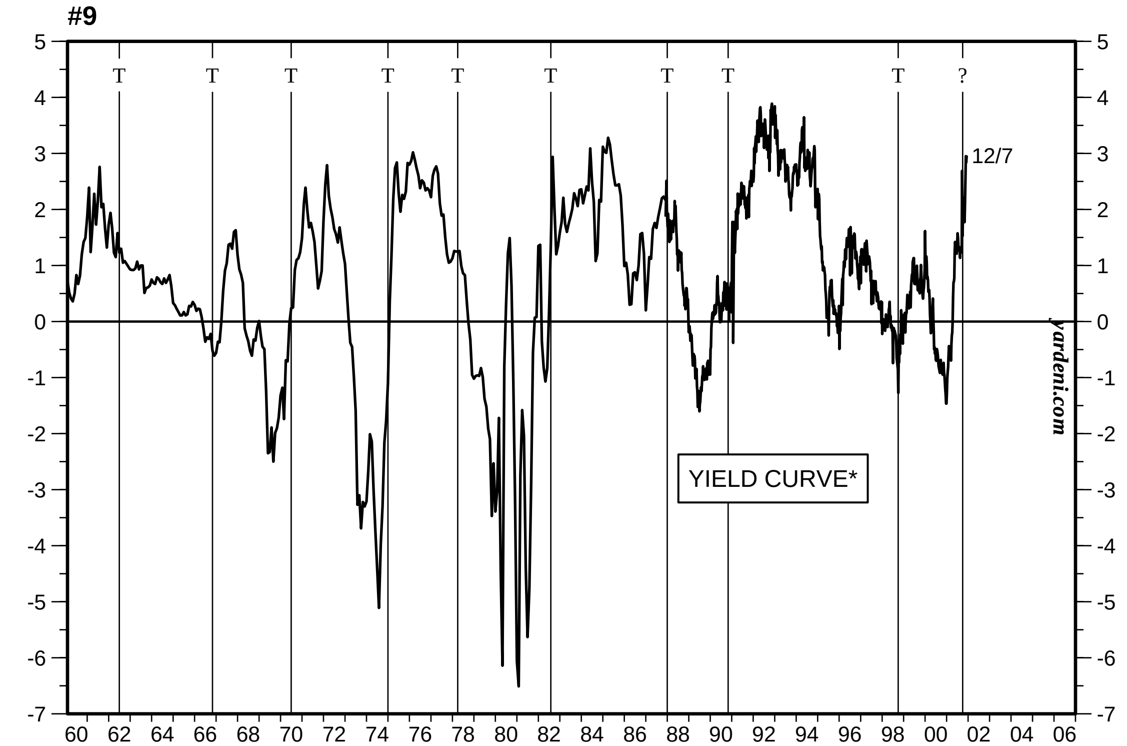



T = S&P 500 major cyclical trough
* Monthly through 1986, 4-week average thereafter.

Stock market bottoms often coincide with cyclical peaks in the bond yield during inflationary times. During the more recent deflationary times, the trough in stock prices is more likely to coincide with the upturn in the bond yield as in 1998.

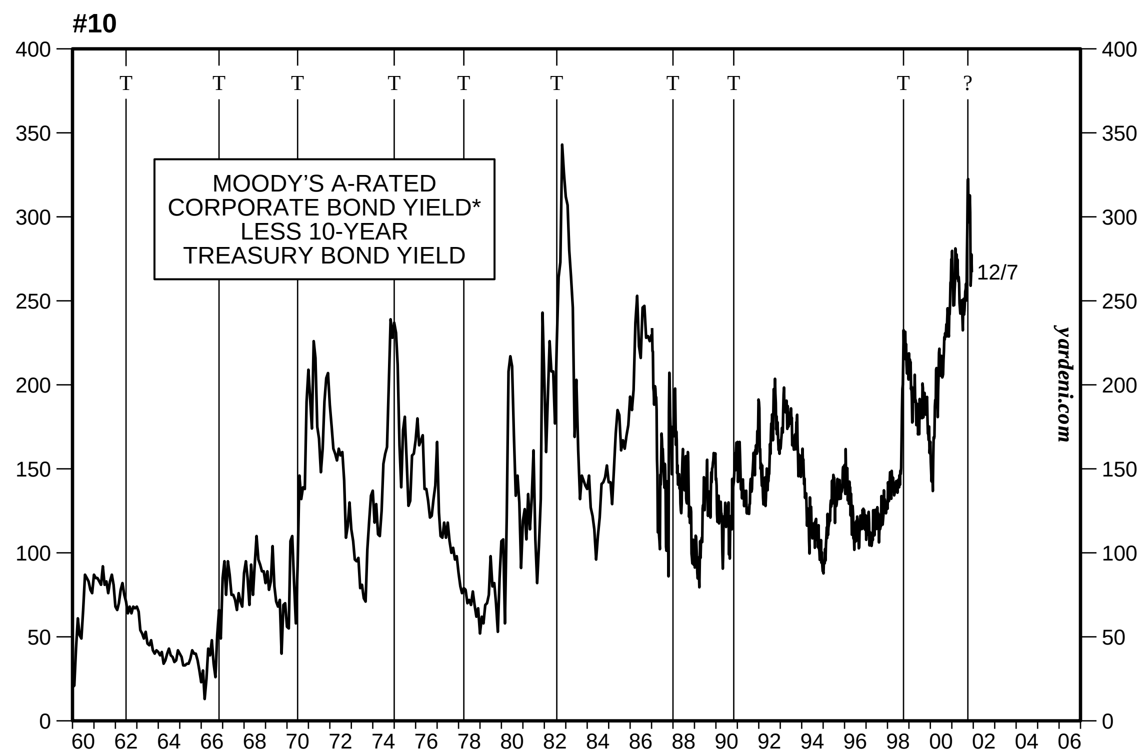

T = S&P 500 major cyclical trough
* Monthly through 1986, 4-week average thereafter.

# - Interest Rates -




T = S&P 500 major cyclical trough
* 10-year Treasury yield less federal funds rate. Monthly through 1987, weekly thereafter.

The yield curve spread tends to cross from negative to positive territory at major stock market bottoms. The yield curve did so again most recently at the start of 2001.



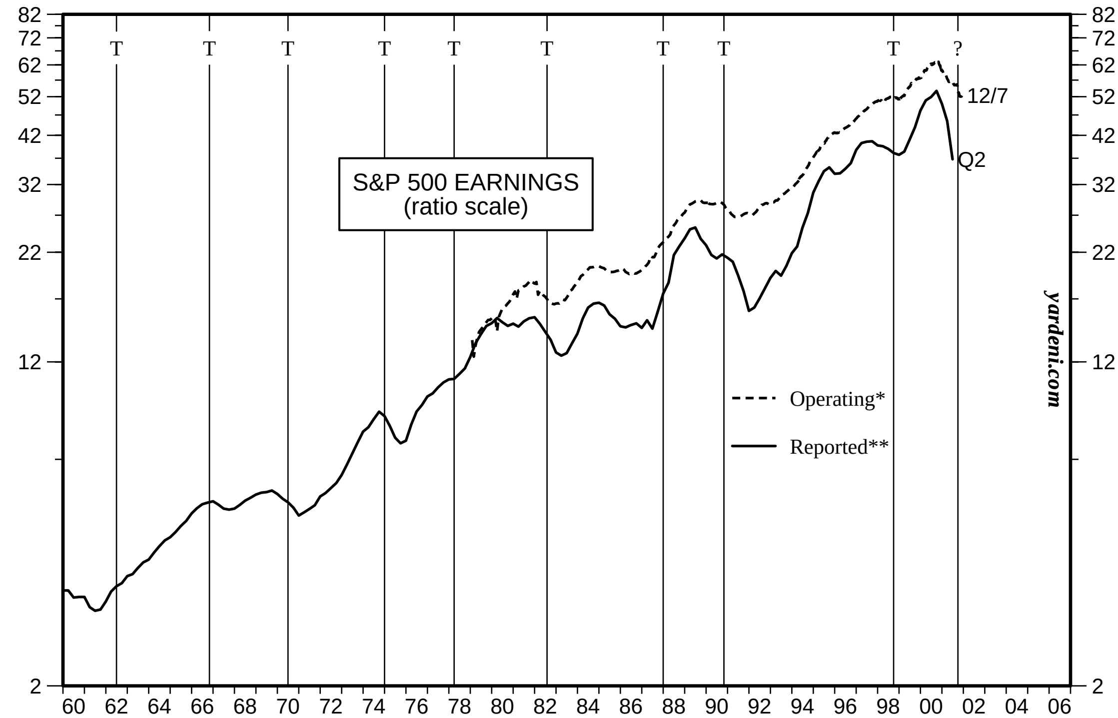

T = S&P 500 major cyclical trough. Monthly through 1986, weekly thereafter.
* Based on nearly 100 seasonal bonds with remaining maturities of at least 20 years.
Source: Moody's Investors Service.

Stock prices tend to trough when credit-quality corporate bond yield spreads peak, as is likely to be the case again soon.

# - Earnings -

In the past, stock prices started to recover 3 to 15 months before the bottom in reported earnings. There is less of a lead time relative to expected earnings.

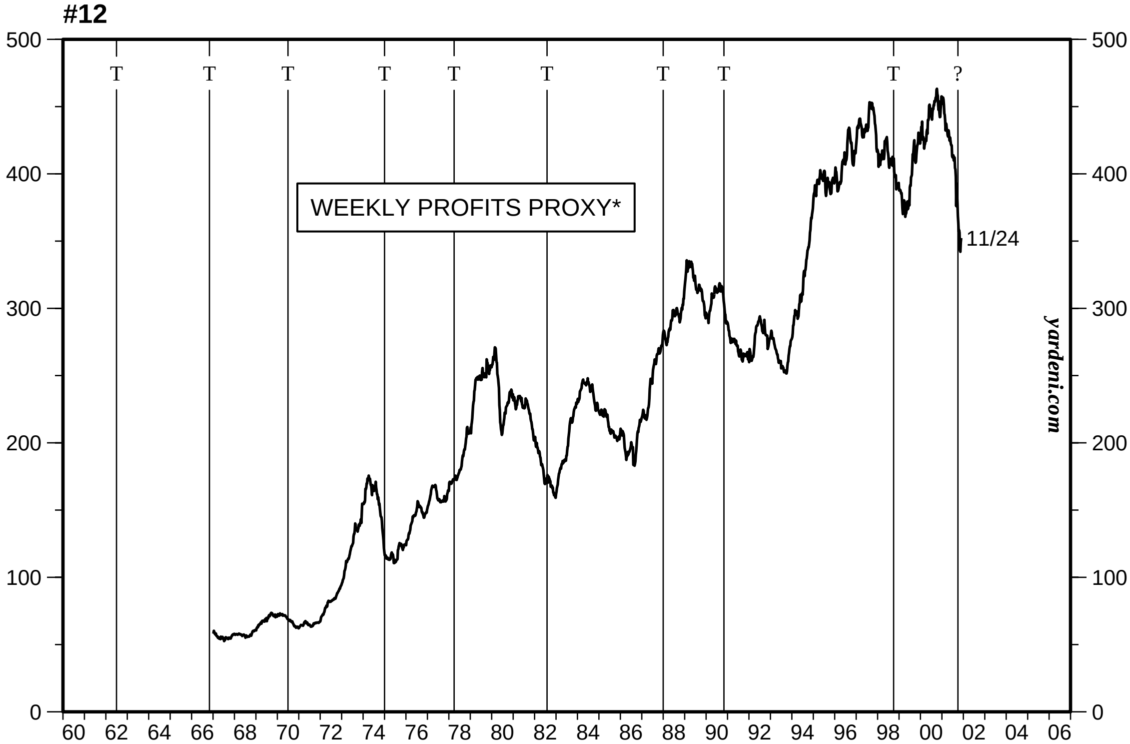
#11




T = S&P 500 major cyclical trough
* 52-week forward consensus expected S&P 500 operating earnings per share. Monthly through April 1994, weekly thereafter.
** Four-quarter sum.
Source: Thomson Financial

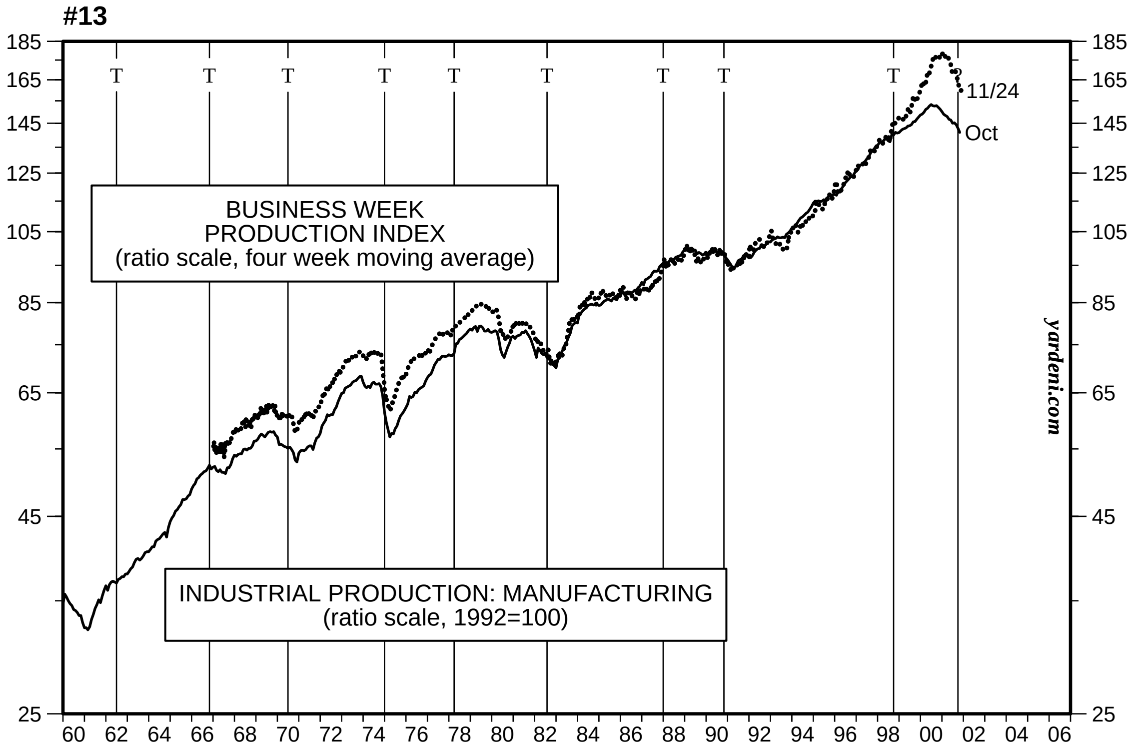
Stock prices often trough shortly before upturns in our Weekly Profits Proxy.

