AIQ Opening Bell® Monthly

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*Feature*



*Sections*



The *Opening Bell Monthly* is a publication of AIQ Incorporated
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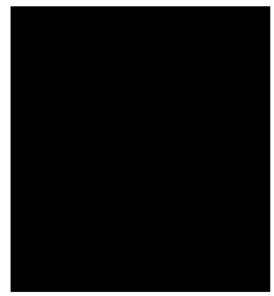
**SCREENING TECHNIQUES - 1**

# LOOKING FOR TURNAROUND SITUATIONS USING REVERSAL PATTERNS



DAVID VOMUND

**By David Vomund**

We are beginning a series of articles which will test various screening techniques that identify turnaround situations. The results of these tests will then be used to build an effective bottom fishing mechanical screening model.

In this article, our focus will be on various short term reversal patterns based solely on price activity. Since we are looking for turnaround situations, we'll apply these reversal patterns to stocks that are in clear downtrends. Eventually, we'll incorporate some of the effective reversal patterns with indicator readings as we form our screening model for turnaround situations.

*"Eventually, we'll incorporate some of the effective reversal patterns with indicator readings as we form our screening model for turnaround situations."*

To begin our test, we identified five periods where the market corrected, formed a bottom, and then rallied. In each case, we tested several reversal patterns at the market low (since the database we are using is comprised of 2000 stocks, we often used the Russell 2000 as a measure of the market).

The five dates that were used were 04/20/94, 06/27/94, 12/09/94, 07/23/96, and 04/11/97. There were plenty of stocks for bottom fishers to choose from during these time periods.

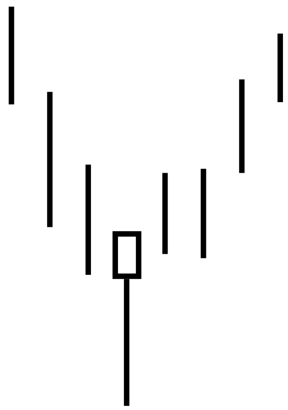
On each of the five dates that we used, we searched a database of the most active 2,000 stocks looking for different types of bullish reversal patterns. We then examined the performance of the stocks that had reversal patterns for several different time periods ranging from one day to one month.

Since we are searching for turnaround situations, only stocks that were below their 200-day and their 50-day moving averages were examined.

*Screening Techniques continued on page 2*

## SCREENING TECHNIQUES - 1 *continued . . .*

**Figure 1**

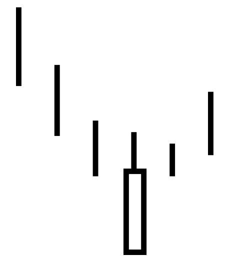


Hammer Pattern

**Figure 2**

Bullish Engulfing Pattern

**Figure 3**



Bullish Belt Hold Pattern

Three of the five reversal patterns utilized in this testing are based on Candlestick charts. The patterns include the Hammer, Engulfing Pattern, and Belt Hold. For information on the construction of Candlestick charts along with their terminology, please refer to AIQ's Technical Indicator Reference Manual, page 91.

### Hammer Pattern

In the Hammer pattern, the body is at the upper end of the trading range (we only used white real bodies). The long lower shadow must be at least twice the height of the real body and it should have no, or a very short, upper shadow (see **Figure 1**).

### Engulfing Pattern

The Engulfing Pattern is comprised of two Candlesticks. The second real body must engulf the prior real body. For a bullish Engulfing Pattern, the second Candle must be white (see **Figure 2**).

