Trade the Oversold BOUNCE

In July 2008, the S&P 500 Index completed a 15 percent slide from a prior peak in May 2008. This drop preceded massive losses later in the year. During the summer slide, the Volatility Index (VIX), slowly churned higher but eventually fell far short of its prior two highs of 2008, although at the time, the market hit new lows for the year.

By N. Duru Ahanotu

This behavior contradicted the conventional understanding that VIX tends to increase as stock prices decrease and the stock market becomes more oversold. In other words, at a lower low for stocks, VIX should make a higher high relative to recent trading action.

This mild surprise motivated me to analyze trading behavior during oversold periods using an indicator for the percentage of stocks trading above their 40-day moving averages.

WHAT IT SHOWS

The percentage of stocks trading above a moving average represents a relative degree of oversold or overbought conditions. This indicator relies on the general market's tendency to follow moving averages of price.

When too many stocks get on one side of a moving average, trading in the current direction becomes over-extended (or overdone) for the relevant timeframe. A reversion toward the moving average becomes more and more likely the further price moves away from that moving average—similar to a rubber band snapping back to its resting state after stretching too far.

KEY LINE IN THE SAND

The 40-day moving average (DMA) is my favorite moving average threshold. For the purposes of this article, I call it "PSA40" (percentage of stocks above the 40-DMA); various data providers give this indicator other nicknames.

THE PERCENTAGE OF STOCKS TRADING ABOVE A MOVING AVERAGE REPRESENTS A RELATIVE DEGREE OF OVERSOLD OR OVERBOUGHT CONDITIONS.

PSA40 uses all the listings on the NYSE (as provided by Worden Telechart 2000).

The Volatility Index is calculated based on the implied volatility of S&P 500 Index options. So, although the results presented here appear robust, future work will investigate whether a PSA40 based just on the S&P 500 provides any meaningful improvement.

THE PARAMETERS

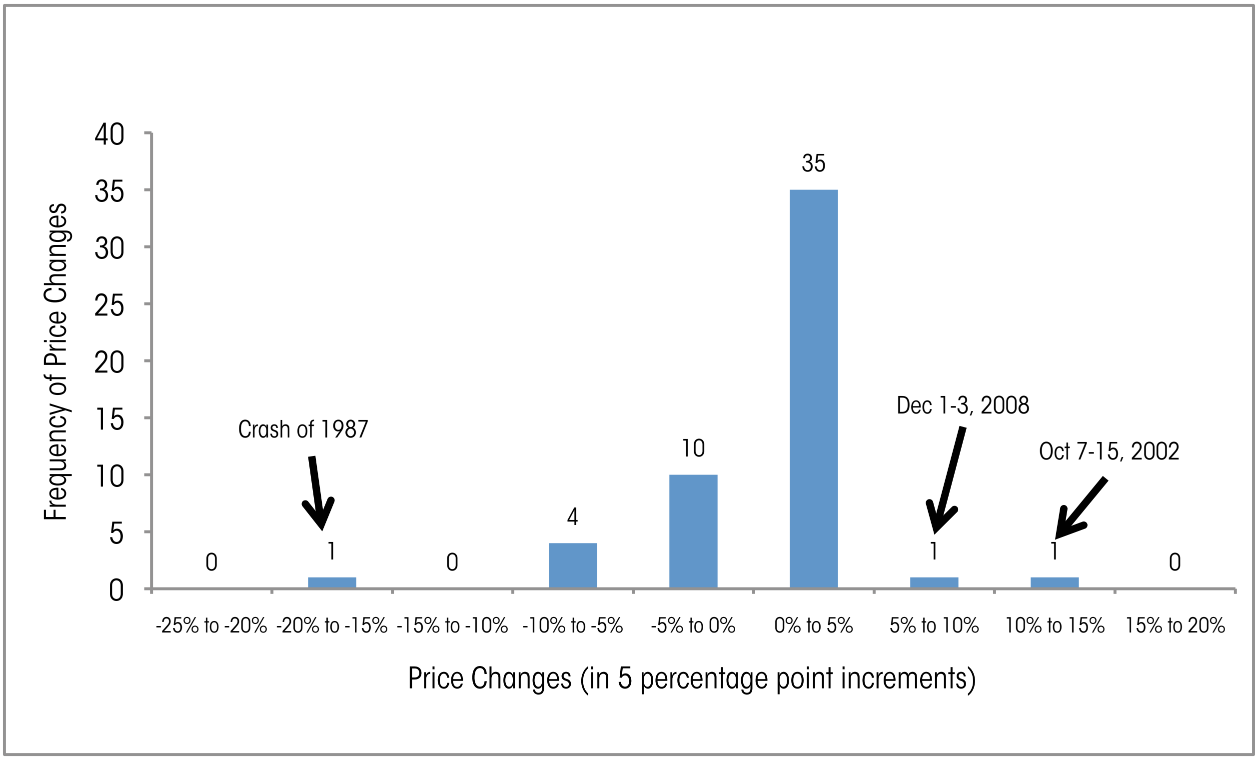
To define periods of oversold trading conditions, I adopted the convention that the stock market is oversold when PSA40 equals 20 percent or lower (PSA40 is overbought when it equals 70 percent or higher).

