A Novel Approach To Market Timing

Combining A/D Indicators And Volume Patterns

Here's a novel approach to market timing that can forecast mid-term runs on the S&P 500.

by Victor Kalitowski and Andrew von Stuermer

There are certain critical advance and decline levels that serve as excellent high-reward/low-risk entry points to go long the Standard & Poor's 500 for a mid-term run. We have found critical levels associated with two A/D ratios applied to the S&P 500. You can, however, use the indicators to trade any of the S&P 500 constituent stocks. We chose the S&P 500 mainly because many analysts and money managers consider it to be the best proxy for market sentiment. Our findings are based on an analysis of historical data dating back to June 1997.

About the A/D indicators

Advances and declines (AD) are well-known indicators used to gauge market strength or weakness, so armed with AD data, you can assess how strong a current trend really is. We use two specific ratios based on the advance/decline (A/D) concept:

- A/D issues
- A/D volume

The A/D issues ratio simply indicates whether a majority of stocks were traded at higher or lower prices relative to the close of the previous trading session. An A/D issues ratio with a large positive value indicates a strong market performance (positive market momentum), while a negative ratio represents a weak performance (negative market momentum).

Whereas the A/D issues ratio deals strictly with the number of issues that advance and decline, the A/D volume ratio goes one step further: It introduces the critical element of volume into the equation. Volume plays an essential part in A/D analysis because it is the best sentiment indicator. Volume also indicates the degree of market strength. Because it is the underlying cause of all price movement, volume data provides a true reflection of what is *really* happening in the market. After all, there can logically be no movement in a security if there is no change of volume.

We trade predominantly based on evolving volume patterns and look for significant surges (spikes) in volume. Such volume spikes signal that a significant number of shares have been transferred from one group of market participants to another. It is usually at such inflection points that the market tends to become overbought or oversold. When volume is applied to the A/D concept, it allows you to determine whether the bulk of trading activity was focused in declining or advancing issues. This provides a more refined picture of market health than is possible with a simple A/D issues ratio.

For example, say that on a particular day 400 stocks in the S&P 500 closed up and 100 issues closed down. Based on this A/D statistic alone, you could assume that market breadth was strongly bullish — after all, 80% of the index's stocks closed higher than they did the previous day.

However, say that upon closer inspection of the volume data you discovered that volume of advancing issues was 600 million shares, while that of declining ones amounted to only 400 million shares. From this additional data, you could decide that the bullish trend was not as strong as you first believed. Conversely, what if volume of advancing issues amounted to 800 million shares, while volume of declining issues was limited to 200 million? In such a case, it becomes clear that the bulk of volume activity was concentrated in advancing issues. You could argue that this particular trend was much healthier than the first.

We trade with both the A/D issues and the A/D volume ratios, as they supplement each other and make our market analysis more accurate. We will now outline how you may use these two ratios together to establish critical support levels for the S&P 500.

Approach

While the following examples are addressed primarily to mid-term traders who wish to play the long side, the basic principles can of course be adapted to short trades as well.

After testing more than 600 different combinations of very low A/D issues and A/D volume ratio readings (between 1998 and 2005), we derived the following values for the S&P 500:

- Critical A/D issues ratio = 0.12
- Critical A/D volume ratio = 0.14

Over the seven-year time span we studied, we found that once the S&P 500 reached or dropped below these critical levels, there was a strong likelihood the index would reverse to the upside within a few days. The S&P frequently rallied from these critically oversold conditions and initiated new mid-term uptrends. (We define a mid-term move as one that persists for more than a month and achieves a gain of at least 5%.)

We found that these critical ratios represent good cutoff levels. A tradeoff was established between missing the starting points of major new upturns (cutoff levels too low) and missing out on ideal points at which to initiate new positions. This is because the indicators simply confirm existing mid-term uptrends already in progress (cutoff levels too high).

