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The Major Term Reversal Indicator

A tool for identifying bear market bottoms

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Introduction

Trying to pick bear market bottoms is usually a risky proposition. In part, the danger arises because stocks tend to fall faster than they rise, so that even if you decide to increase your market exposure only a short time before the ultimate bottom, significant losses can accrue in that interval. This simple indicator has a good record of signaling the start of periods more profitable than average, with relative safety.

Constructing the major term reversal indicator

Calculate the indicator using weekly S&P 500 index closing data. Three calculations are required each week:

New 4-wk EMA = $0.6 \times$ most recent 4-wk EMA + $0.4 \times$ latest S&P 500 weekly close

New 8-wk EMA = $0.778 \times$ most recent 8-wk EMA + $0.222 \times$ latest S&P 500 weekly close

New value of indicator = (New 4-wk EMA)/(New 8-wk EMA) – 1. To express this decimal in percent, multiply by 100%.

(EMA = exponential moving average)

The key level is –2.5% (-0.025).

The entry signal occurs on the first Friday when the indicator rises from below –2.5% to above –2.5%.

There are no formal sell rules. Historically, 6-12 month periods following entry signals have been more profitable than average (see results below).

Example 10/5-10/12/01 (the 10/12/01 buy signal):

On 10/5/01, the S&P 500 closed at 1071.4. The 4-week exponential moving average was 1058.74 and the 8-week was 1087.04. Calculate the indicator as $(1058.74/1087.04)-1 = -0.026$ which is –2.6% -- below the critical level of –2.5%.

On 10/12/01, the S&P 500 closed at 1091.65. We will use this to update the 4-week and 8-week moving averages and the indicator:

New 4-week EMA = $0.6 \times 1058.74 + 0.4 \times 1091.65 = 1071.904$

New 8-week EMA = $0.778 \times 1087.04 + 0.222 \times 1091.65 = 1088.06$

New indicator = $1071.904/1088.06 - 1 = -0.0148 = -1.48\%$

Since the indicator on 10/5/01 was lower than –2.5% but on 10/12/01 was above –2.5%, the entry signal occurred on 10/12/01. No subsequent entry signal can occur until after the 4-8 week oscillator retreats back below –2.5%.