### Belt Hold Pattern

Our last pattern is the Belt Hold. In the bullish Belt Hold pattern there


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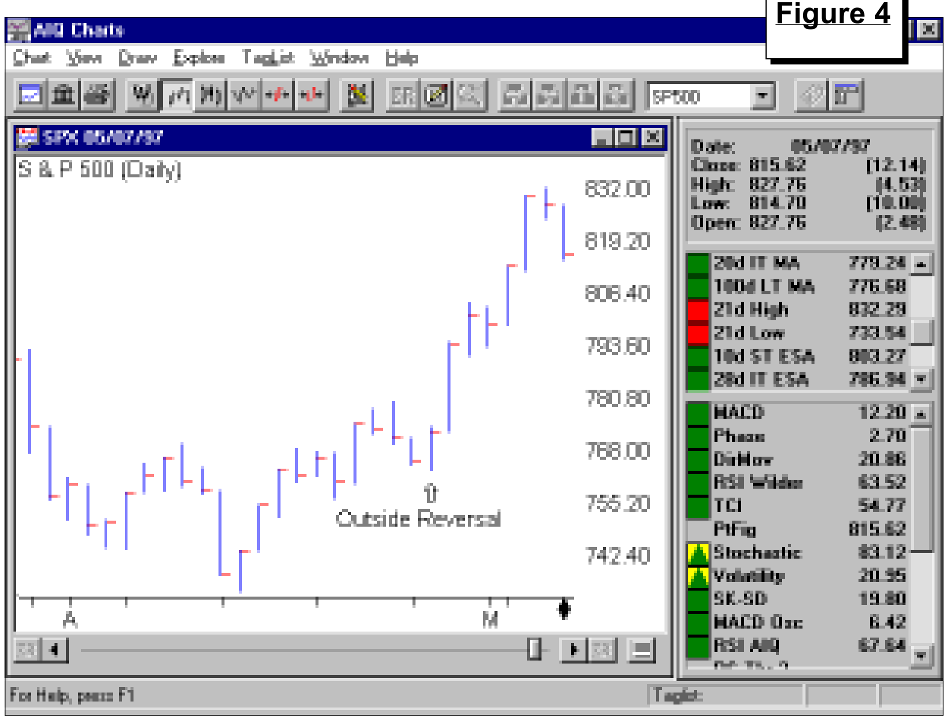
**Figure 4**



SCREENING TECHNIQUES - 1 *continued . . .*

is a strong white Candlestick which opens at or near the low and moves higher for the rest of the day. Our testing required that the upper shadow had to be less than one quarter the size of the entire Candlestick (see **Figure 3**).

**Outside Reversal**

We also tested for outside reversal days. A bullish outside day occurs when the security moves lower than its previous day's low price but closes higher than its previous day's high price.

**Gap Reversal**

A well known saying is that a stock will typically fill a gap. Therefore, our final screening was for stocks that gapped down and then two or three days later rose above the high price of the gap-down day.

**Results of Testing**

The results of our test are found in **Table 1**. Listed is the average percentage change of the stocks that fit each pattern over a one day, five day, and one month time period. For reference, we also show the percentage change figures for the Russell 2000 index.

The majority of the stocks with reversal patterns underperformed the Russell 2000. That is not too surprising because our analysis was only on stocks that were underperforming and in downtrends (the stocks were below their 50-day and 200-day moving averages).

We were hoping for better results. The results from the Belt Hold and Engulfing Candlestick patterns were very comparable, and are slightly better than the Hammer pattern. The gap reversal pattern did poorly when looking at the return the day after the buy signal but performance improved. When you look at one month after the gap reversal pattern, the results are about the same as the Candlestick patterns.

(Editors Note: This is not meant to be a thorough testing of the effectiveness of Candlestick charting. Several Candlestick patterns will be thoroughly tested and results will be reported in an upcoming article.)

**Table 1**

**Avg. Percent Change after Market Reversals**

For Stocks after Signals from Five Different Reversal Patterns vs. Russell 2000

| | 1 Day* | 5 Days* | 1 Month* |
|---|---|---|---|
| Russell 2000 | 0.001 | 1.760 | 4.230 |
| Belt Hold | -0.190 | 1.390 | 3.130 |
| Engulfing Pattern | -0.190 | 1.289 | 3.416 |
| Hammer | -0.078 | 1.125 | 2.087 |
| Outside Reversal | -0.029 | 1.920 | 5.640 |
| Gap Reversal | -0.289 | 1.026 | 3.759 |

* Time since reversal signal

The best performer of this first test was the outside reversal pattern. It outperformed the other patterns and its return was slightly better than the Russell 2000 index.

**Figure 4** illustrates an outside reversal pattern on the S&P 500. On April 28, the S&P 500 moved lower than its previous day's low but closed higher than its previous day's high.

**Two Main Points**

This first step in our creation of an effective price reversal model has taught us two main points.

First, in order to trade reversal situations, you need to incorporate more than current price activity. All of our reversal patterns are based on the price activity for either one or two days of trading. Unless you managed the trades very well, it would be hard to outperform the market using only these patterns. Clearly, volume analysis and indicator readings need to be incorporated as well. Second, of the reversal patterns we tested, the outside reversal pattern is the most effective so it will play a role in our final screening model.