Next, we wanted to determine the extent of uptrends (recovery rallies) that followed once the S&P 500 reached these critical A/D ratio levels. The information is summarized in Figure 1. The table qualifies the incidences since 1998, where the S&P 500 reached the critical A/D ratios levels defined here. The table also summarizes the extent of the ensuing recovery rallies. For instance, after reaching critical A/D ratios levels on March 22, 2004, the S&P 500 recovered with a rally of 5%.

SPECIFIC EXAMPLES

Since the middle of 1997, the S&P 500 has reached critical A/D ratio levels 34 times. Year by year, this can be broken down as you see in Figures 2–7.

- ***Five incidences of critically low A/D ratios during 1998:***

As you see in Figure 2, after reaching the critically low reading in April (point A), the index traded sideways in a tight range for nearly two months and then started a recovery rally.

In the autumn of 1998, three critically low readings occurred within a short time span (points B, C, and D). This sparked a strong recovery rally of 38%.

- ***One incidence of critically low A/D ratios during 1999, and one in 2000:***

Figure 3 shows that 1999 was the last year of the ominous Internet bubble. This bubble burst in 2000 and was followed by a three-year downtrend. During all of 1999 and 2000, we found only two incidences of critically low A/D ratios — a stark reflection of the extremely positive market sentiment that prevailed over those two years. Interesting also is that during the last four months of 2000, the S&P 500 lost almost 15%, yet there was no indication of an extremely negative market sentiment. This reveals that a majority

Date	Critical A/D Issues Ratio	Critical A/D Volume Ratio	Magnitude of Uptrend (Recovery Rally)	Chart & Point Reference
1998				
01/09/1998	0.03	0.02	22.1%	
04/27/1998	0.08	0.06	9.5%	Chart #1 - A
08/04/1998	0.07	0.07	3.1%	Chart #1 - B
08/27/1998	0.06	0.04	0.9%	Chart #1 - C
08/31/1998	0.06	0.03	38.0%	Chart #1 - D
1999				
03/23/1999	0.08	0.06	23.0%	Chart #2 - A
2000				
04/14/2000	0.02	0.01	12.8%	Chart #2 - B
2001				
03/12/2001	0.07	0.05	1.6%	Chart #3 - A
04/03/2001	0.09	0.09	19.1%	Chart #3 - B
06/14/2001	0.11	0.12	1.7%	Chart #3 - C
09/17/2001	0.12	0.14	13.2%	Chart #3 - D
2002				
01/29/2002	0.09	0.06	6.6%	Chart #4 - A
06/03/2002	0.05	0.03	0.9%	Chart #4 - B
07/02/2002	0.08	0.10	4.8%	Chart #4 - C
07/19/2002	0.07	0.13	7.7%	Chart #4 - D
08/05/2002	0.11	0.11	9.6%	Chart #4 - E
08/13/2002	0.11	0.10	9.2%	Chart #4 - F
09/03/2002	0.04	0.04	5.3%	Chart #4 - G
09/12/2002	0.10	0.12	1.8%	Chart #4 - H
09/19/2002	0.09	0.09	13.2%	Chart #4 - I
12/27/2002	0.06	0.08	6.8%	Chart #4 - J
2003				
01/24/2003	0.04	0.09	0.8%	Chart #4 - K
03/04/2003	0.10	0.12	1.0%	Chart #4 - L
03/10/2003	0.03	0.06	10.9%	Chart #4 - M
03/24/2003	0.02	0.02	9.8%	Chart #4 - N
05/19/2003	0.05	0.06	10.3%	Chart #5 - A
06/23/2003	0.10	0.10	3.4%	Chart #5 - B
08/05/2003	0.07	0.05	7.7%	Chart #5 - C
09/22/2003	0.10	0.13	13.7%	Chart #5 - D
2004				
03/22/2004	0.10	0.11	5.0%	Chart #6 - A
04/13/2004	0.07	0.11	1.5%	Chart #6 - B
05/17/2004	0.11	0.08	5.7%	Chart #6 - C
08/05/2004	0.05	0.06	10.8%	Chart #6 - D
12/07/2004	0.11	0.11	3.5%	Chart #6 - E

FIGURE 1: HOW STRONG WILL THE TREND BE? Here you see the magnitude of uptrends (recovery rallies) following critical A/D issues and A/D volume ratios on the S&P 500 from January 1998 to December 2004.