#12



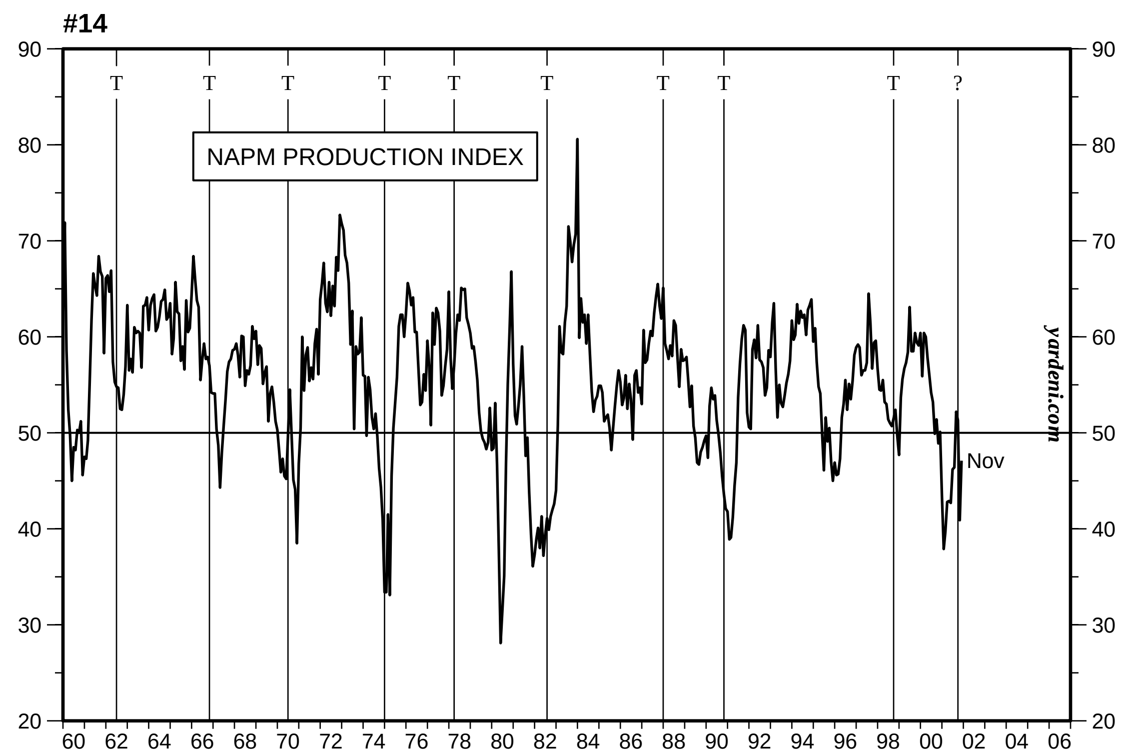

T = S&P 500 major cyclical trough
* Business Week's industrial production index multiplied by CRB raw industrials spot price index divided by 1000.

# - Production -




T = S&P 500 major cyclical trough

The S&P 500 is included in the Index of Leading Economic Indicators. Industrial production is a component of the Index of Coincident Indicators. The bottom in stock prices led the bottom in industrial production 5 times since 1960 with a lead time of 3 to 9 months.



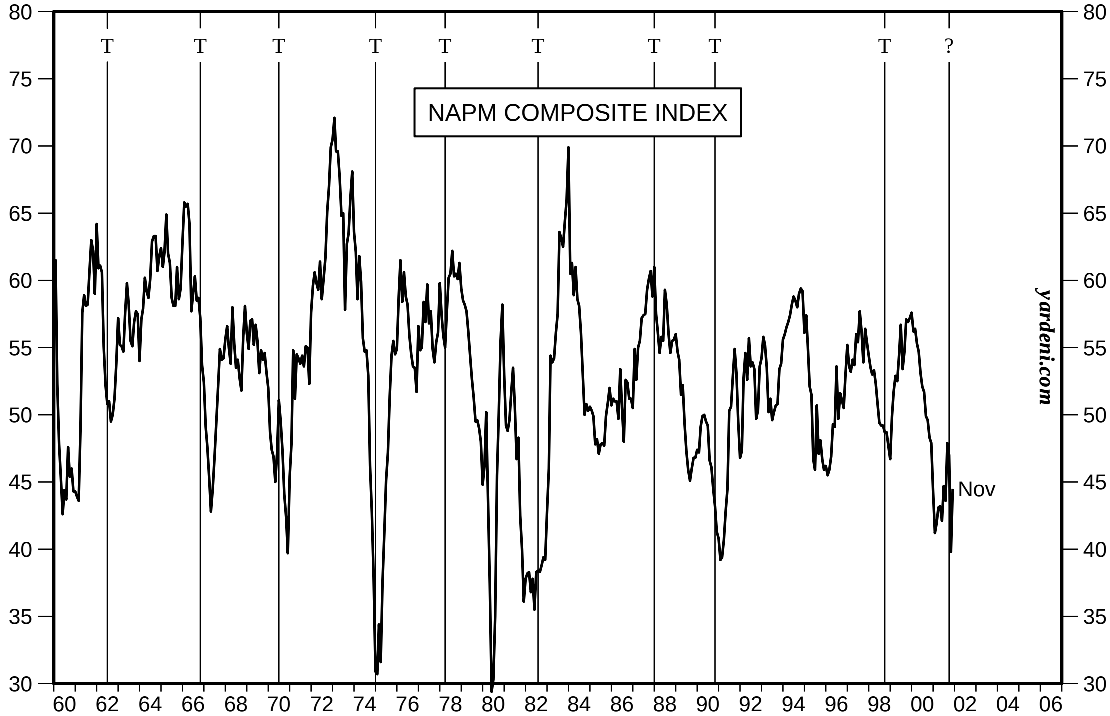

T = S&P 500 major cyclical trough

Stock prices bottomed just before or at the same time as the NAPM Production Index did so 7 times since 1960.

# - NAPM Composite -

The NAPM Composite Index has bottomed either at the same time or a few months after stock prices bottom 6 out of 9 times since 1960.

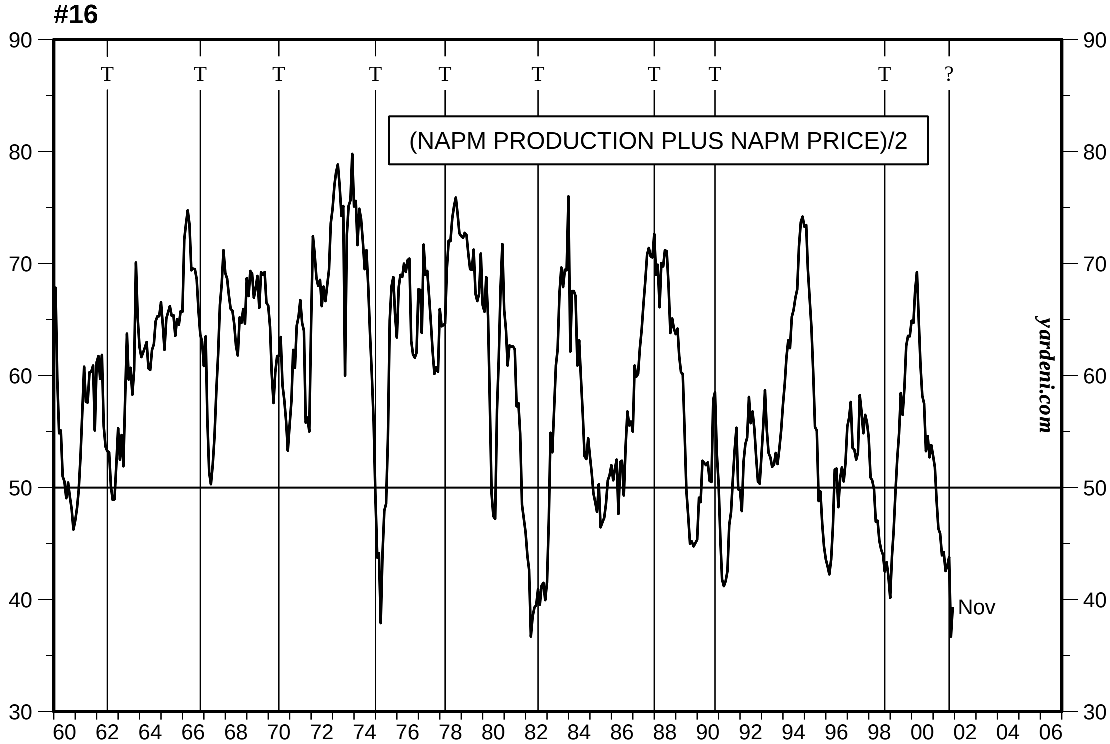
#15




T = S&P 500 major cyclical trough
Source: National Association of Purchasing Management.

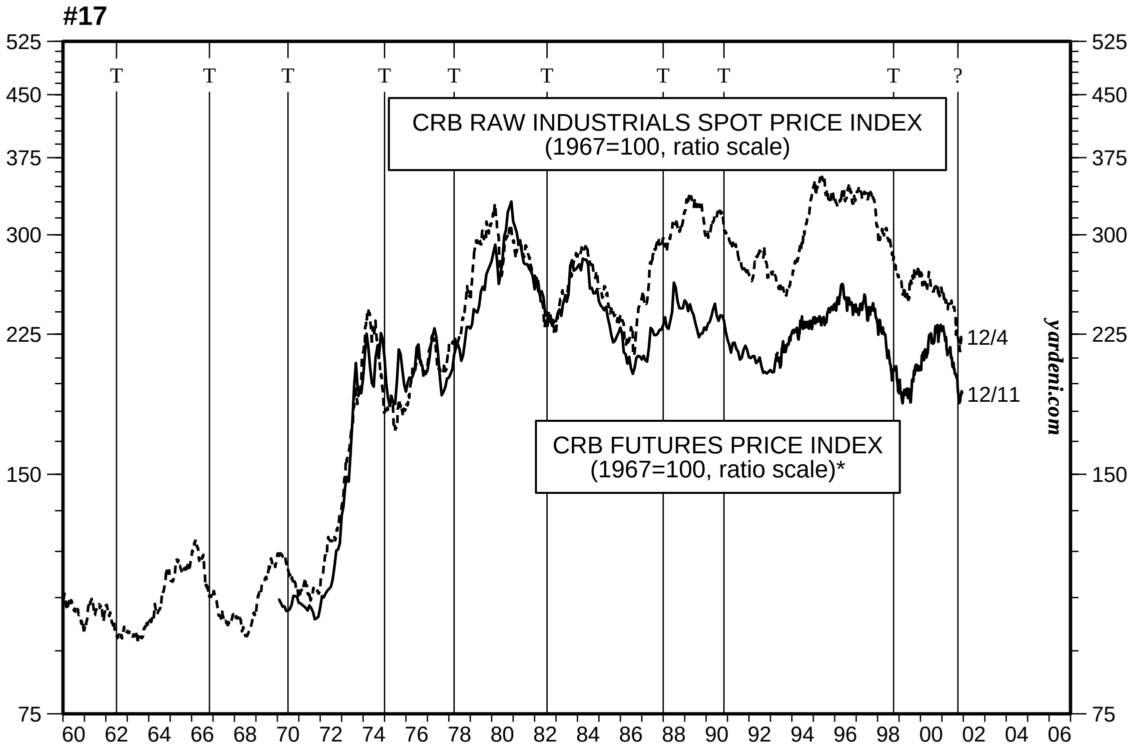
Since 1960, 9 out of 10 times, stock prices rebounded from their cyclical lows within a month or two of the bottom in this "nominal" NAPM composite index.

#16



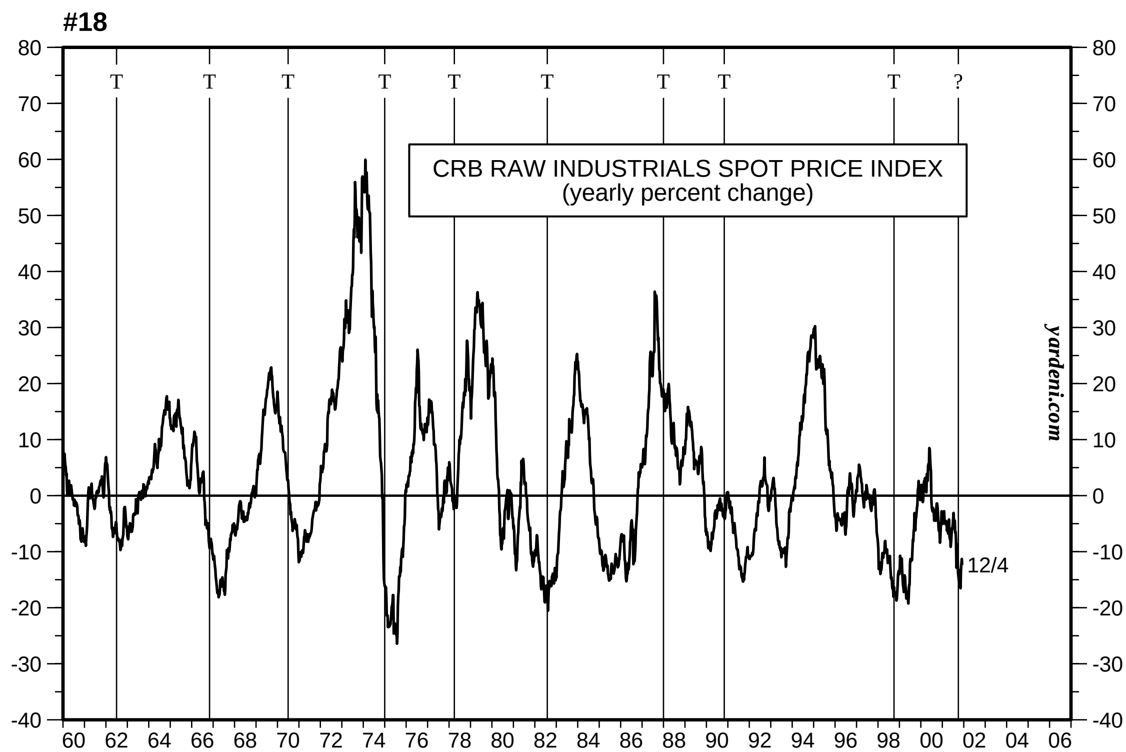

T = S&P 500 major cyclical trough
Source: National Association of Purchasing Management.

# - Commodity Prices -




T = S&P 500 major cyclical trough
* Monthly through April 1993, weekly thereafter.

Stock market bottoms usually occur after commodity prices have peaked.