Our testing will continue in next month's issue of the *Opening Bell*. ■

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GROUP ANALYSIS

# WHICH GROUPS HAVE A PROPENSITY TO MOVE — AND WHICH DON'T

By David Vomund

Money can be made with short term trading but easy money is made by jumping on board a hot industry group. Traders who purchased trucking stocks in the first half of this year can attest to this as the group advanced about 80%.

Some industry groups are more likely to stage big advances than others. TradingExpert's Group Analysis report is short term so there may be a case where a utility group and a technology group appear near the top of the ranking. Because of its volatility, the technology group has a much greater chance of making big money.

In this article, we will examine the performance of the AIQ Pyramid industry groups in an attempt to measure which groups have a propensity to move.

To determine which groups have a propensity to move, we calculated the quarterly returns for the 85 Pyramid industry groups beginning in 1994. We counted the number of times that each group was one of the five best performers or one of the five worst performers for the quarter. The groups that often rise to the top or fall to the bottom of the quarterly Price Change report are the ones that have the inherent volatility to stage a strong advance or have a steep drop.

There were a few surprises in our test. We expected that a technology group would head the list of groups appearing at the top or bottom of the report. That wasn't the case. The industry group that appeared most often at the extremes of the Price Change report was Securities Brokers. This consists of Alex Brown, AG Edwards, Merrill Lynch, and Charles Schwab. Not surprisingly, the Semiconductor & Related group came in second.

**Table 2**

| Groups that Move | ...and Those That Don't |
|---|---|
| Advanced Medical Devices | Aerospace & Defense |
| Casinos | Aluminum |
| Footwear | Automobile, Parts |
| Health Care, Providers | Banks, Eastern |
| Home Construction | Banks, Money Center |
| Home Furnishings & Appli. | Banks, Southern |
| Media-Broadcasting | Beverages, Misc. |
| Metals, Precious | Chemicals, Specialty |
| Office Equipment | Clothing & Fabrics |
| Recreation, Toys | Diversified Technology |
| Securities Brokers | Electric Utilities |
| Semiconductor & Related | Food |
| Steel | Gas Companies |
| | Industrial, Diversified |
| | Insurance, Full Line |
| | Insurance, Property & Casualty |
| | Medical Supplies |
| | Oil, Integrated Majors |
| | Oil, Secondary |
| | Oilfield Equipment |
| | Paper & Forest Products |
| | Pharmaceuticals |
| | Pipelines |
| | Recreation, Entertainment |

A listing of which groups frequently appeared (five or more appearances) at the extremes of the Price Change report is found in Table 2 along with the groups that never appeared at the top or bottom of the report. In a sense, this table shows aggressive groups and defensive groups. In a strong bullish market, pay particular attention to the list of Groups that Move. One of these will likely become the next big winner.

Table 3 lists the groups that have appeared at the top or bottom of the list, but on an infrequent basis. They are sorted by the number of times that they appeared as one of the top five or bottom five groups in the report.

When I began trading Fidelity sector funds based on surrogate groups, I didn't incorporate this analysis into my thinking. There were times when both the Brokerage group and the Insurance group rose to the top of the Group Analysis report with the indicators on both groups attractive. Back then, deciding which sector fund to purchase was tough; now I'll go with Brokerage every time. As seen in Table 2, the Brokerage group has the higher propensity to move.

GROUP ANALYSIS *continued* . . .

If you use the Pyramid industry group structure, you may want to change the description field for the groups listed under Groups that Move in Table 2. Either make their description all capitalized or add asterisks to their title. Then, when they appear on a report, they'll stand out and you'll pay more attention to them. ■