Not surprisingly, success in trading the S&P 500 based on the index hitting critical A/D ratio levels is not 100% guaranteed.

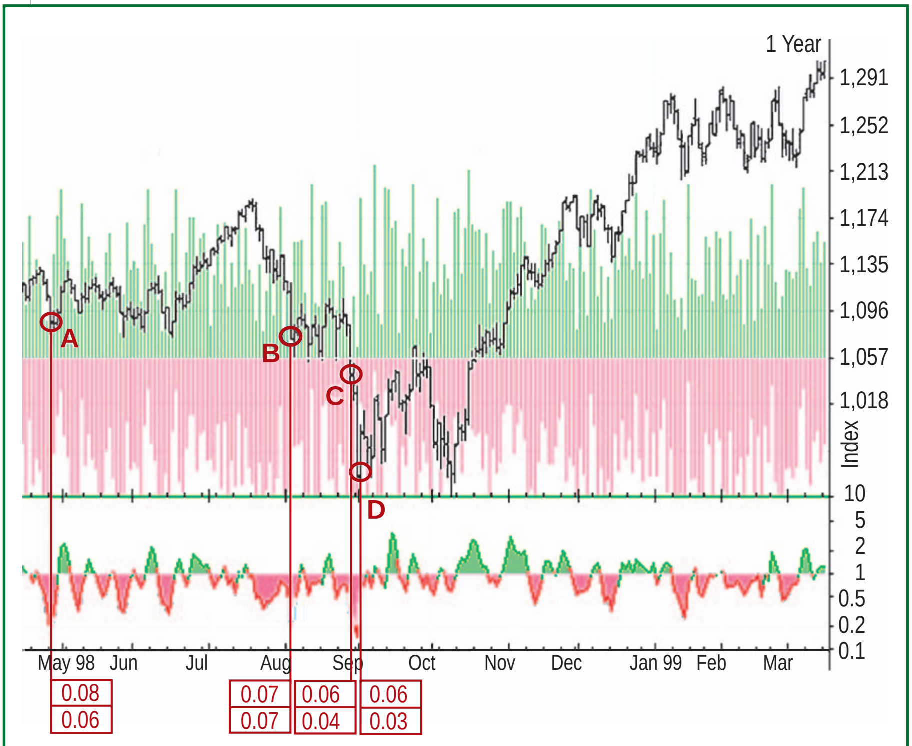

FIGURE 2: LOWEST CRITICAL A/D VOLUME AND A/D ISSUES RATIOS. During 1998, the S&P 500 saw five incidences of critically low A/D ratios. These low levels sparked a strong recovery rally of 38%. In the bottom pane, A/D issues ratios are listed at the top and A/D volume ratios at the bottom.