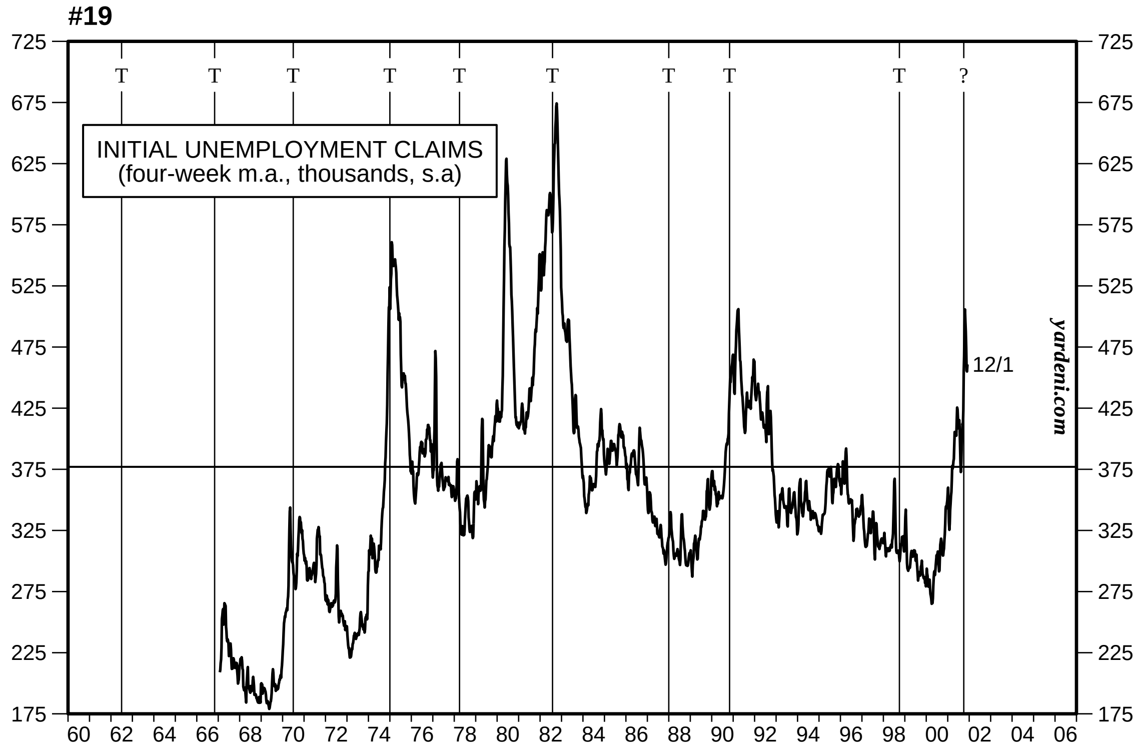



T = S&P 500 major cyclical trough

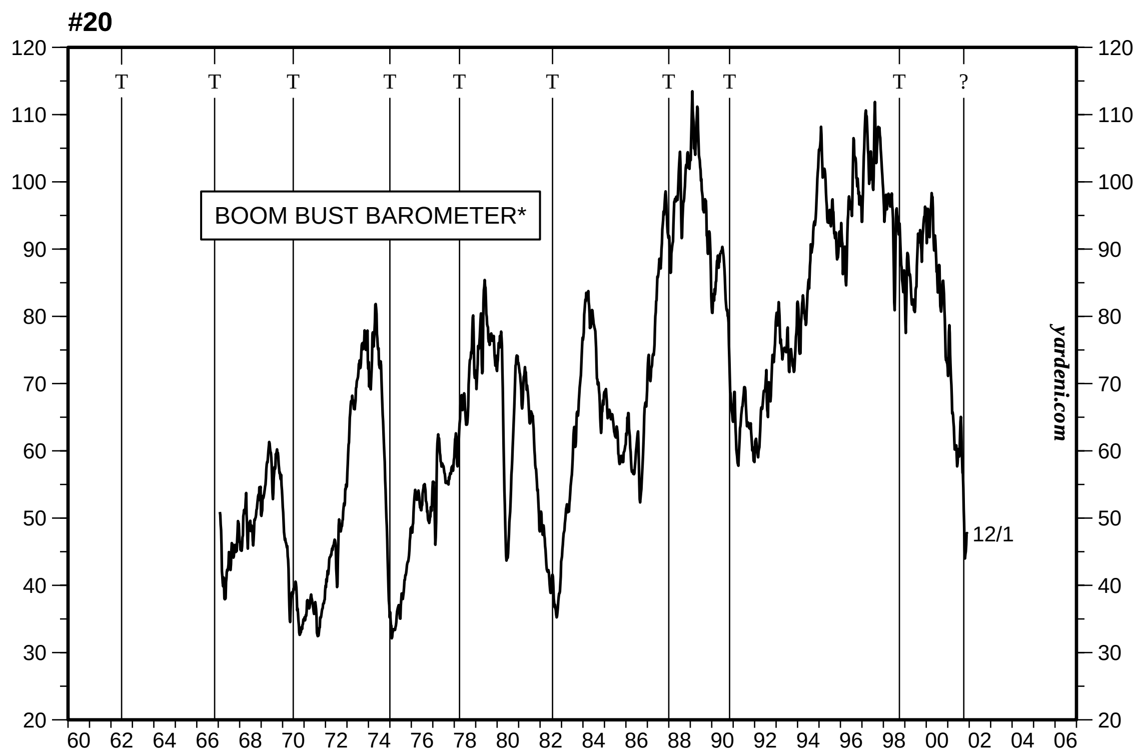
Stock prices usually recover when industrial commodity prices are rising on a year-over-year basis. Currently they are falling.

# - Boom-Bust Barometer -

Stock market bottoms often coincide with peaks in initial unemployment claims and troughs in our Boom/Bust Barometer.



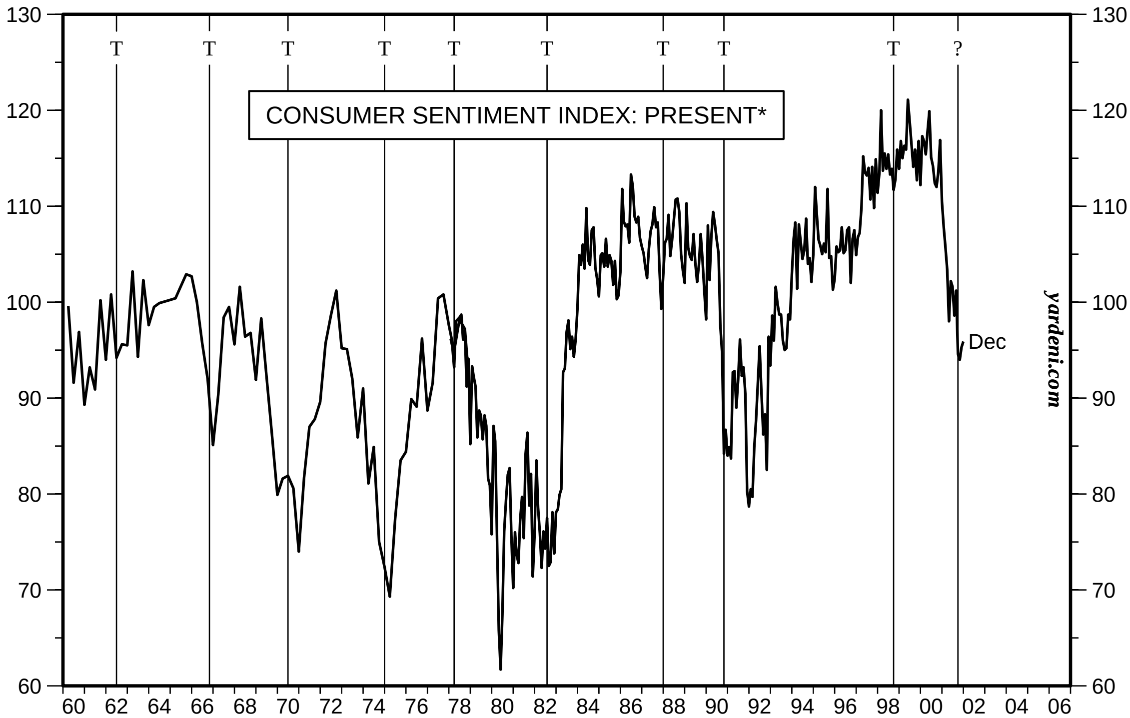

T = S&P 500 major cyclical trough




T = S&P 500 major cyclical trough
* CRB raw industrials spot price index divided by initial unemployment claims.

# - Consumer Sentiment -

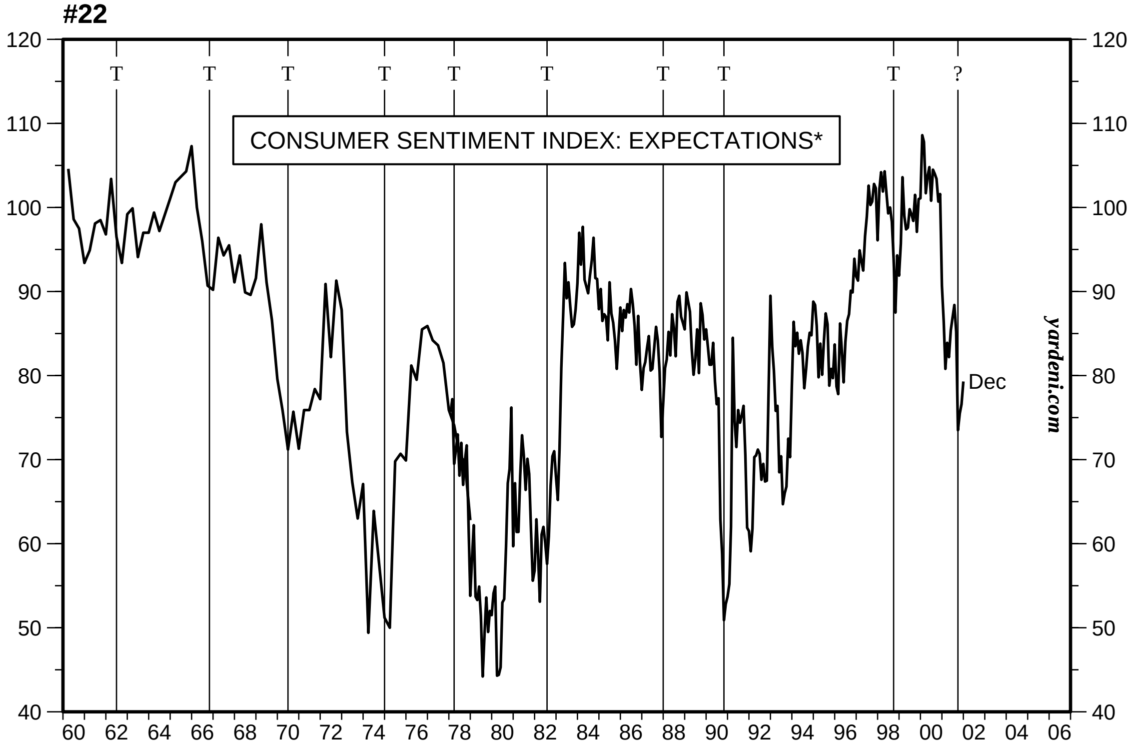
#21




T = S&P 500 major cyclical trough
* Quarterly through 1978, monthly therafter.
Source: Survey Research Center, University of Michigan.

The "expectations" component of the Consumer Sentiment Index has a better track record of calling stock market bottoms than does the "present" component.

#22

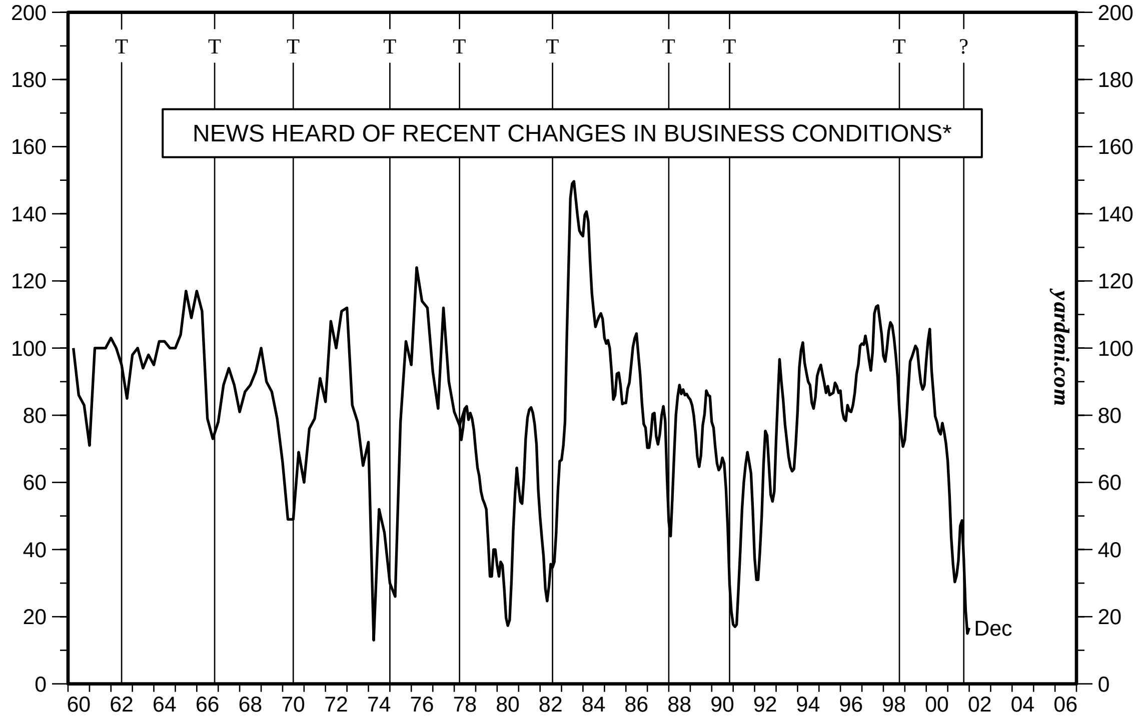



T = S&P 500 major cyclical trough
* Quarterly through 1978, monthly therafter.
Source: Survey Research Center, University of Michigan.

# - Consumer Sentiment -

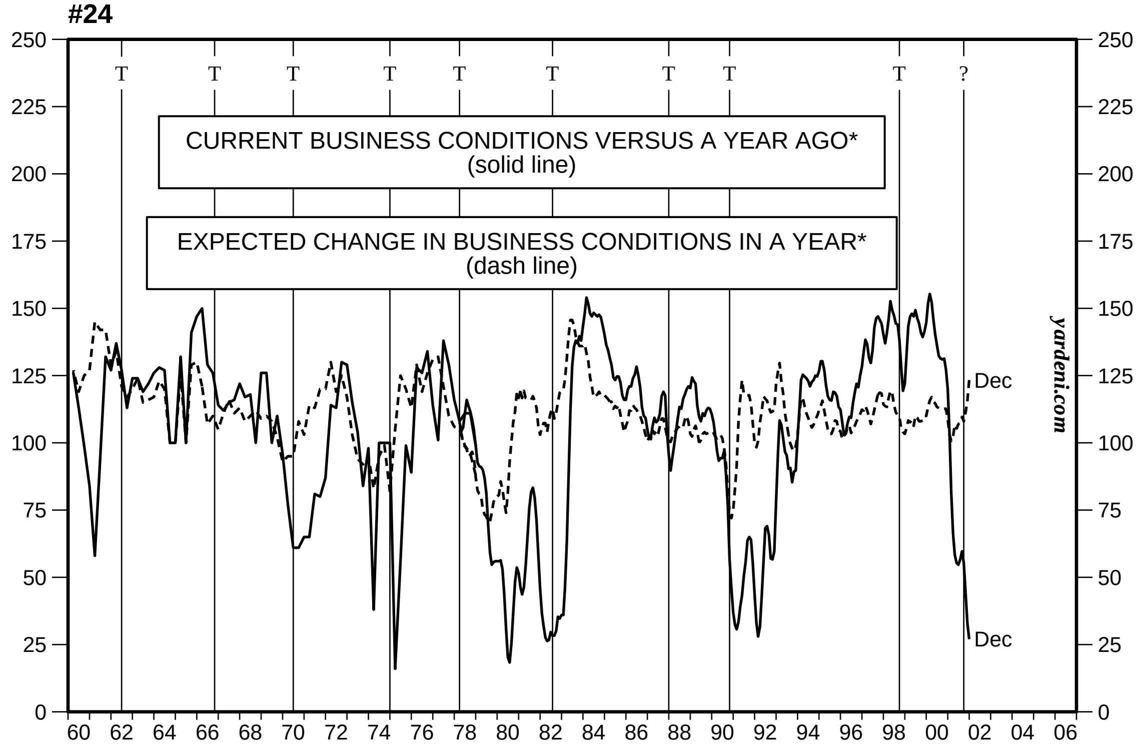
Stock market bottoms usually occur when the news background is the worst, and when consumers are most negative about the year ahead outlook for business.

#23




T = S&P 500 major cyclical trough. Quarterly through 1977, 3-month moving average thereafter.
* Favorable minus unfavorable plus 100.
Source: Survey Research Center, University of Michigan.

#24




T = S&P 500 major cyclical trough. Quarterly through 1977, 3-month moving average thereafter.
* Better minus worse plus 100
Source: Survey Research Center, University of Michigan.

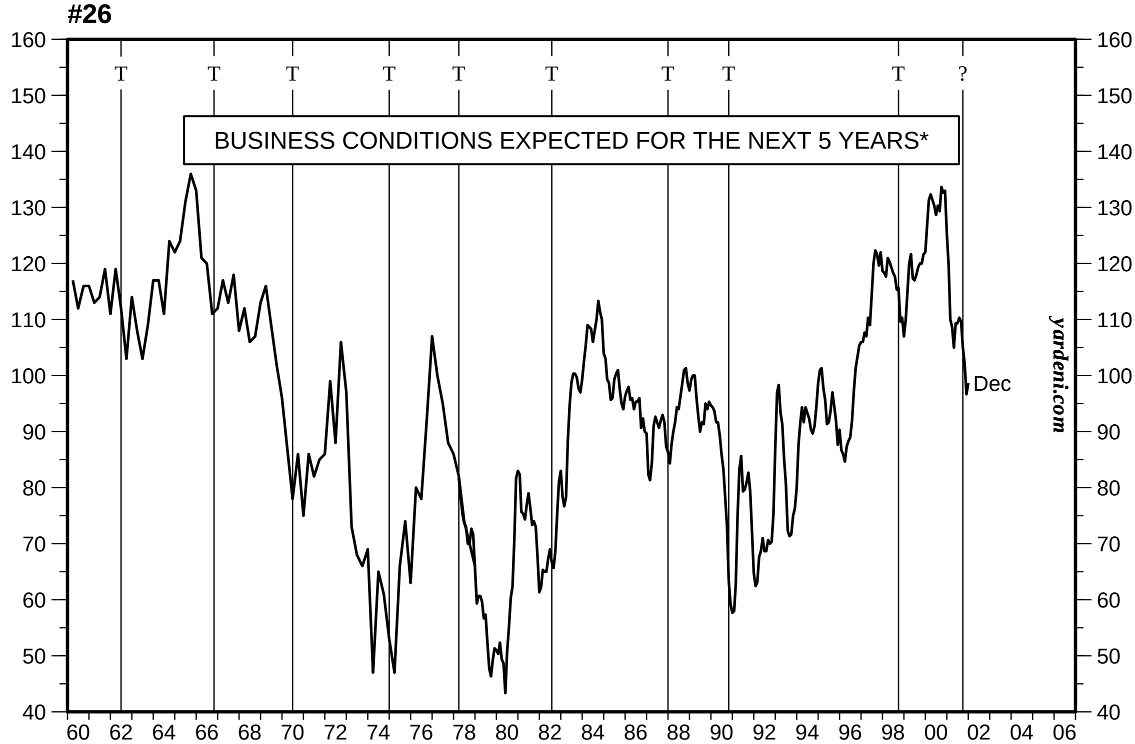
# - Consumer Sentiment -

#25


T = S&P 500 major cyclical trough. Quarterly through 1977, 3-month moving average thereafter.
* Good minus bad plus 100
Source: Survey Research Center, University of Michigan.