**Table 3**

### The Rest of the Pack

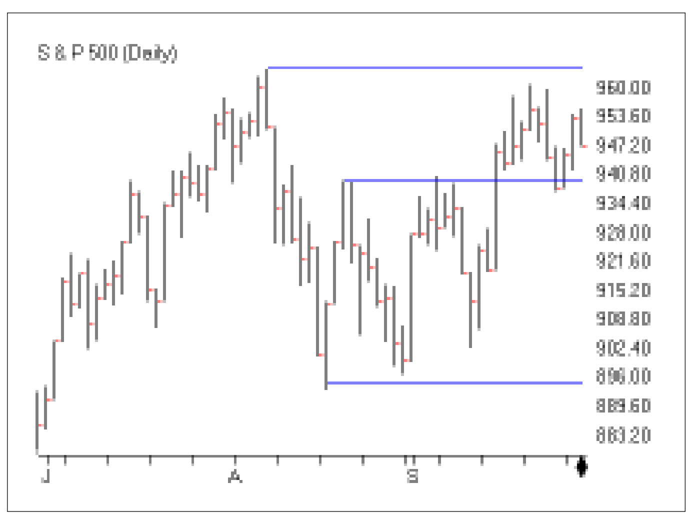
| Group | Count | Group | Count |
|---|---|---|---|
| Airlines | 4 | Banks, Central | 1 |
| Communications | 4 | Banks, Western | 1 |
| Media, Publishing | 4 | Building Materials | 1 |
| Retailers, Apparel | 4 | Chemicals, Commodity | 1 |
| Trucking | 4 | Financial Services, Divers. | 1 |
| Air Freight & Couriers | 3 | Heavy Construction | 1 |
| Computer, Networks | 3 | Industrial & Commerical Svs. | 1 |
| Computers & Information | 3 | Insurance, Life | 1 |
| Containers & Packaging | 3 | Metals, Non-Ferrous | 1 |
| Heavy Machinery | 3 | Oil, Drilling | 1 |
| Industrial, Technology | 3 | Pollution Waste Mgmt. | 1 |
| Medical & Biotechnology | 3 | Railroads | 1 |
| Savings & Loans | 3 | Restaurants | 1 |
| Cosmetics & Personal Care | 2 | Retailers, Broadline | 1 |
| Retailing, Specialty | 2 | Retailers, Food | 1 |
| Software & Processing | 2 | Telephone Systems | 1 |
| Transportation Equipment | 2 | Tobacco | 1 |
| Automobile, Manufacturing | 1 | | |

## MARKET REVIEW

The market's amazing advance continued in the third quarter with most of the gains occurring in the broader market stocks. In the third quarter, the S&P 500 advanced 7%. The Russell 2000, the best measure of small company stock activity, doubled that return. With the broader market outpacing the S&P 500 index, about 80% of domestic equity mutual funds outperformed the index funds on the quarter. For the year, the S&P 500 is up 27.9% and the Russell 2000 is up 25.2%. The biggest winner is the technology heavy Nasdaq Composite which is up 30.6%.

In late August, the S&P 500 successfully re-tested its correction low. On September 2 the market staged a strong rally and AIQ registered a 100 up market timing buy signal. After that buy signal, the S&P 500 rallied to its August recovery high level but was unable to penetrate resistance. The market made a third test of the correction lows and another market timing buy signal was registered. A 96 up Expert Rating came on September 12. The market rallied and on September 16 the S&P 500 broke above its trading range. At the end of the month, the S&P 500 was trading between 937 and its all-time high price of 960. While the S&P 500 was consolidating, the Russell 2000 continued its advance and was at a new all-time high at month's end.

With the strength in the Russell 2000 there were plenty of advancing industry groups. The biggest gainers were in Securities Brokers, Recreation-Toys, and Media-Broadcasting. All of these groups advanced over 20% in August. ■



DATA MAINTENANCE

# Clean Data Is Important! Three Things to Do Now

**BY David Vomund**

An article on data maintenance is not nearly as interesting as one on stock selection strategies, but it can be just as important. Time should be spent on maintaining clean data and we hope that the stock Data Maintenance section of this newsletter helps with this task. In this article, we will discuss three quick and easy tasks AIQ users should periodically perform to help improve the quality of their databases.

### Task #1. Delete Inactive Tickers

Do you have an ever growing list of inactive tickers (stocks that don't trade anymore) in your database? For most users, the list of inactive tickers is so long that it is necessary to scroll up in the message file in order to see if any stocks had a price change of 25% or more.

Before the recent windows versions of TradingExpert, inactive stocks had to be manually deleted. This is no longer the case.

In Data Manager, simply go to *Utilities* and then select *Delete Non-Trading Stocks*. Any stock that has not traded over a time period that you specify will automatically be deleted.

### Task #2. Fix the Start Dates

Have you seen a stock on which the Trading Bands don't fit as expected? The bands might start at the bottom of your screen (**Figure 5**) or the price action never reaches the upper band (**Figure 6**). If this is the case, the stock has a bad start date.

This most often occurs if the stock's start date is earlier than the date the stock began trading. TradingExpert users should periodically fix the start dates for all of the

Figure 5


stocks in their databases. This is easy to do.

In Data Manager, go to *Utilities* and then select *Check Ticker Data*. In the dialog box that appears, select *All Tickers* in the *Source* section and select *All Dates* in the *Range* section. Make sure *Stocks* is selected in the *Check Only* section, then put a check mark next to *Fix Start Dates* in the *Tasks* section. This will correct all start date problems.