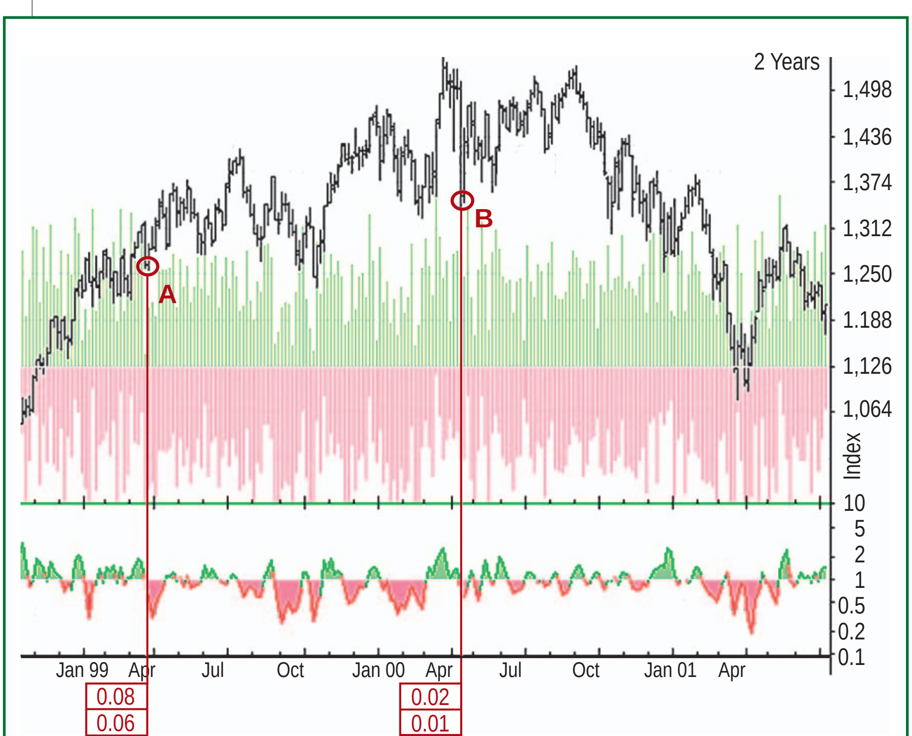

FIGURE 3: CRITICALLY LOW A/D VOLUME AND A/D ISSUES RATIOS (1999–2000). Leading up to the Internet bubble in 2000 and several months after that, there were only a few times when the A/D ratios reached critically low levels. This goes to show that sentiment was still bullish. What this should have told you is that the market was heavily overbought and the uptrend was likely to reverse.

Applying a stop-loss policy to this trading approach can make this a profitable strategy for mid-term traders.

of investors/traders were still overly bullish — most likely they held on to the belief that this was just a pullback and that the market would surely come back and move higher.

The first panic selling among traders took place only months later (in March 2001), by which time the index had shed 30%. Such low number of incidences over a lengthy period of time is an excellent confirmation that the market was extremely heavily overbought and about to reverse its long-term (three-year) uptrend to a downtrend.

- ***Four incidences of critically low A/D ratios during 2001:***

Following the Internet bubble, the first real panic among traders came only after a 30% decline in the S&P 500. Points A and B in Figure 4 mark two dates with critically low A/D ratios (that is, March 12 and April 3, 2001). Following point B, the index regained more than half (19%) of what it had lost during the previous downtrend (of 30%).

The next incidence of critically low A/D ratios occurred on June 14, 2001 (point C). Despite the low readings, the market hardly bounced and the index then proceeded to push significantly lower. In contrast, the critically low readings on September 19, 2001 (point D), soon led to a speedy index recovery of more than 13%.

- ***10 incidences of critically low A/D ratios in 2002, and eight in 2003:***

On January 24, 2002 (point A in Figure 5), the market ignored the fact that it had reached critically low A/D ratio readings. Apart from a small bounce of 6%, no significant recovery took place. While the critically low readings on June 6 (point B) and July 2 (point C) also did not lead to a full-blown mid-term recovery, they presaged a change from the prevailing long-term downtrend to a new uptrend. From the beginning of June up to the middle of August, we noted eight occurrences of extremely negative market breadth (points B–I) — a potential harbinger of an impending end to the long-term downtrend.

Following the 13% recovery in October–December 2002, we had a similar situation. In the short time from the end of December 2002 to the end of March 2003 (points J–N in Figure 5), A/D issues and A/D volume ratios hit critically low levels five times. Such a large number of incidences over a short period of time provides an excellent confirmation that the market was heavily oversold and about to reverse its long-term (three-year) downtrend to an uptrend.

The next four occurrences (points A–D in Figure 6) of critically low sentiment readings reveal that even a small corrective down-move in the index can generate low sentiment readings. This tells us that a majority of traders did not believe in the recovery — they were under the impression the market would quickly revert to a downtrend again.