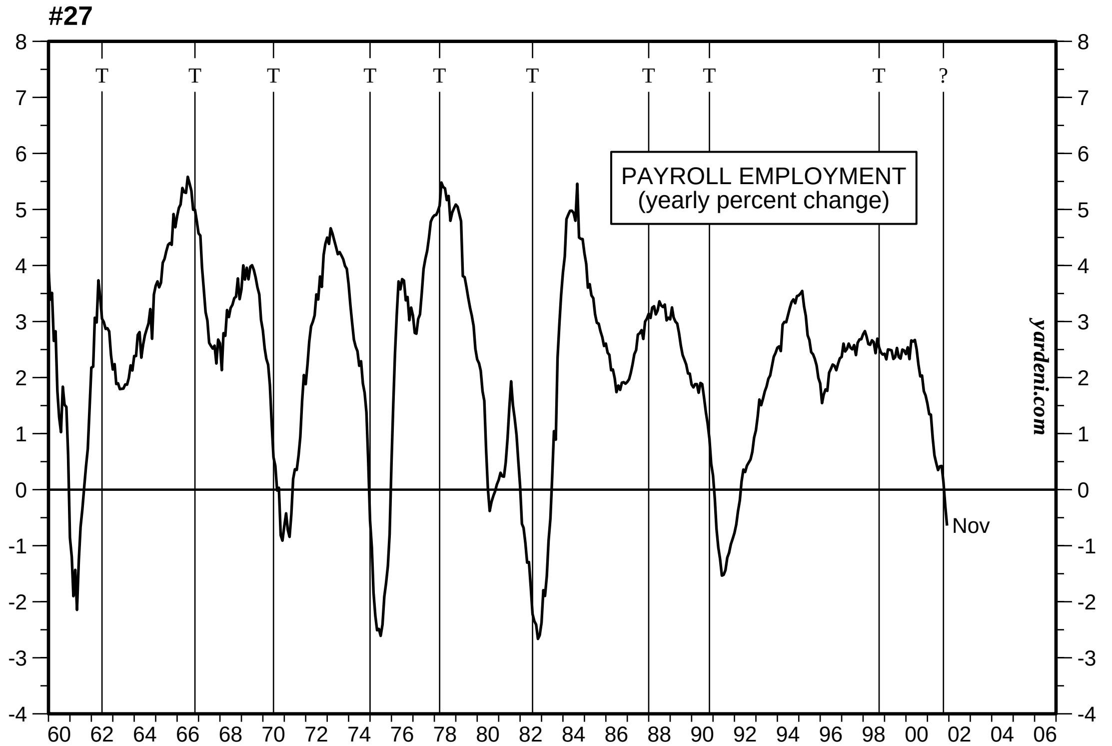
Often, consumers' assessment of the future is most pessimistic near market bottoms.

#26



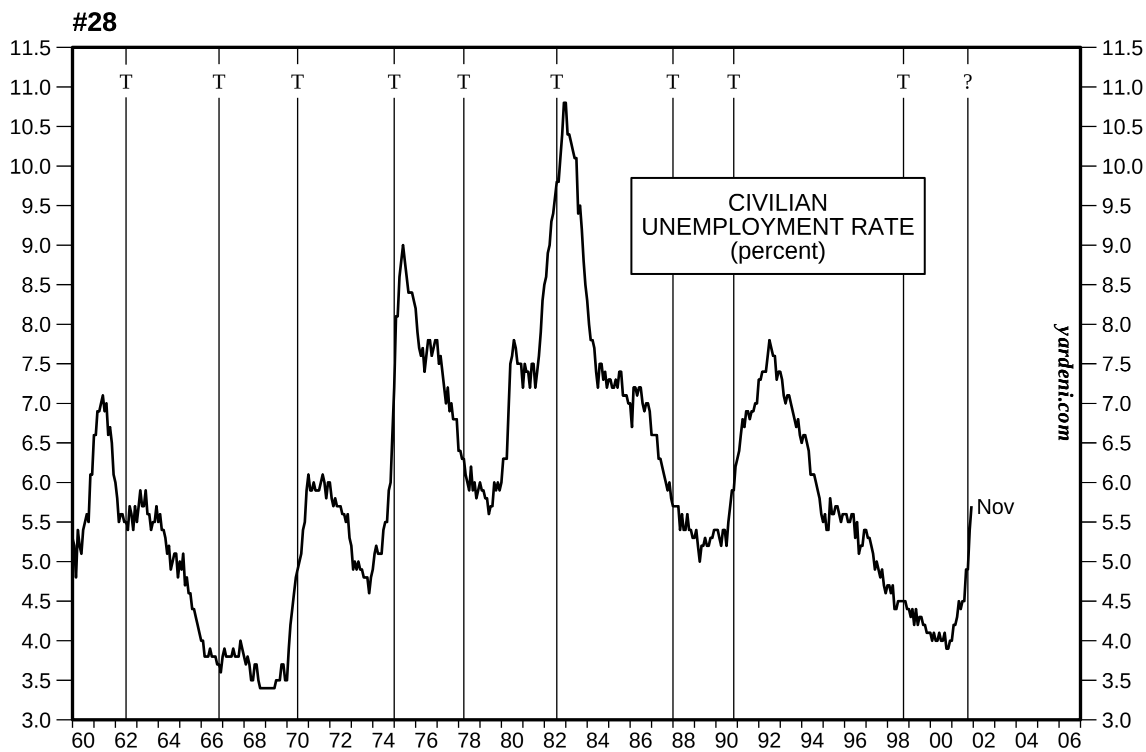

T = S&P 500 major cyclical trough. Quarterly through 19977, 3-month moving average thereafter.
* Good minus bad plus 100
Source: Survey Research Center, University of Michigan.

# - Employment -




T = S&P 500 major cyclical trough

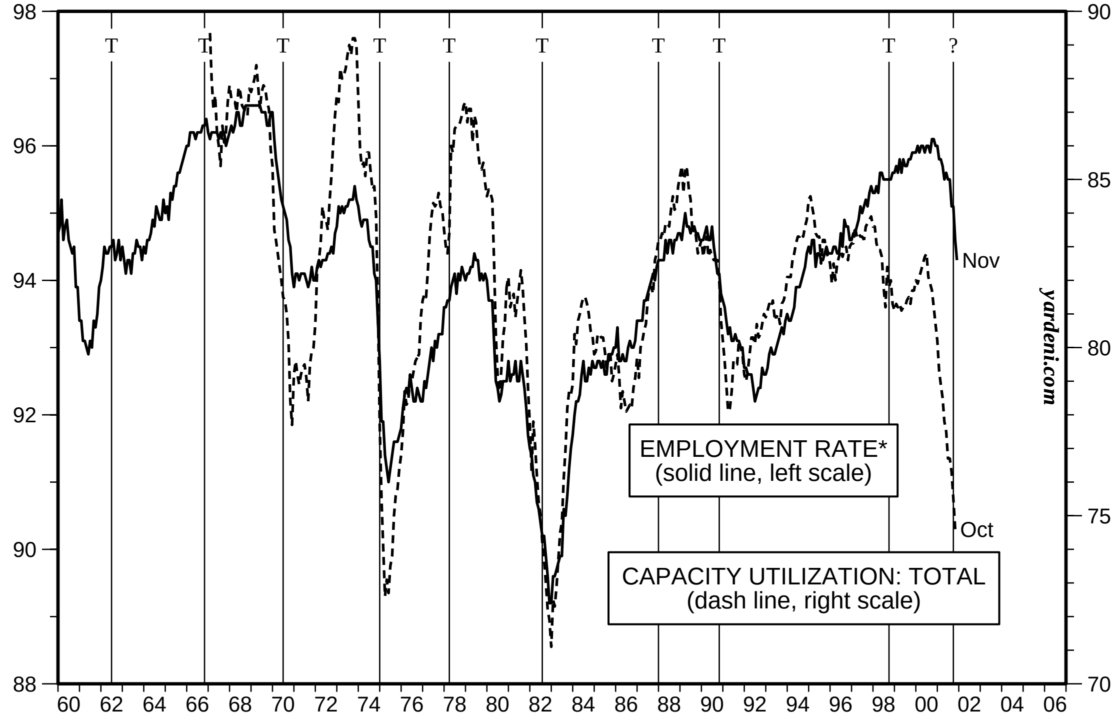
Stock market bottoms have coincided as often with the peak as with the trough in employment growth. The same mix applies to the jobless rate.




T = S&P 500 major cyclical trough

# - Resource Utilization -

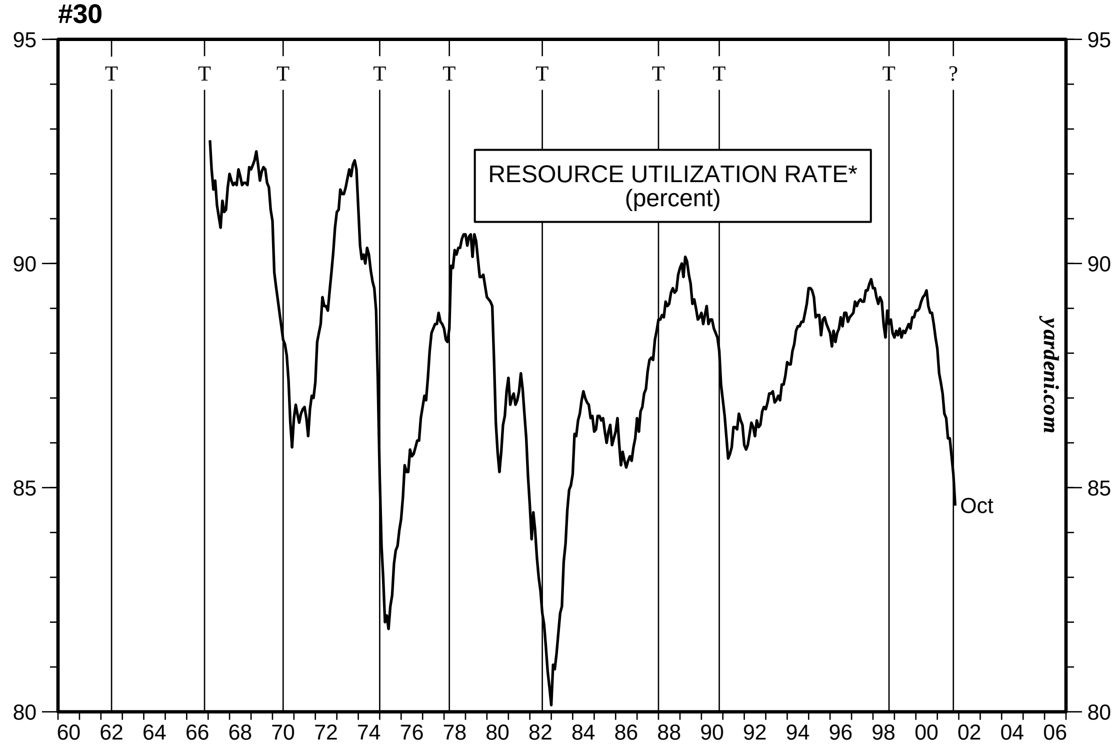
#29




T = S&P 500 major cyclical trough
* 100 minus unemployment rate.

The Resource Utilization Rate tends to bottom a few months after the stock market does so.

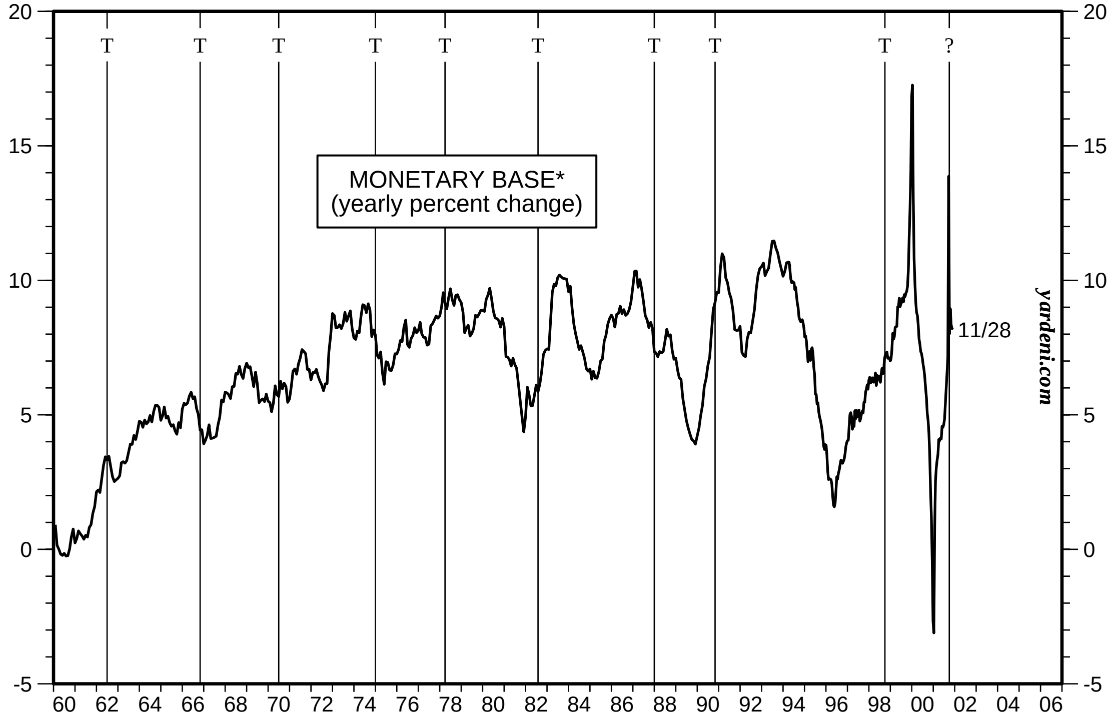
#30




T = S&P 500 major cyclical trough
* Average of all industries capacity utilization rate plus employment rate, i.e, percentage of labor force that is employed.