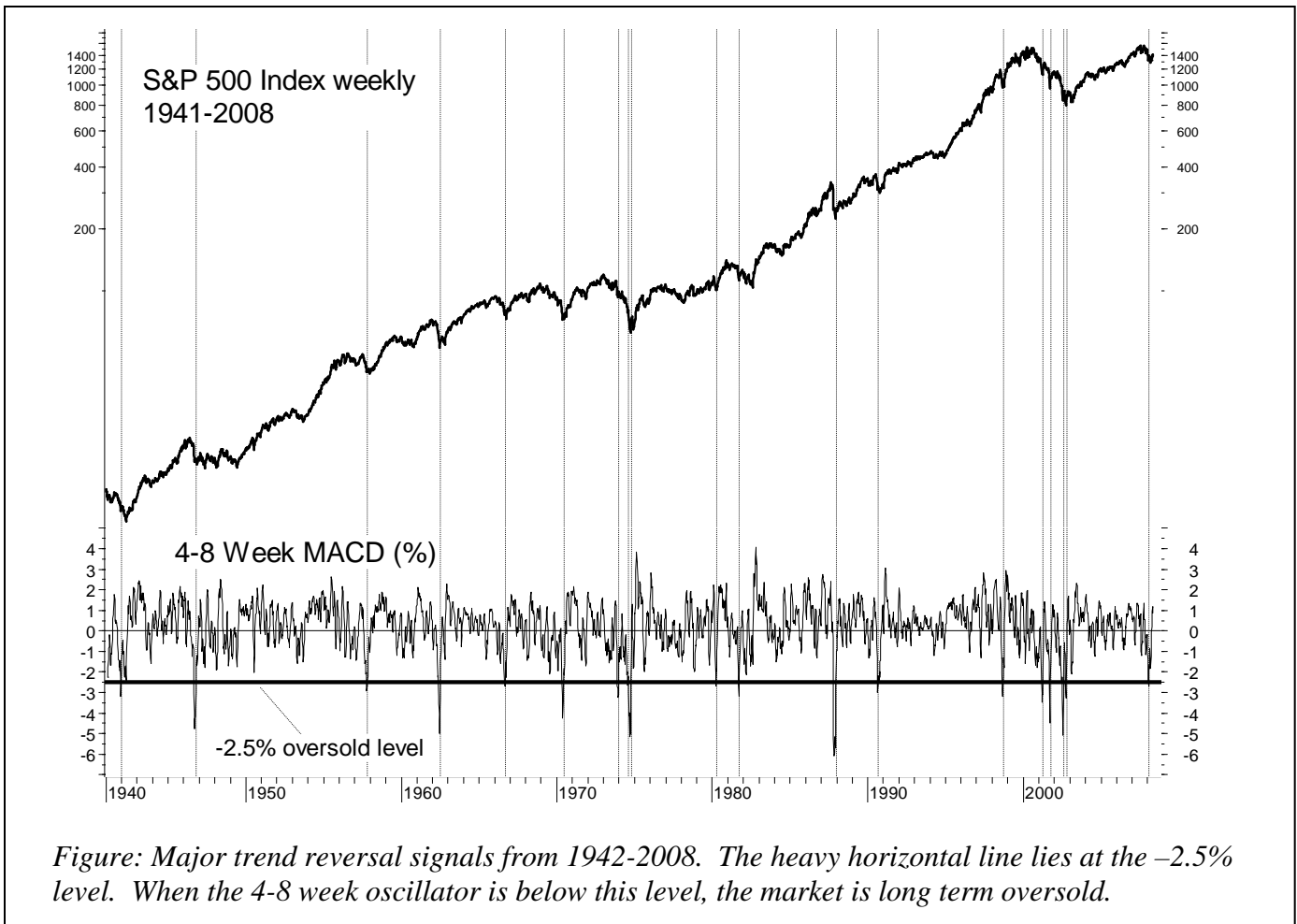


Figure: Major trend reversal signals from 1942-2008. The heavy horizontal line lies at the -2.5% level. When the 4-8 week oscillator is below this level, the market is long term oversold.

Results

The chart above shows graphically how most of the entries in the past sixty-seven years have been good long term buying opportunities.

On infrequent occasions (1973-1974 bear market, 2000-2002 bear market) entries did expose investors to severe drawdowns. On other occasions, bottom fishing even during what ultimately turned out to be good times to buy (such as January, 1942 or October, 1981) has required a good deal of patience.

The table below presents the individual signals. Overall, the entry dates marked the start of six and twelve month periods with above average returns. One-year periods following the entry date were more likely to be profitable than all one-year periods.

The most disastrous entry was 12/28/73, which turned out to be the midpoint of the worst bear market in a generation that experienced many bear markets. Some other entries were also swamped by severe extended market declines: 1946, 1981 and 2001.

Buy Date	S&P 500 level	13 wk change	6 month change	12 month change
1/3/42	8.97	-9.6%	-5.9%	9.7%
11/2/46	15.18	3.7%	-2.2%	2%
11/1/57	40.44	3.1%	8%	26.9%
7/13/62	57.83	-1.5%	12.1%	20.4%
9/16/66	79.99	2%	12.8%	20.4%
6/19/70	77.05	7.2%	17.1%	28.4%
12/29/73	97.54	-3.6%	-11.8%	-30.3%
8/9/74	80.86	-7.4%	-2.8%	6.4%
10/18/74	72.28	-1.8%	19.4%	22.9%
4/4/80	103.79	13.2%	24.6%	30.5%
10/2/81	119.36	2.7%	-3.6%	2.2%
12/24/87	252.02	2.6%	8.6%	10.3%
9/7/90	323.40	1.3%	15.9%	20.3%
9/19/98	1020.08	16.5%	27.4%	30.9%
4/12/01	1183.50	2.7%	-7.8%	-6.1%
10/12/01	1091.65	4.9%	1.8%	-22.9%
8/16/02	928.77	-2.0%	-10.1%	+6.7%
10/18/02	884.40	3.4%	+1.0%	+17.5%
2/1/2008	1395.4	+1.3%	-9.7	?
Average change after entry		2.0%	5.0%	10.9%
Profitable/total entries		13/19	11/19	15/18
All periods 1941-2008				
Average gain		2.0%	4.2%	8.8%
Percent profitable		64%	68%	72%

How should you view the latest buy signal?

The 2000-2003 bear market showed that in a severe bear market, stocks may require several corrections into long-term oversold territory before the beginning of a new bull market. So far, the 2007-2008 bear market appears to offer the same lesson, with the Feb. 2008 buy signal under water at its six-month mark. At its low point in October 2008 the S&P 500 Index had fallen more than 40% from of its 2007 high. Even if the 2007-2008 bear market breaks the S&P 500 drawdown record of 49% reached in 2002, stocks are still likely to prove to be near their ultimate lows overall. As a result, even if there is another retest of the October 2008 lows in the next several months (which I view as likely), the imminent buy signal should represent both an intermediate-term buying opportunity for traders looking to take profits within the first three months, as well as a good long-term entry point for multi-year investors.

The information presented here was gathered from sources believed reliable to the best of our knowledge, but we cannot guarantee the accuracy of or assume liability for the data or calculations presented. There is no guarantee that future results using this or any other indicator will resemble past results.