- ***Five times in 2004***

The S&P 500 chopped around in a sideways trading pattern for most of the year, as illustrated in Figure 7. Each time critically low A/D ratios appeared, the index generated a mid-term run higher. The only exception was point B (April 14), where the index recovered by only 1.5% and then declined to new lows.

DISCUSSION OF RESULTS

Why does the S&P 500 have a tendency to reverse former downtrends after reaching critically low A/D issues and A/D volume ratios?

Very low A/D ratios are indicative of a highly negative market sentiment. An extremely low A/D issues ratio for the S&P 500, for instance a value of 0.10, reveals that the bears are completely dominating the market. In order to reach such a low A/D issues

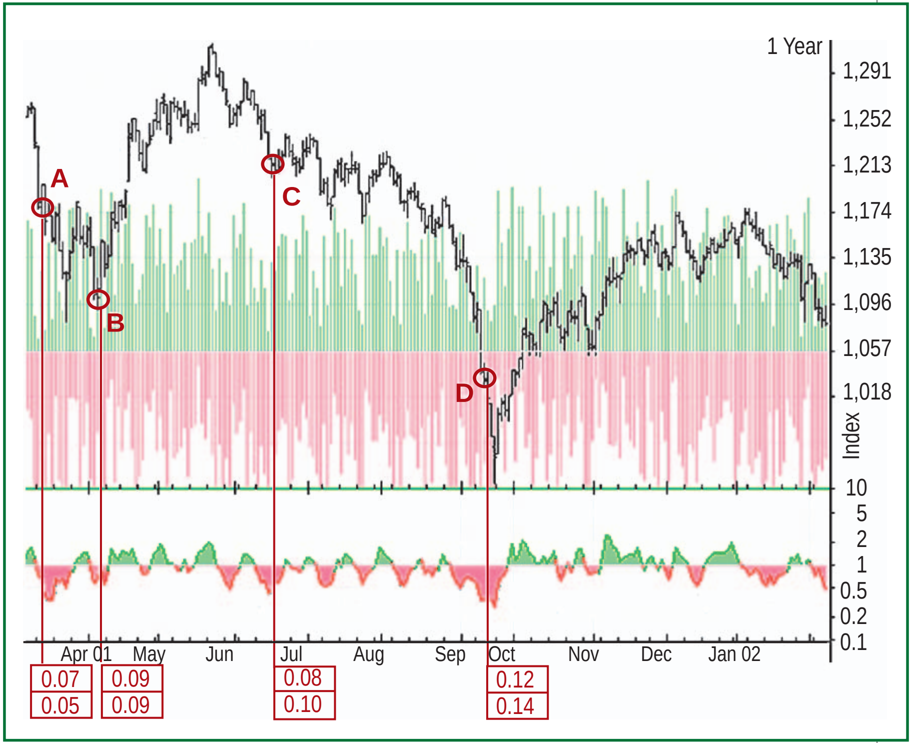

FIGURE 4: LOWEST CRITICAL A/D VOLUME AND A/D ISSUES RATIOS REACHED IN 2001. Following the bubble burst, the A/D ratios hit critically low levels but the market hardly bounced. In fact, it moved lower. It was only after the low reading in September 2001 that the market recovered more than 13%.