# - Money -

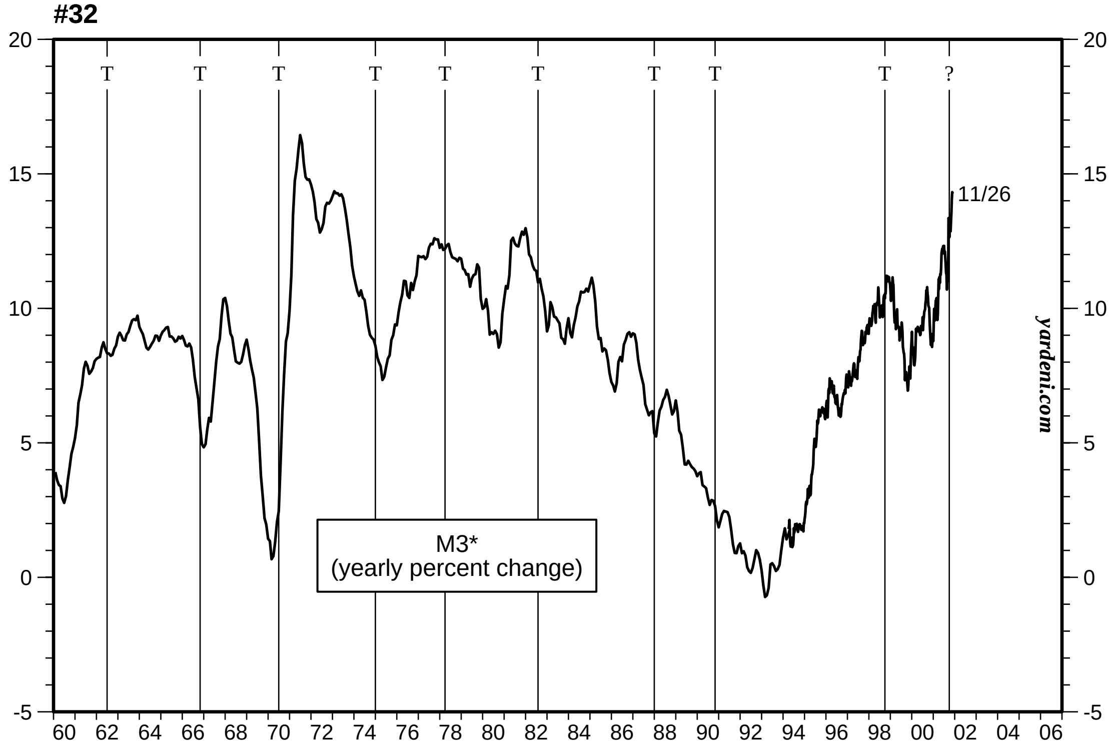
**#31**




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

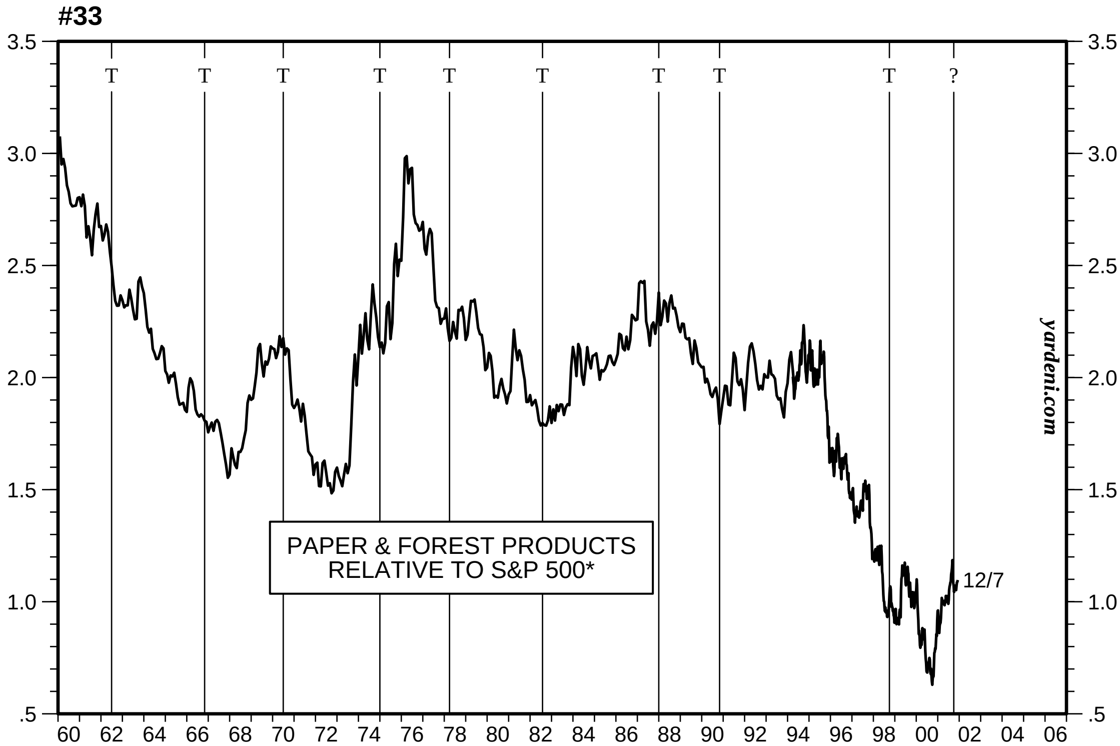
Hard to see a useful correlation between monetary and stock price cycles.

**#32**



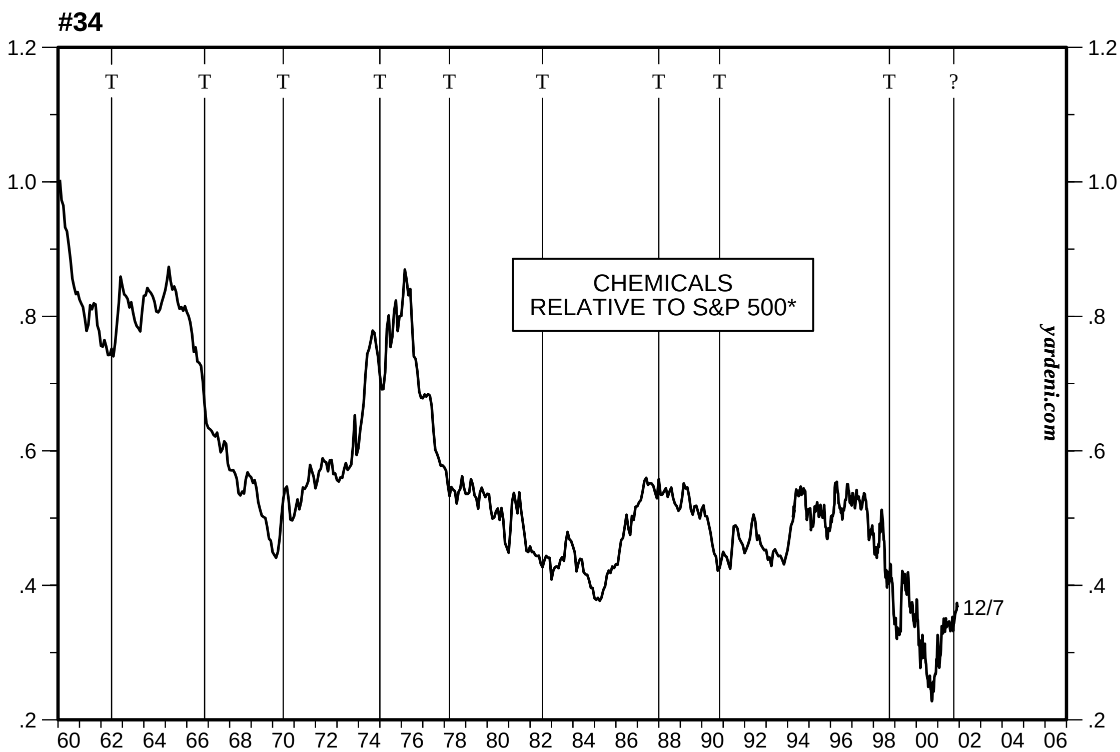

T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Basic Materials -




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

These two basic materials industries were underperformers during the late 1990s and are now starting to show some relative strength again. There have been a few instances where they outperformed before the trough in stock prices.




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

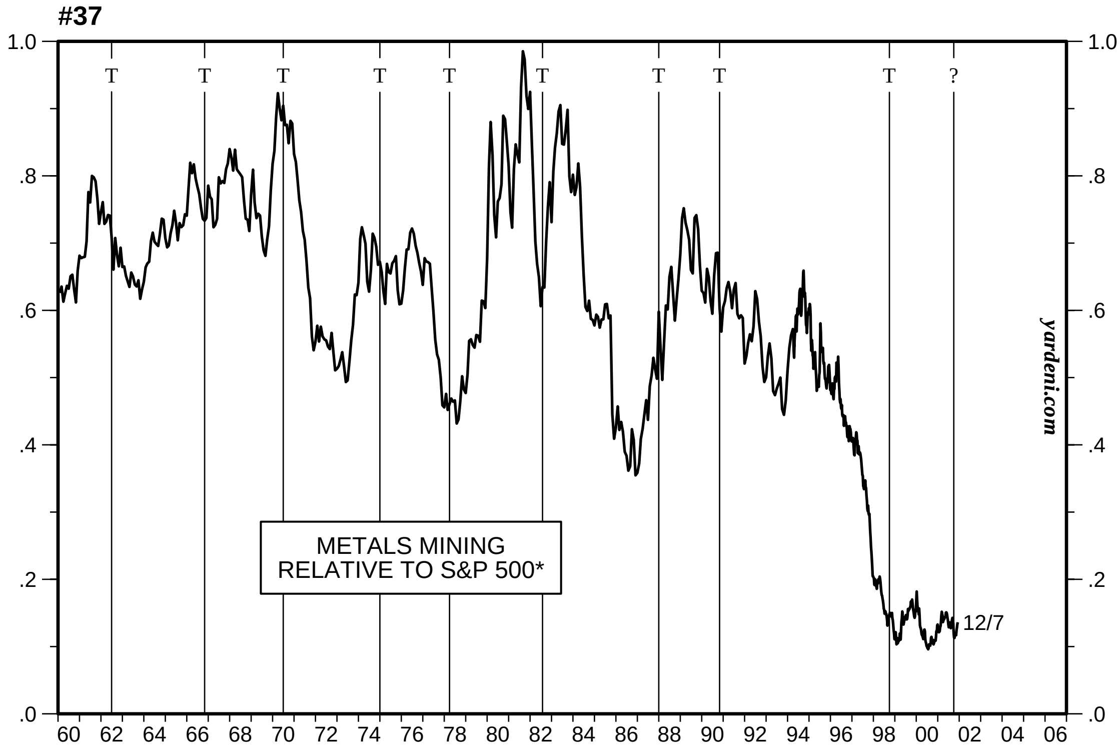
# - Basic Materials -

These two basic materials industries have been underachievers since 1960s. In a few instances, Aluminum has outperformed before the trough in the S&P 500.


T = S&P 500 major cylical trough
* Monthly through April 1994, weekly thereafter.

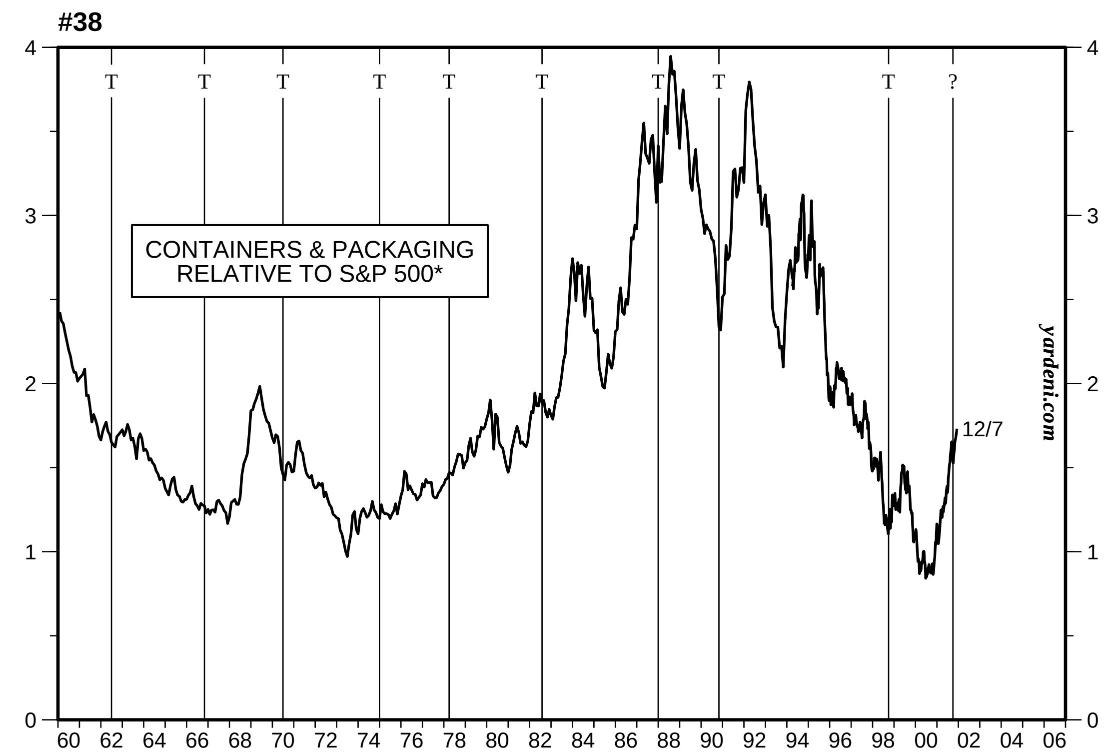

T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Basic Materials -




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Metals Mining industry is overdue for some relative gains.

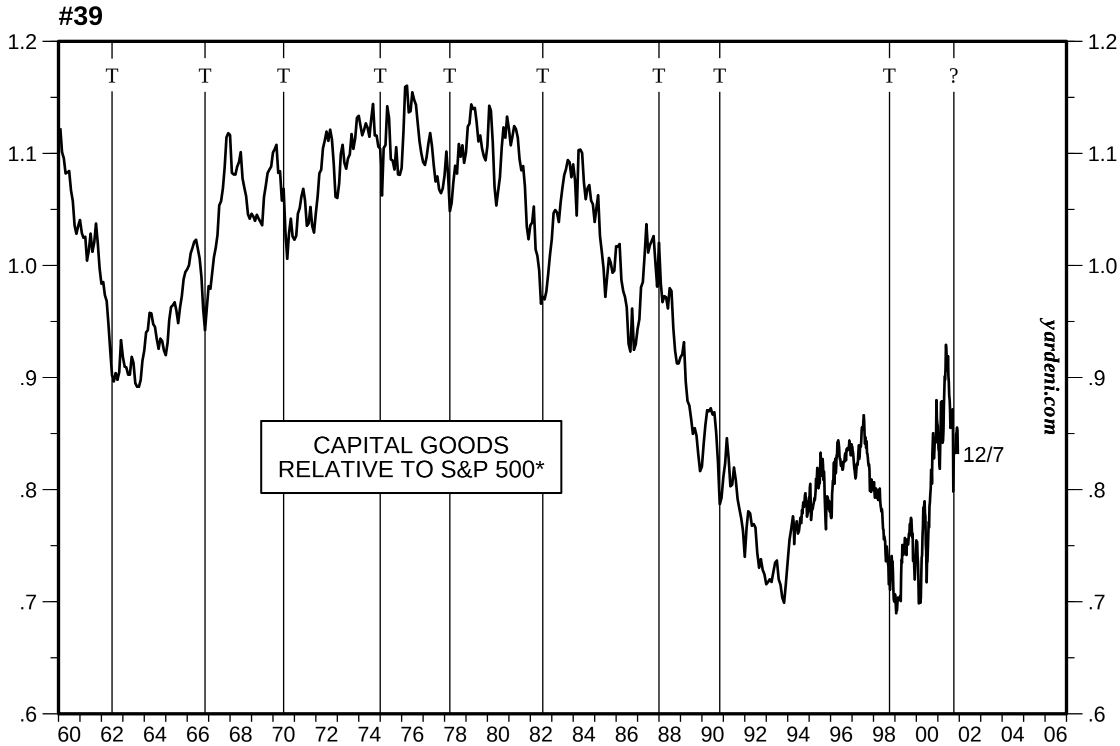



T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Containers and Packaging rebounding nicely after years of underperformance.