### Task #3. Reload History for AIQ's Market Timing Model

We've saved the most important task for last. Most users pay close attention to AIQ's buy and sell signals on the overall market (symbol DJIA). Yet, I'm always amazed how many users get false signals as a result of bad data.

In my weekly newsletter, I report when AIQ gives a buy or a sell signal. When a signal is registered, I can count on at least a dozen calls from subscribers who did not get the same signal on their systems. One piece of bad market timing data, even if eight months ago, can affect today's Expert Rating.

Most people get bad data by downloading too early after the market closes. This sometimes happens because after the download the data vendor corrects an error that was previously posted. Bad data for the market is easily corrected.

To make sure your market timing signals are correct, perform often a *Reload History* (in Data Retrieval) on the selected ticker DJIA. At a minimum, a *Reload History* should be performed every week for the prior week.

I go even farther than this. Before updating my entire database, I'll first do a *Reload History* on

## DATA MAINTENANCE *continued . . .*

symbol DJIA for the previous three days. I do this every day. This way, if the data vendor makes any change to the market breadth or volume numbers, I'll get that change on my system.

If you have never performed a *Reload History* on the symbol DJIA, do one now for the previous year and then perform a *Reload History* often.

In the Market Review section of this newsletter, we list the latest buy and sell signals so you can verify the accuracy of your signals. These signals will correspond to Dial/Data and Interactive Data users. People who retrieve data through Telescan will get different signals (see September 1997 *Opening Bell*). ■

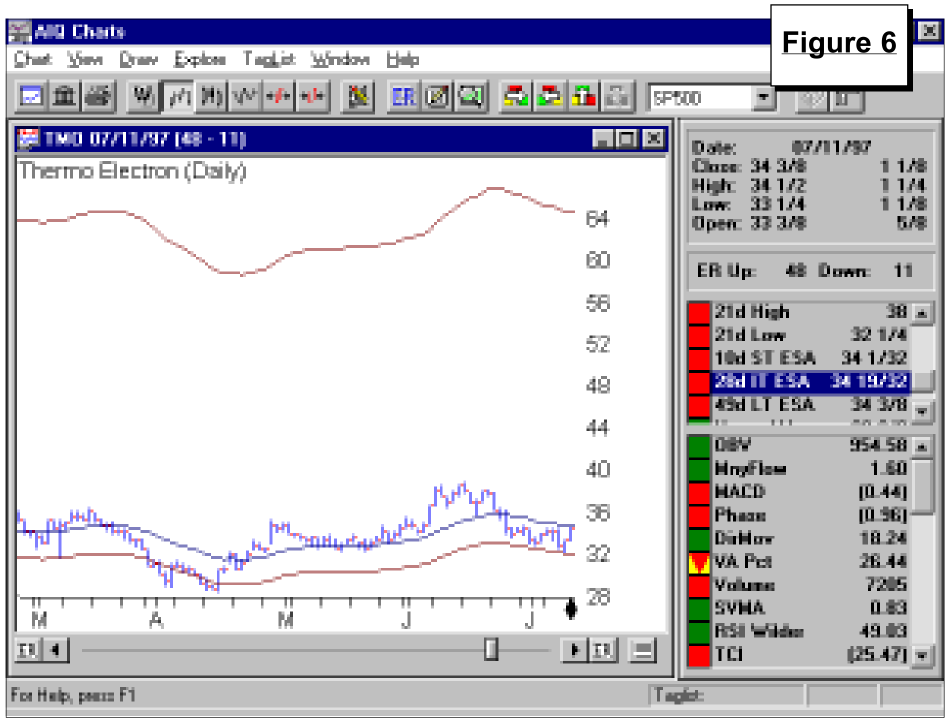


Figure 6

## STOCK DATA MAINTENANCE

**The following table shows past and future stock splits and large dividends:**

| Stock | Ticker | Split/Div. | Approx. Date |
|---|---|---|---|
| Con Agra Inc. | CAG | 2:1 | 10/02/97 |
| MBNA Corp. | KRB | 3:2 | 10/02/97 |
| Edwards AG | AGE | 3:2 | 10/02/97 |
| Gannett Co. | GCI | 4:3 | 10/07/97 |
| Harleysville Group | HGIC | 2:1 | 10/07/97 |
| Reliability Inc. | REAL | 2:1 | 10/07/97 |
| Norfolk Southern | NSC | 3:1 | 10/10/97 |
| Mercury General | MCY | 2:1 | 10/10/97 |
| Friede Goldman Int'l | FGII | 2:1 | 10/13/97 |
| Barra Inc. | BARZ | 3:2 | 10/14/97 |
| Applied Materials | AMAT | 2:1 | 10/14/97 |
| DBT Online | DBT | 2:1 | 10/15/97 |
| Merrill Corp. | MRLL | 2:1 | 10/16/97 |