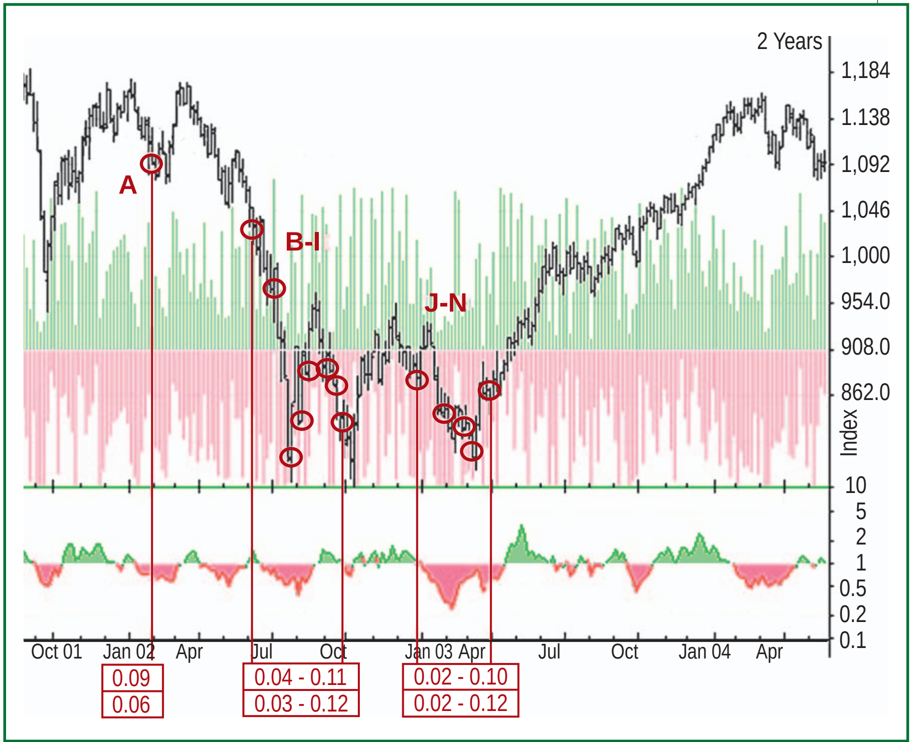

FIGURE 5: LOWEST CRITICAL A/D VOLUME AND A/D ISSUES RATIOS REACHED IN 2002–03. From June 2002 to mid-August 2002, the A/D ratios reached critically low levels eight times. This suggested that the long-term downtrend could be over. The S&P 500 did recover 13% from October to December 2002, but shortly after that, the A/D ratios hit low levels again. This further confirmed that the market was heavily oversold.

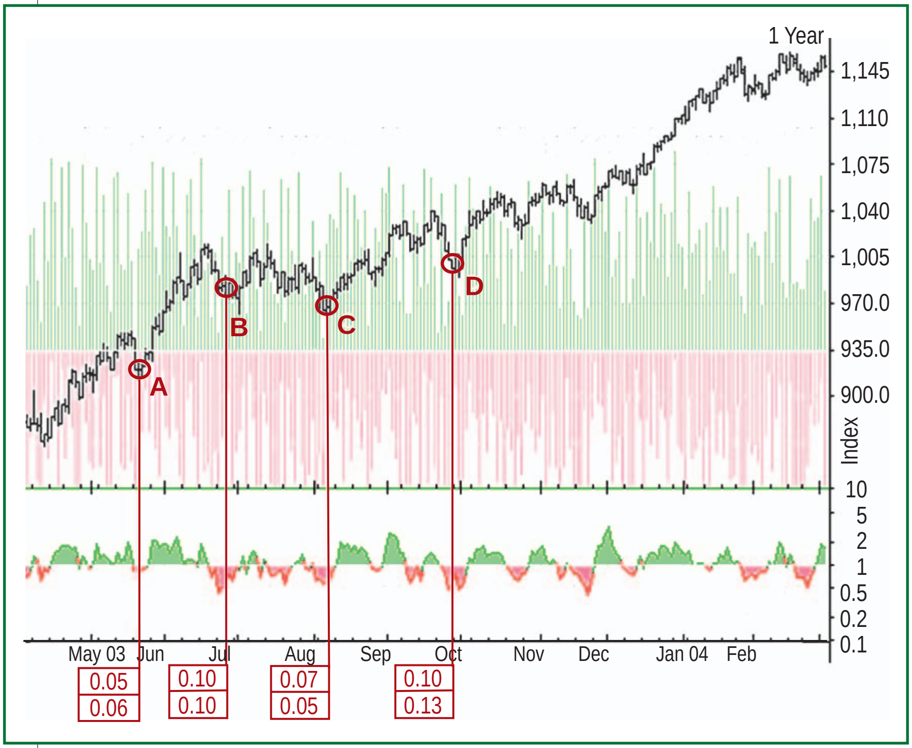

FIGURE 6: WILL THE MARKET REVERSE? Even though the S&P 500 was trending up, it is evident that corrective moves generated low A/D ratios, suggesting that most traders were not confident that the market would reverse.