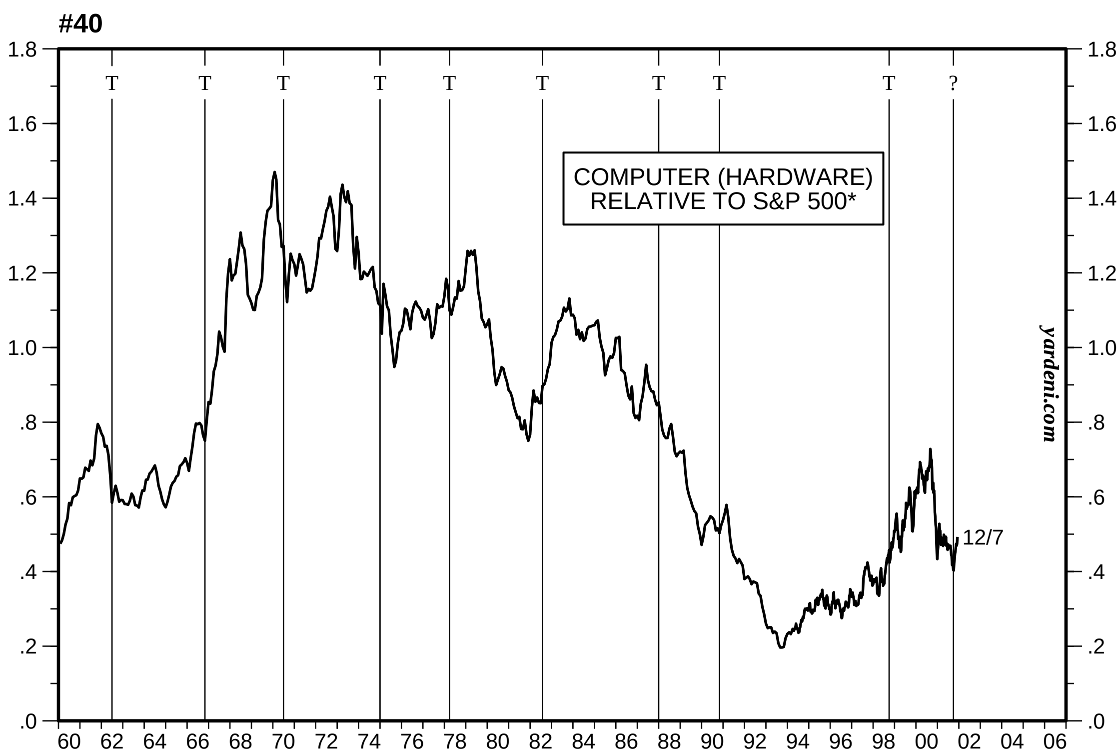
# - Capital Goods & Computers -

Capital Goods tends to trough relative to S&P 500 near market troughs.



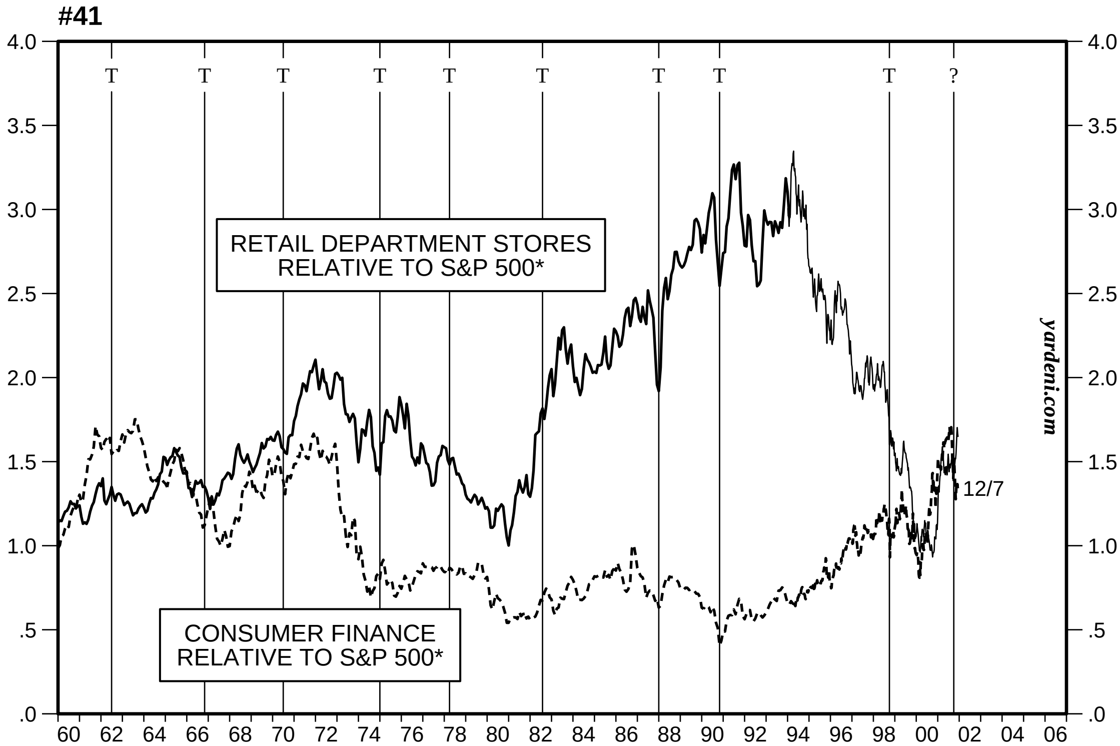

T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Computers tend to outperform around stock market troughs. Currently, they are underperforming.



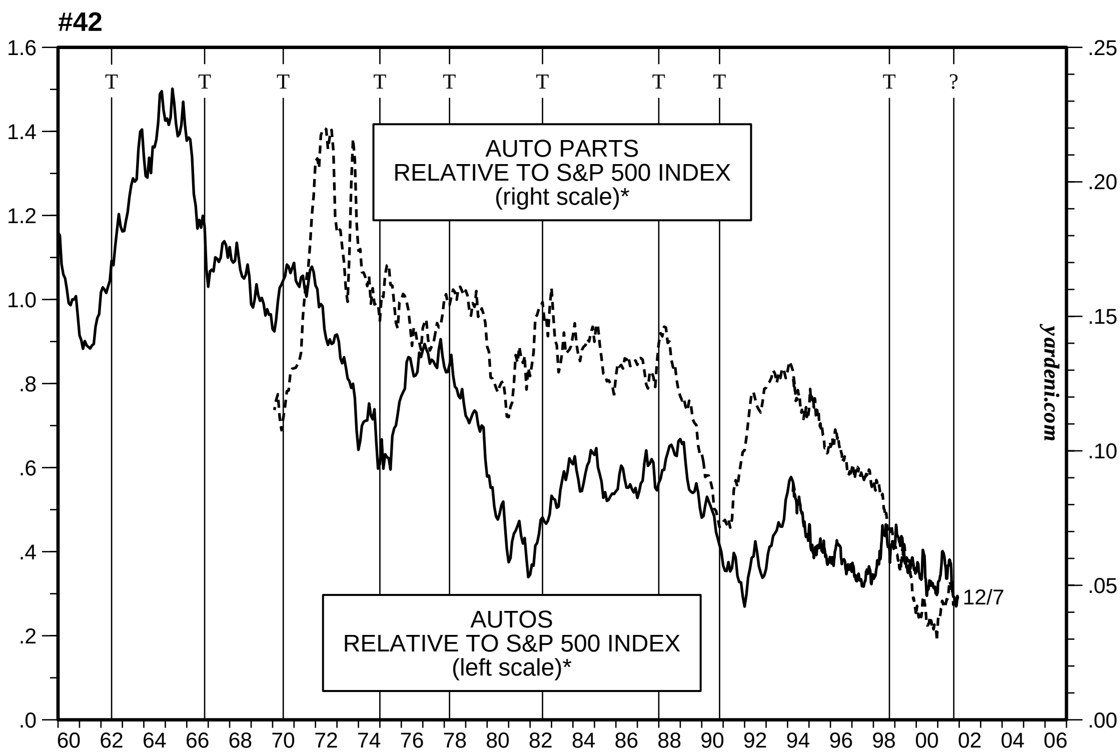

T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Consumer Cyclicals -




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Department Stores and Consumer Finance sometimes outperform S&P 500 during stock market rebounds from major troughs.




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

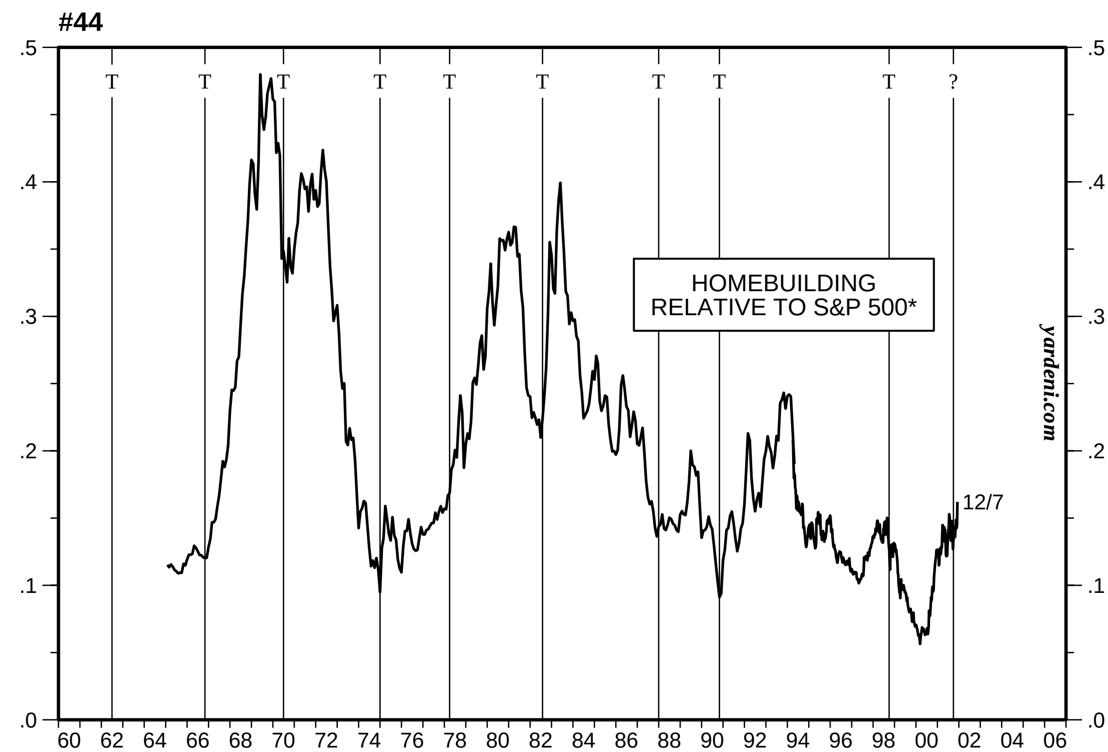
Autos often outperform the market just before and just after market troughs. This is not happening now. Auto Parts lag Autos on the way down, but often lead on the way up.

# - Consumer Cyclicals -

Entertainment was a very volatile outperformer during the 1970s and 1980s. It has been a volatile market performer since early 1990s.


T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

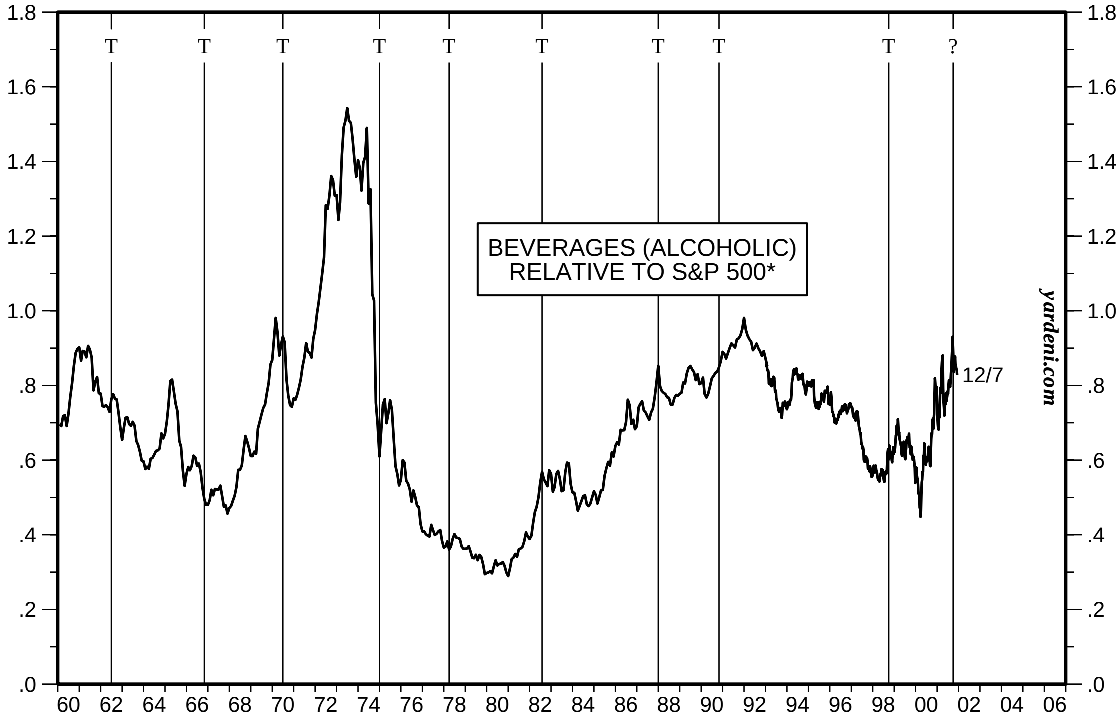
Not much correlation between Homebuilding stocks cycle and S&P 500 cycle.




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Consumer Staples -

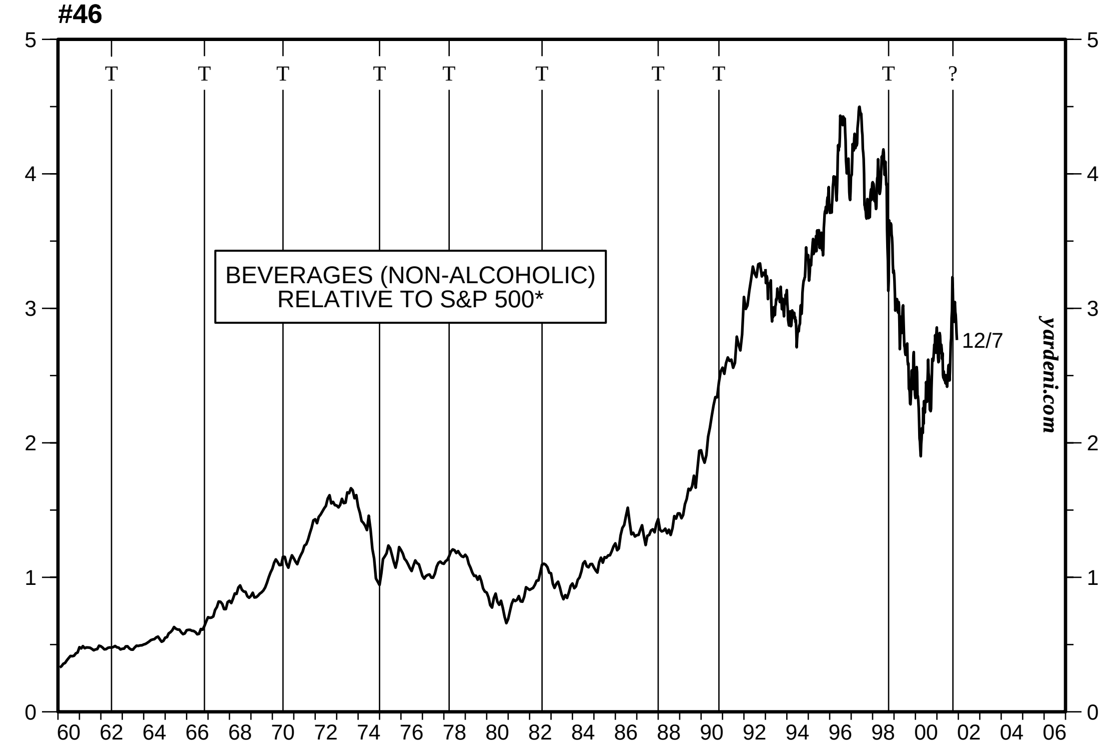
#45




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Beverages tend to outperform going into market troughs and underperform coming out.