Since September 1986 (the extent of the available historical data), the stock market has experienced 52 of these oversold periods.

I next examined the behavior of VIX during oversold periods lasting longer than two days to confirm that intraday highs in VIX tend to coincide with near-term closing and intraday lows for the S&P 500.

The maximum VIX and the intraday low on the S&P 500 occurred on the

FIGURE 1
Percent Change in S&P 500 Index Closing Prices Between the First Oversold Day and the First Day Following the Oversold Period



Source: Worden Telechart 2000

same day 60 percent of the time and 70 percent of the time within one day (before or after).

The maximum VIX and the closing low on the S&P 500 occurred on the same day 43 percent of the time, but 83 percent of the time within one day (before or after).

ENTRY POINTS

Finally, I measured the maximum drawdowns for different buying triggers to complete the following entry strategies conditioned on a trader's risk tolerance:

1. **Lower risk tolerance (conservative trader):** buy once VIX increases 20 percent from the first oversold day or buy the first day after the oversold period ends, whichever comes first.

2. **Higher risk tolerance (aggressive trader):** buy on the first oversold day, recognizing that 56 percent of all oversold periods last only one or two days. This strategy eliminates dependence on VIX.

ADJUSTING RISK TOLERANCE

Traders with moderate risk tolerances can combine these strategies by allocating an appropriate amount of capital to each approach.

For the previous example from July 2008, the lower-risk strategy triggered a buy on July 11, two days before the intraday and closing low of the oversold period. The maximum drawdown was -3 percent, and the maximum gain was 7 percent before the next decline in stock prices.

The higher-risk strategy performed relatively poorly with an entry on June 26, a maximum -6.5 percent loss and a maximum 1.3 percent near-term gain.

Given this contrasting performance, it may make sense to target the lower-risk strategy during bear markets (market downtrends) and the higher-risk strategy during bull markets (market uptrends). However, the conservative strategy exchanges opportunity for slightly reduced downside risk.

GETTING AGGRESSIVE

The aggressive strategy produced a positive return 71 percent of the time by the close of the first day after the oversold period (67 percent for oversold periods lasting longer than a day).

Figure 1 displays the distribution of returns using price changes on the S&P 500. Note that the high of each range shown on the X-axis is inclusive of the range while the low is exclusive.

DIFFERENT RESULTS

The conservative strategy triggered a trade within the oversold period just 23 percent of the time, with 67 percent of these trades generating a positive return by the close of the first day after the oversold period.

Five of the six top drawdowns for the aggressive strategy occurred during bear markets, ranging from -13 percent to -24 percent, and the highest drawdown (-27 percent) occurred during the crash of 1987. The lower-risk strategy eliminated one of the large drawdowns and reduced the range of the remaining four to -10 percent to -21 percent. This behavior confirms that the

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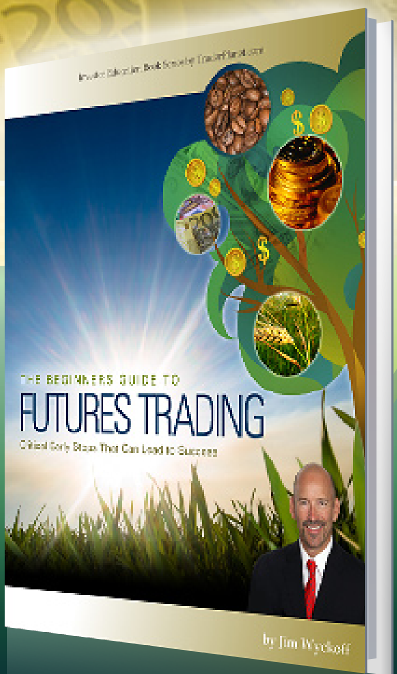

Jim Wyckoff, Author

“ One of the best ways to learn about the markets and trading is to have a mentor, an experienced person who knows the ropes thoroughly and is willing to pass along his or her knowledge to you personally. As a reporter for a wire service on every major exchange floor at one time or another, Jim Wyckoff had access to some of the best and brightest people in the business… ”