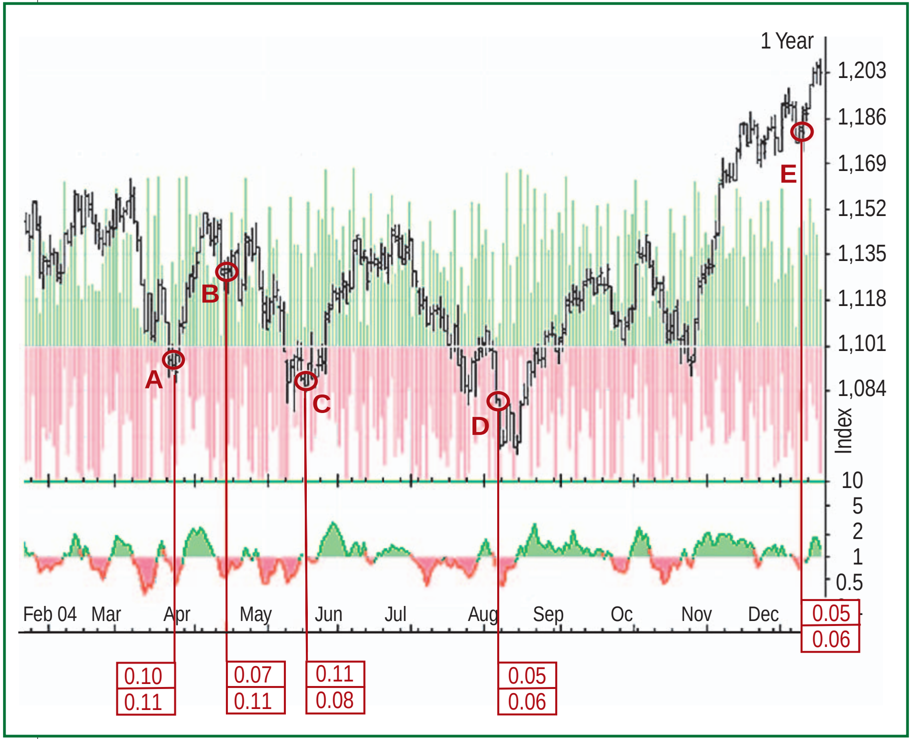

FIGURE 7: LOWEST CRITICAL A/D VOLUME AND A/D ISSUES RATIOS REACHED IN 2004. The S&P 500 seems to reverse former downtrends after reaching critically low A/D issues and volume ratios.

ratio, roughly 460 stocks from the basket of 500 in the S&P 500 must be in the declines group. During such critically pessimistic and lopsided periods of market sentiment, a very large number of shares are being transferred — across the broad market — from the hands of the bearish camp into the hands of more bullish traders, all at comparatively low prices. Such events are frequently accompanied by large volume spikes, further confirmation that huge blocks of shares are changing hands.

As a result of wholesale transfer of stock, the bearish group soon becomes exhausted as more and more investors satisfy their urge to close out positions. The market quickly becomes oversold; at some point there are simply too few sellers left to cover the demands of those buyers who wish to establish positions at such low prices. The big volume events that often accompany such exhaustion scenarios (accompanied by critically low A/D ratios) indicate that there is a significant interest on the behalf of the bulls to buy into the market.

Over the seven years covered by our research, we found only eight incidences (of a total of 34) where individual recovery rallies resulted in gains of less than 3%.

Not surprisingly, success in trading the S&P 500 based on the index hitting critical A/D ratio levels is not 100% guaranteed. However, our work reveals that the odds of winning with this strategy are nonetheless quite attractive. In our opinion, applying an appropriate stop-loss policy to this trading approach can make this a profitable, high-reward strategy for mid-term traders.

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