#46

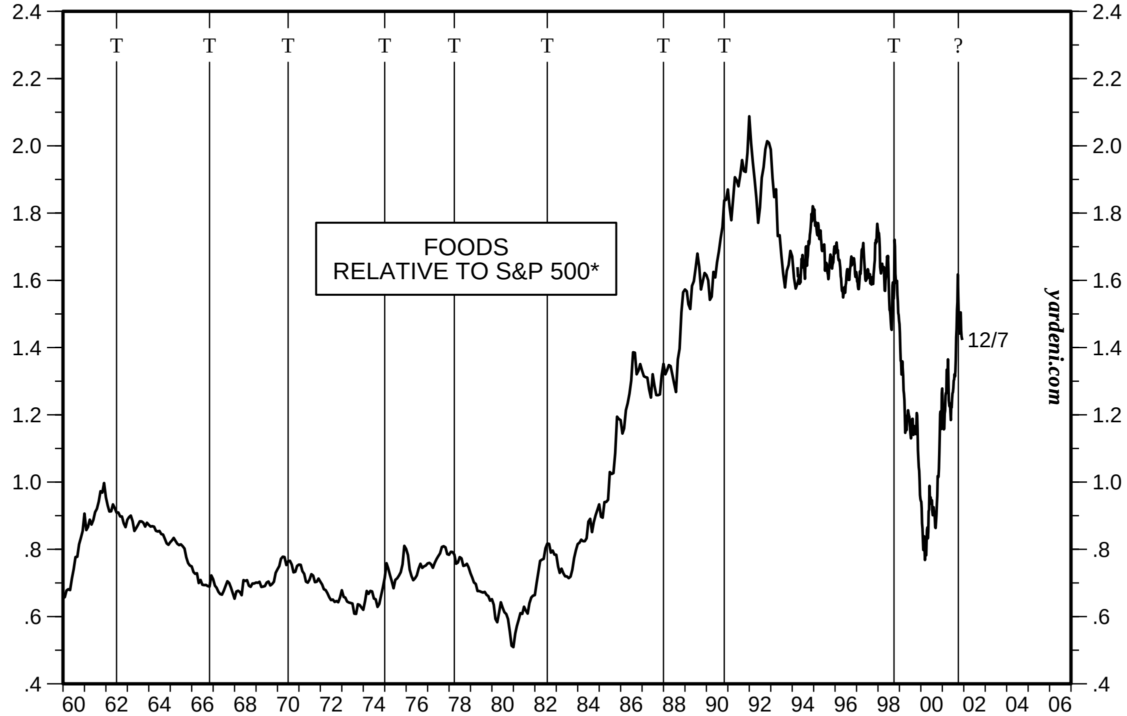



T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Consumer Staples -

Foods quickly regaining much of their relative strength that was lost in the late 1990s.

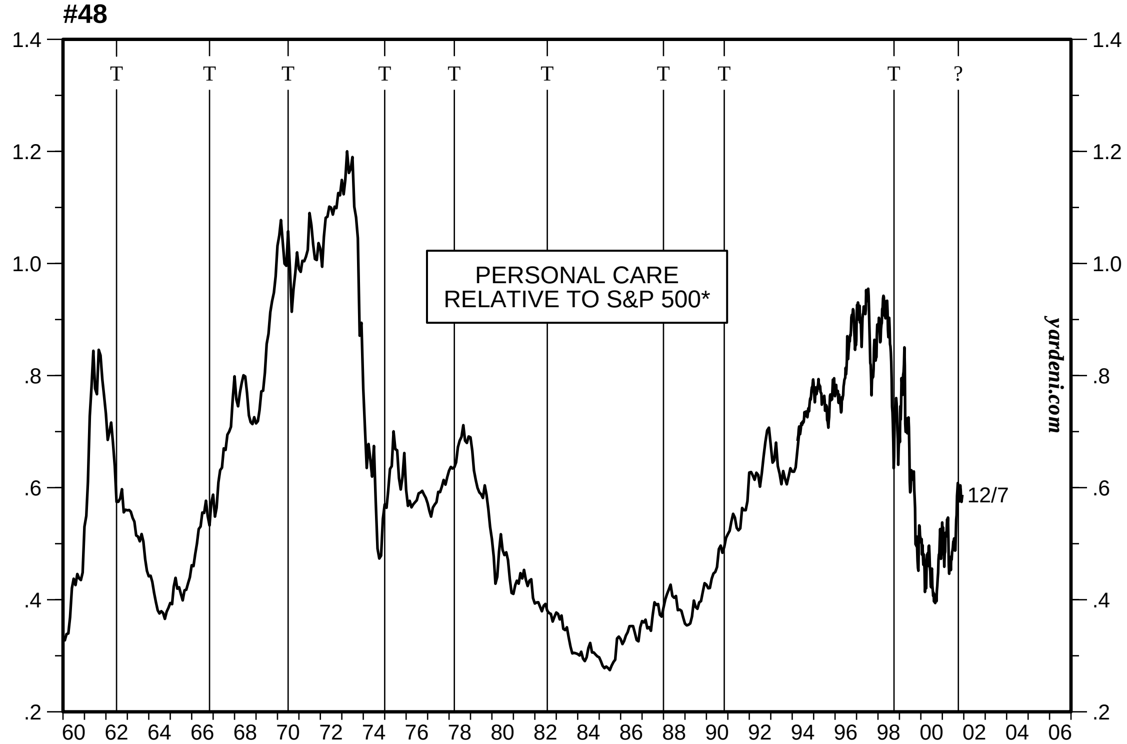
#47




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Personal Care tends to outperform going into stock market troughs and underperform coming out.

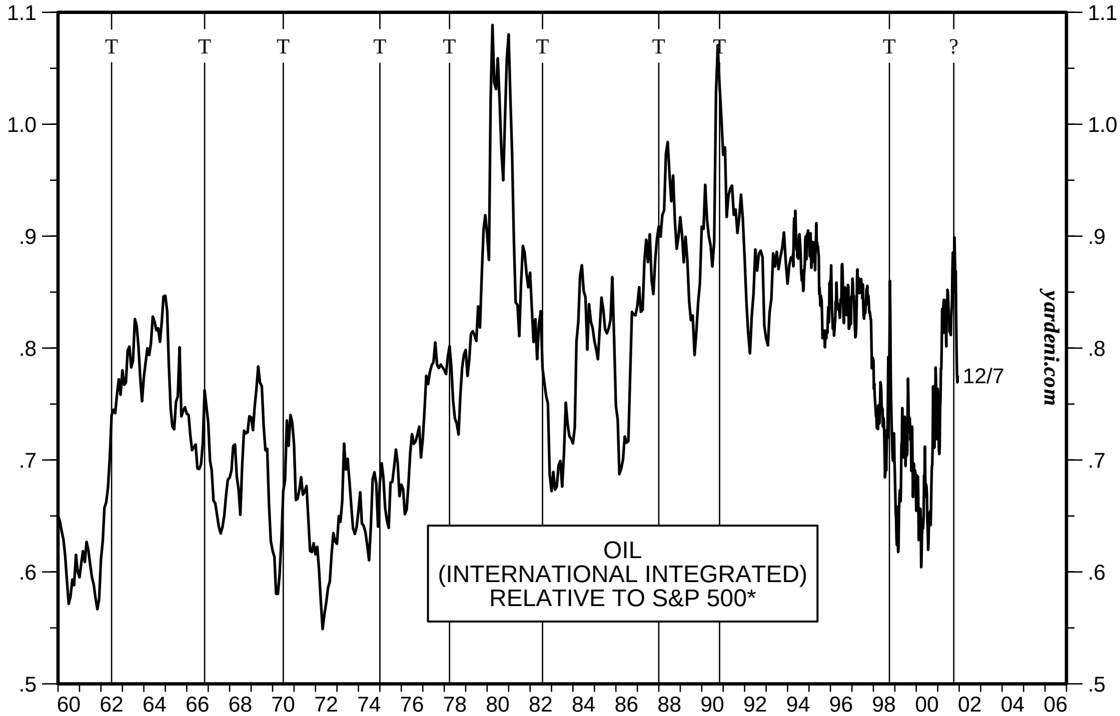
#48




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Energy -

#49




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

International Integrated Oil stocks tend to be volatile market performers. The volatility is driven by oil prices.

#50


T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Domestic Integrated Oil's relative performance is driven entirely by trend in oil prices.

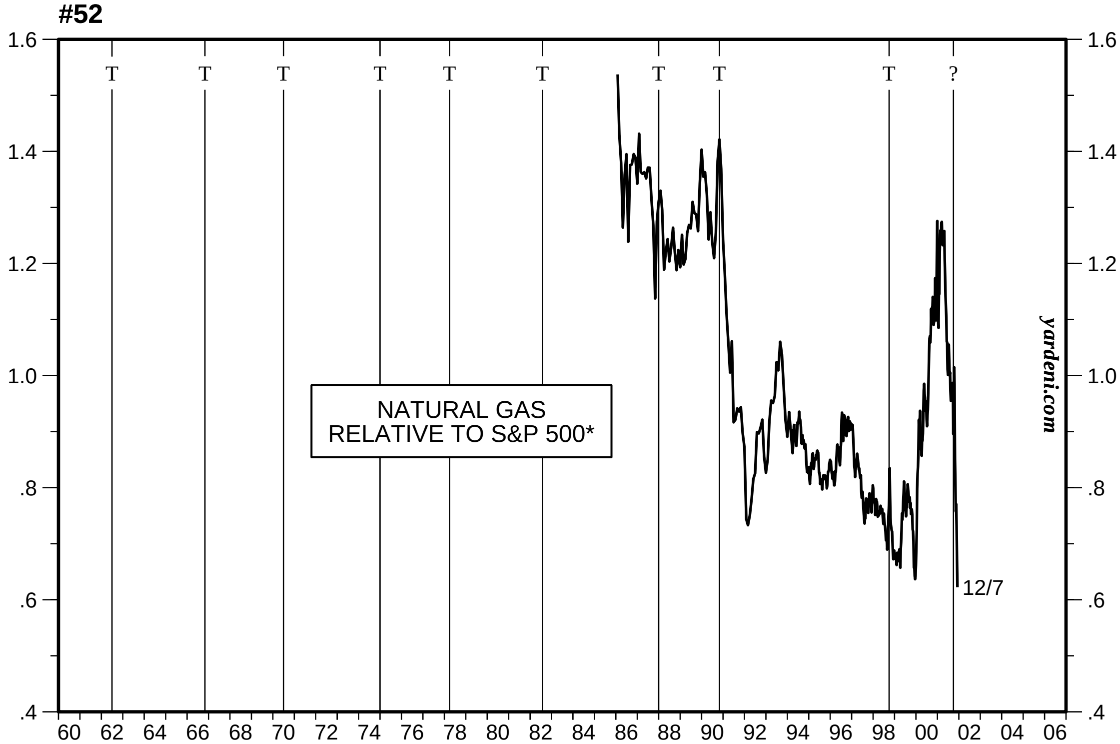
# - Energy -

#51


T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Not much of a relationship between these two industries and the stock market's cycle.

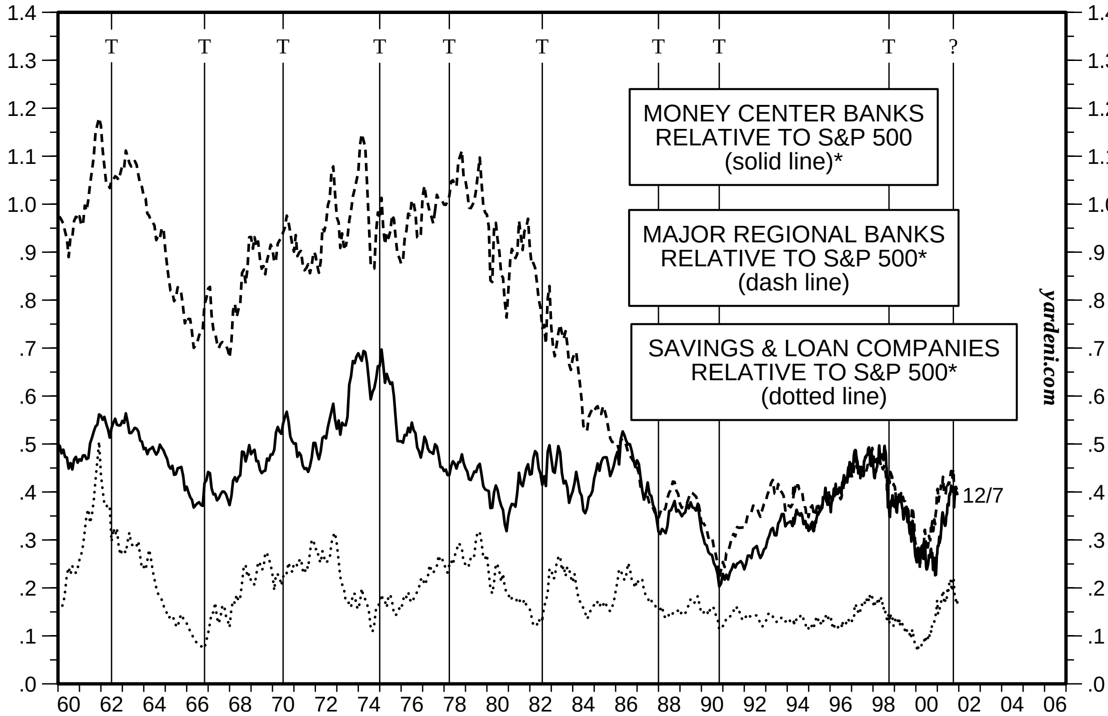
#52




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Financials -

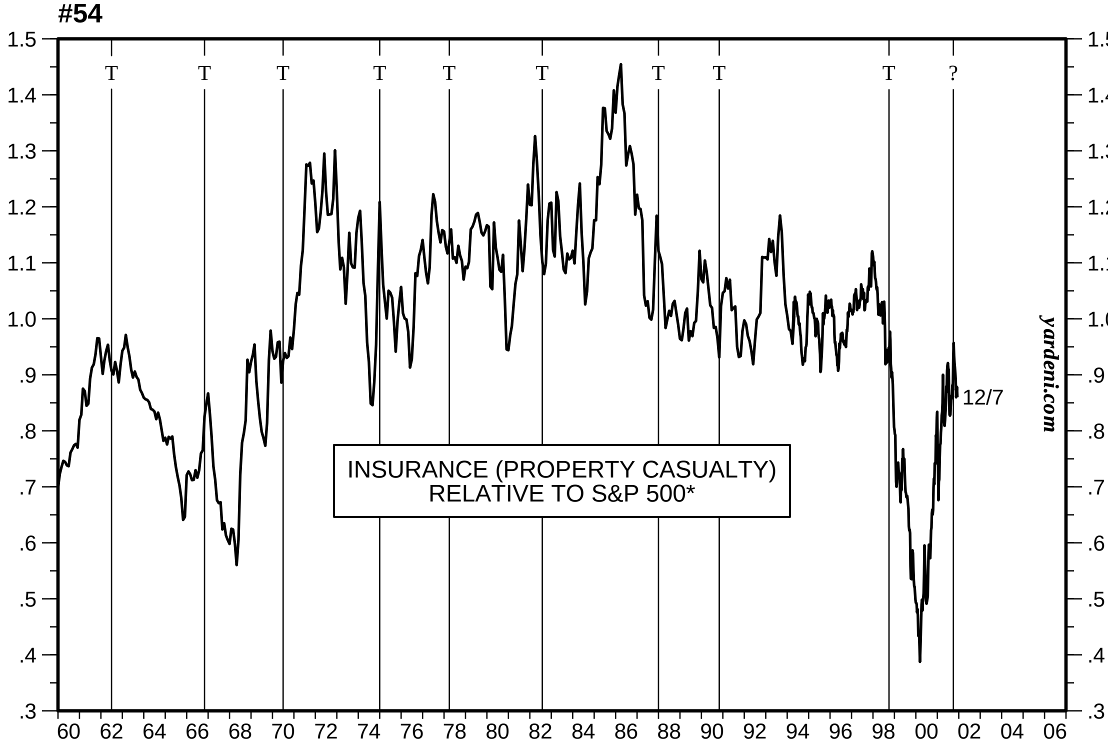
#53




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Banks and thrifts tend to outperform before the stock market bottoms though a predictable pattern is hard to find.