– Darrell Jobman,
Senior Analyst, TraderPlanet.com

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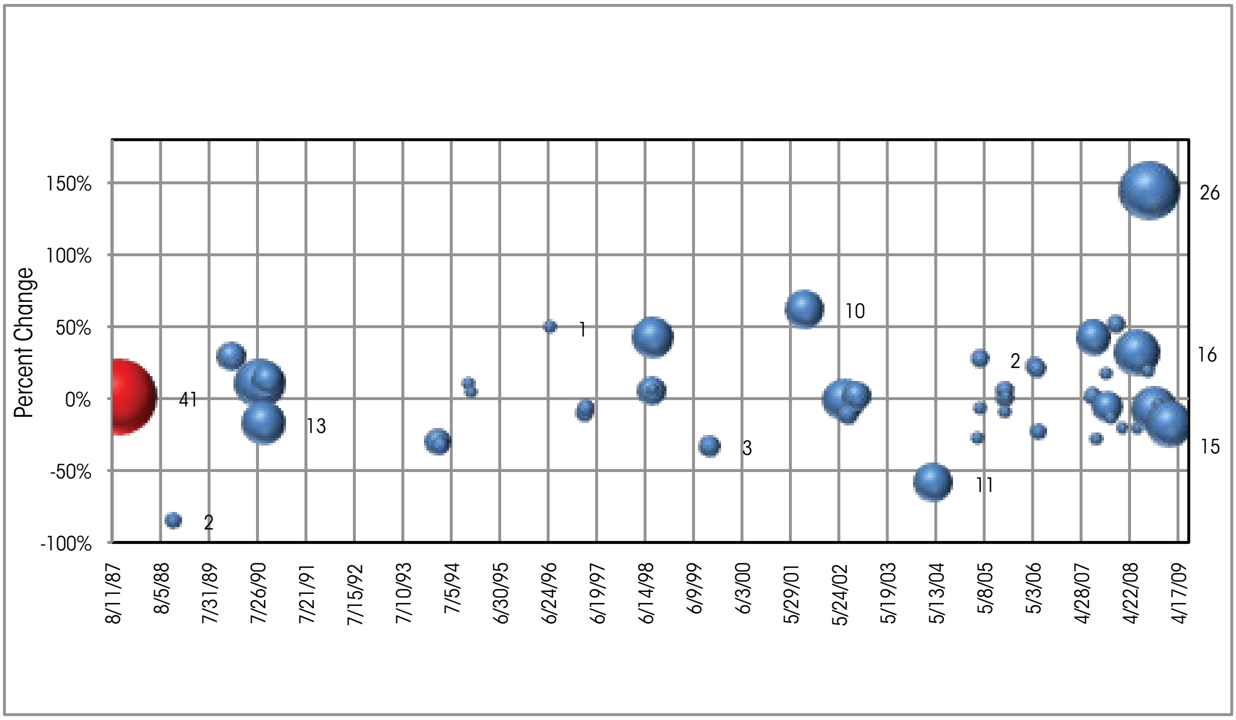
FIGURE 2
Percent Change in VIX Intraday High from the Previous Oversold Period



Bubble size represents duration of oversold period measured in days.

Source: Worden Telechart 2000

conservative strategy is most attractive during bear markets for reducing risk.

EXITS ARE KEY

The ultimate profitability of either strategy depends upon a trader's exit strategy given preferences for time horizon and risk tolerance conditioned by the existing trend in the market and/or fundamentals, such as price-to-earnings (P-E) ratios.

For example, a long-term trader may use these to accelerate regular investments during market corrections when P-Es are relatively low. A short-term trader may execute a trailing stop on an open position once the oversold period ends.

HISTORY SHOWS

For some context and perspective, Figure 2 summarizes the historical behavior of these oversold periods. The chart includes an overlay comparing the change in the maximum value of VIX between one oversold period and the previous one (measured on the Y-axis).

The size of the bubble measures the duration of the oversold period in days. Some bubbles include labels to clarify the scale. The red bubble signifies that the crash of 1987 initiates the data series and, thus, has no point of comparison; its VIX change is arbitrarily anchored to 0 percent.

TRADING GUIDELINES

Figure 2 reveals some important historical features that can further guide trading.

From one oversold period to the next, spikes in VIX generally exhibit no discernable pattern. What I found was that the peak in VIX is lower than the last spike 47 percent of the time. This confirms that waiting for VIX to jump relative to earlier oversold periods is an insufficient trading strategy.

Sixteen of the 52 (31 percent) oversold periods lasted only one day.

Twenty-nine (56 percent) of the oversold periods occurred in the past six years, with 14 happening since the S&P 500 Index peaked in October 2007. Perhaps the density of oversold periods starting in 2005 signaled the end of the bull market. The last bear market produced a much denser set of oversold periods than the previous bear market.

The crash of 1987 produced the longest oversold period, lasting 41 days. The climactic selloff in fall 2008 would have matched this record except the oversold period was interrupted Nov. 4, 2008, with PSA hitting 20.2 percent.

The average oversold period lasts six days. Eighty percent of all oversold periods end within nine days, and 90 percent end within 10 days.

The dramatic increase in the stock market since the March 2009 lows has not produced any PSA40 oversold periods! The closest occurrences were a 21 percent close Oct. 30 and a 22 percent close Feb. 8.

If this behavior persists, it may make sense to analyze "tiers" or degrees of oversold behavior or to use intraday data on PSA40.

TRADING SPOTS

The historical record summarizes the numerous trading opportunities provided by oversold periods as defined by PSA40 dropping to at least 20 percent.

Profits from oversold periods start either from entering the market long on the first oversold day (aggressive) and/or from waiting for VIX to increase at least 20 percent from the first oversold day or entering the market the first day after the oversold period ends (conservative). The choice depends on a trader's tolerance for downside risk, appetite for opportunities and the current health of the overall market.

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