| Stock | Ticker | Split/Div. | Approx. Date |
|---|---|---|---|
| Fluke Corp | FLK | 2:1 | 10/16/97 |
| Lilly (Eli) | LLY | 2:1 | 10/16/97 |
| Arrow Electronics | ARW | 2:1 | 10/16/97 |
| Burl. Coat Factory | BCF | 6:5 | 10/17/97 |
| Romac Int'l | ROMC | 2:1 | 10/20/97 |
| Amplicon Inc. | AMPI | 2:1 | 10/20/97 |
| AFC Cable Sys. | AFCX | 5:4 | 10/21/97 |
| Tyco Int'l | TYC | 2:1 | 10/23/97 |
| Rexall Sundown | RXSD | 2:1 | 10/24/97 |
| Proffitt's Inc. | PFT | 2:1 | 10/28/97 |
| Global Industries | GLBL | 2:1 | 10/28/97 |
| MBIA Inc. | MBI | 2:1 | 10/30/97 |

**Trading Suspended:**
Smiths Food & Drug (SFD), Alex Brown (AB), Culbro Corp. (CUC), Tandem Comp. (TDM)

**Name/Ticker Changes:**
Inacom Corp. (INAC) to Inacom Corp. (ICO)
Penn Virginia Corp. (PVIR) to Penn Virginia Corp. (PVA)

TOOLS OF THE TRADE

# A Review of Traders Index

The traders Index (TRIN) was developed by Richard Arms Jr., and is also commonly referred to as the ARMS index. TRIN uses New York Stock Exchange figures in forming a ratio of breadth data to volume data. Specifically, it is calculated by dividing the ratio of the number of advancing stock issues to the number of declining issues by the ratio of the volume of the advancing stock issues to the volume of declining issues.

TRIN = (Adv. Issues / Decl. Issues) / (Up Volume / Down Volume)

TRIN values shown on the AIQ charts (TRIN appears only on market timing charts) are computed by applying an exponentially smoothed moving average to this figure.

TRIN measures the relative strength of the volume associated with advancing stocks versus that of declining stocks. If more volume goes into advancing stocks than declining stocks, TRIN will fall below a level of one. Consequently, if more volume flows into declining stocks than advancing stocks, TRIN will have a value greater than one.

Unlike most other indicators, TRIN is considered overbought when it falls to a low level and oversold when it has a high reading. Generally, a value of .75 or lower indicates a market top while a value of 1.2 or higher indicates a market bottom. These values correspond to the dotted horizontal lines on the indicator. Signals are more powerful the longer they stay in overbought or oversold territory. **Figure 7** displays TRIN's last buy signal on August 28, 1997.

How is it working? **Table 4** shows the dates of each buy signal since 1991 along with percentage gain/loss in the S&P 500 in the month following each buy signal.

**Figure 7**


When a cluster of buy signals are registered, only the first in the series is counted. The results are impressive. The average gain in the S&P 500 in the month following each buy signal is 2.57%. In this bull market, the buy signals are very good but the sell signals are not effective.

Like all other indicators, TRIN is not foolproof. When the market enters a strong trend, especially after a long basing period, TRIN will quickly move into overbought or oversold territory, giving false signals counter to the trend. In the last bear market in 1990, TRIN gave bad buy signals near the market top.

Given TRIN's incredible performance since that bear market, it may be time to worry about the health of the market when its buy signals fail to work. ■

**Table 4**

**TRIN Signals 1991-1997**

| Buy Signal Date | Percent Gain S&P 500 Following Month |
|---|---|
| 01/03/91 | 6.57 |
| 03/19/91 | 4.80 |
| 04/09/91 | 2.59 |
| 05/10/91 | 0.75 |
| 06/24/91 | 2.08 |
| 09/10/91 | -1.04 |
| 11/15/91 | 0.48 |
| 04/07/92 | 4.47 |
| 08/24/92 | 1.89 |
| 10/02/92 | 2.99 |
| 04/02/93 | -0.27 |
| 12/20/95 | 0.97 |
| 07/15/96 | 5.16 |
| 08/28/97 | 4.60 |
| Avg. = | **2.57** |