#54

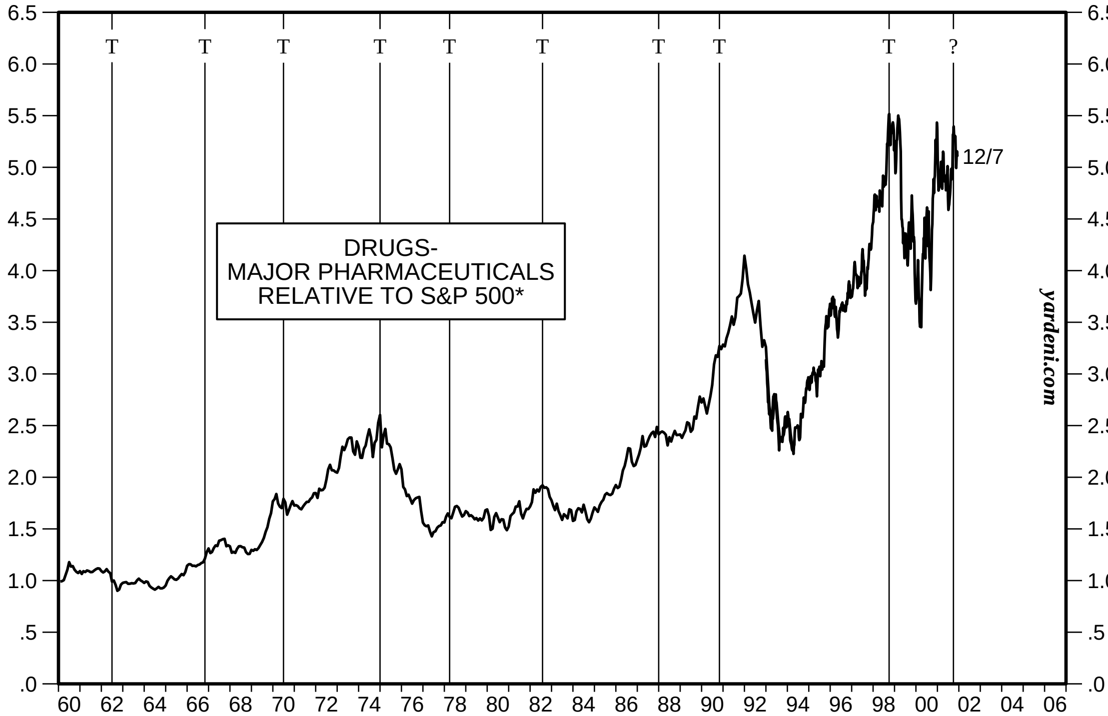



T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

PC Insurance companies tend to be market performers.

# - Health Care -

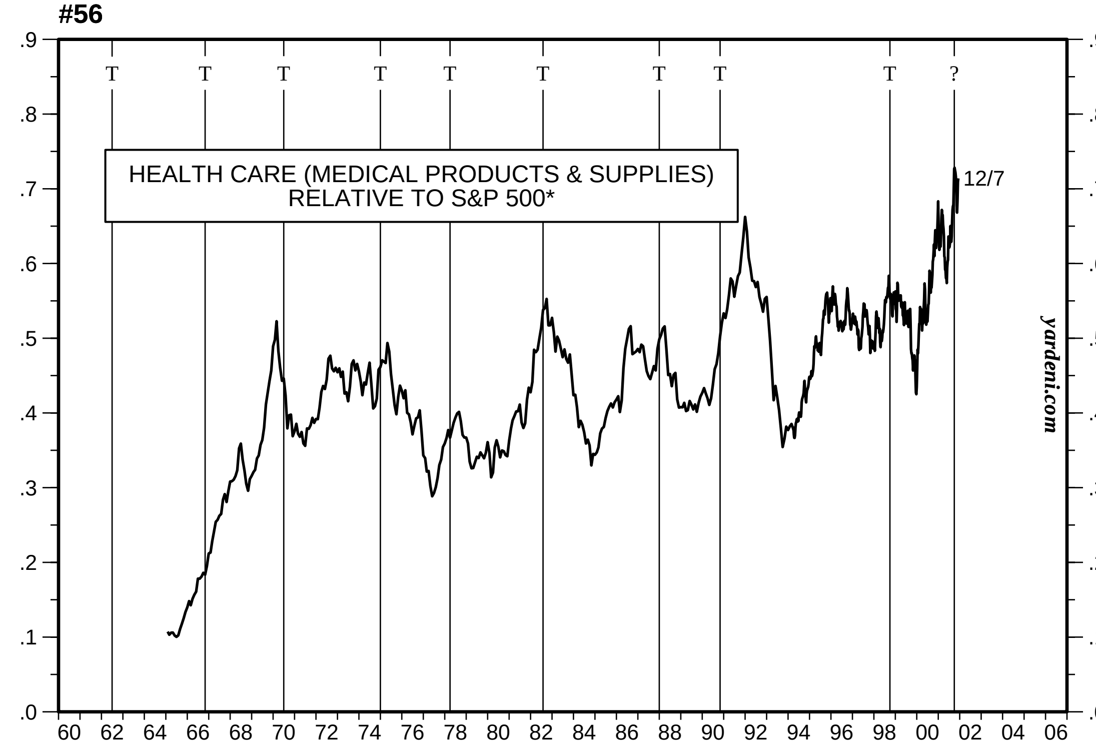
#55




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Health Care often underperforms after S&P 500 troughs.

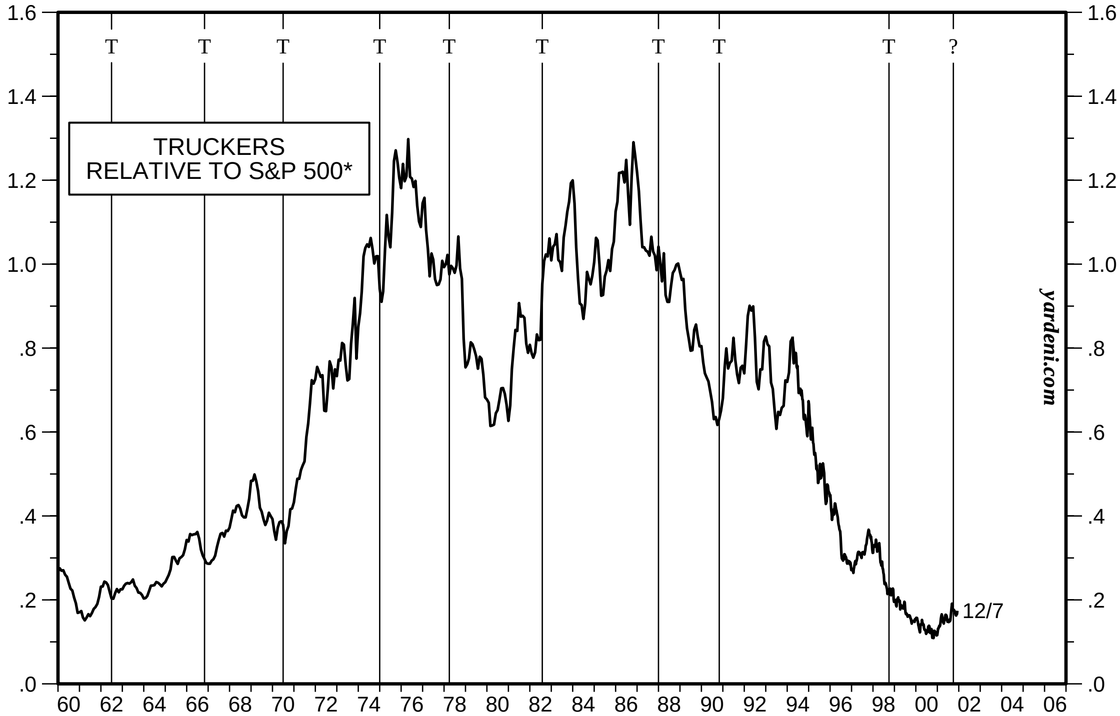
#56




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Transportation -

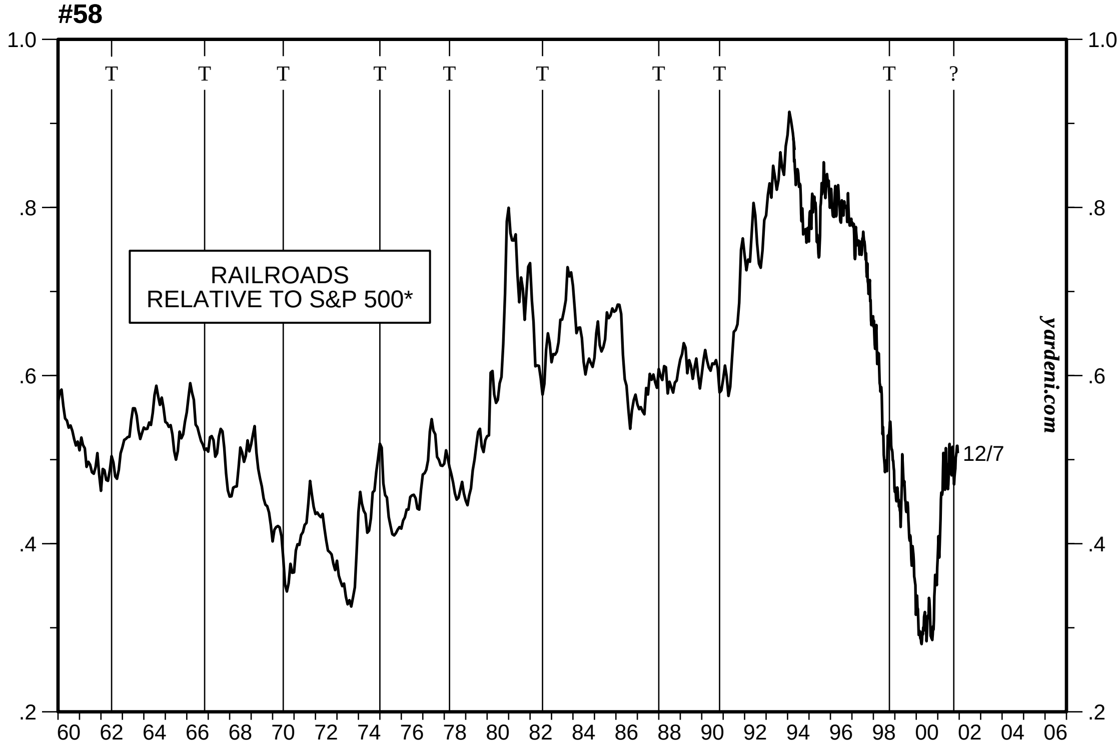
#57




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

Truckers and Railroads often outperform the market for several months after S&P 500 troughs.

#58

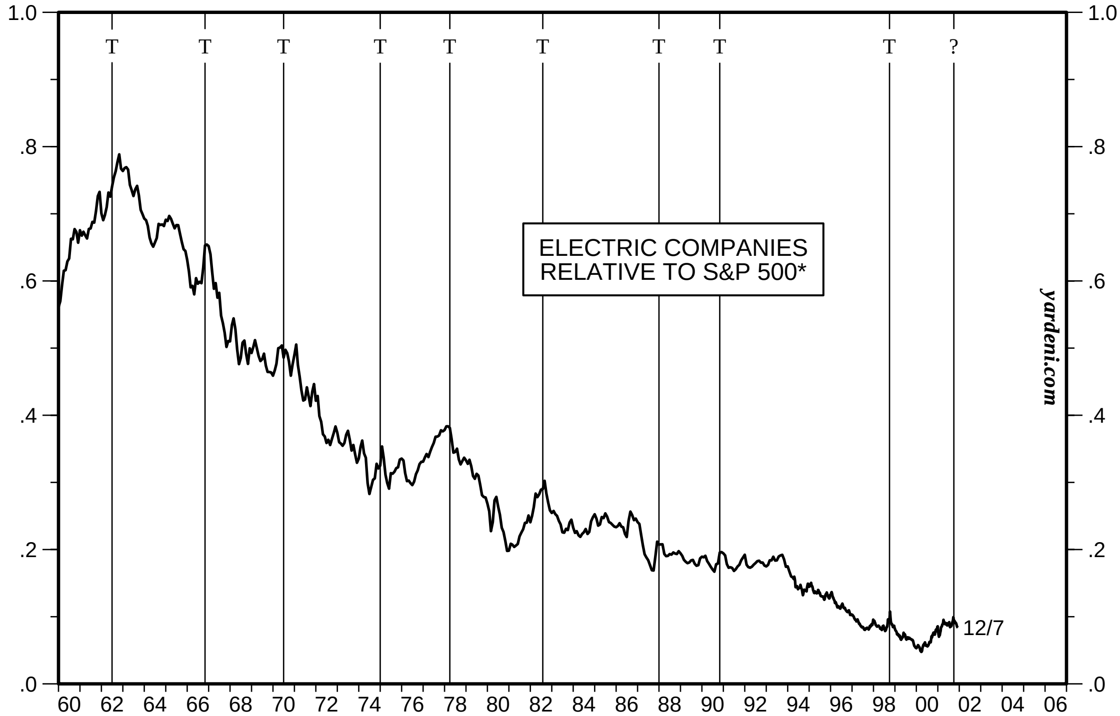



T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

# - Miscellaneous -

Electric Utilities have been long-term underperformers. They tend to outperform for short periods prior to S&P 500 troughs.

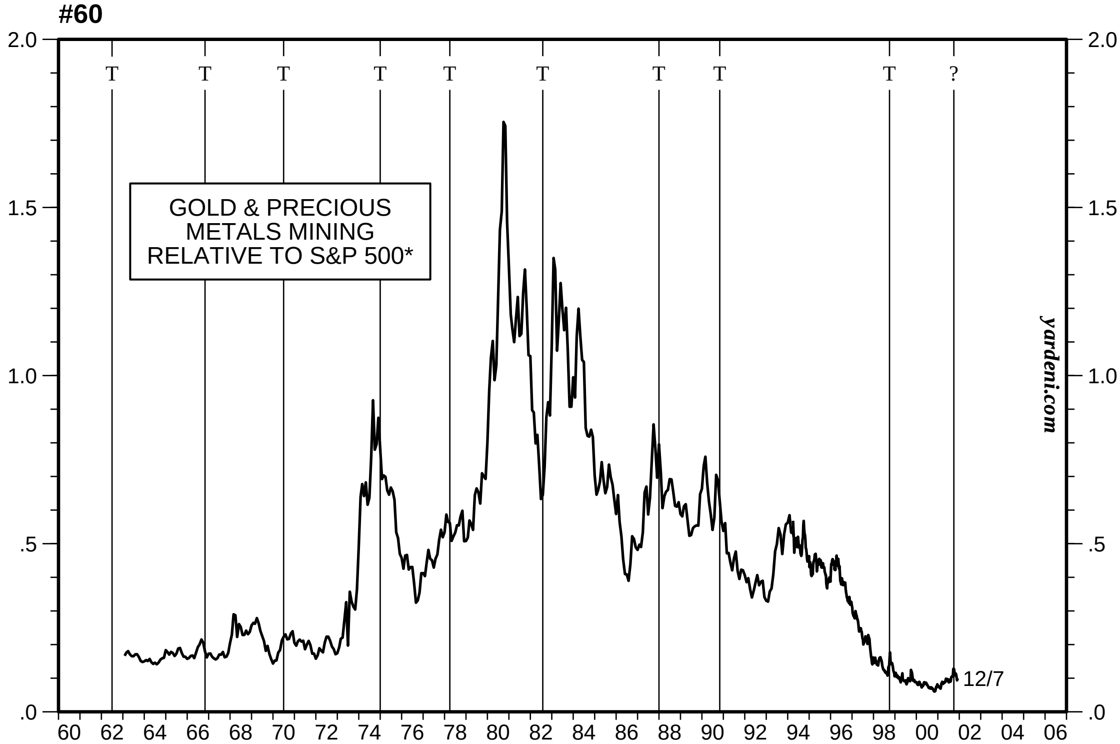
**#59**




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

On a relative basis, Gold has often spiked up near S&P 500 troughs.

**#60**




T = S&P 500 major cyclical trough
* Monthly through April 1994, weekly thereafter.

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