AIQ Opening Bell® Monthly

CHART PATTERN ANALYSIS - III

HOW TO IDENTIFY THE RECTANGLE PATTERN

By David Vomund

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I n our series of articles on chart patterns, we have discussed the symmetrical triangle, right triangle, and rounded top/bottom pattern. This month, we will introduce the rectangle pattern and then discuss how to find all of these chart patterns using Point & Figure analysis.

The Rectangle Pattern

Similar to the symmetrical triangle pattern, a rectangle can be either a reversal pattern or a continuation pattern. There is no way of knowing whether the pattern is bullish or bearish until prices break above or below the formation.

A rectangle consists of a series of sideways price fluctuations which are bounded by both upper and lower horizontal trendlines. This sideways movement is often called a "consolidation period." During the rectangle formation, there is an equal balance between buying interest and selling interest. Eventually, supply and demand situations change and the price breaks above or below the consolidation, completing the pattern. A break to the upside is bullish and a break to the downside is bearish.

An example of the rectangle pattern is found in **Figure 1**. Lancaster Colony (LANC) was moving higher until July when the stock began to drift sideways. Horizontal trendlines are drawn at the upper and lower ends of the trading range. This pattern was not recognizable until mid-November. At that time, we were able to draw the lower trendline which connected the August and October low points. The upper trendline was drawn connecting the September and November high points. In early December, LANC broke above the

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consolidation range, completing the pattern. The $36 level which was resistance now becomes support.

A second example is found in **Figure 2**. Because this is a weekly chart, the pattern covers a longer time period. Lincare Holdings (LNCR) drifted sideways from June 1996 to July 1997. Once again, horizontal trendlines are drawn at the upper and lower ends of the trading range.

The Lincare Holdings (LNCR) example is a stronger formation than the Lancaster Colony (LANC) example for two reasons. First, each trendline on LNCR is tested at least four times. That is, LNCR's price came close to or touched each trendline at least four times before the final breakout. The more times a trendline is tested without being penetrated, the more confidence we have in the trendline. Second, the pattern lasted a longer time horizon. A rectangle pattern that takes place over an entire year typically has greater implications than a pattern that lasts for four months.

Those who trade stocks with an average holding period of several months will prefer to use weekly charts. A breakout on a weekly chart has lasting implications. Short-term traders can benefit from weekly

Figure 1

pattern analysis as well. In the case of Lincare Holdings, a short-term trader can buy long with a tight stop as the stock nears the lower support trendline and then short the stock as it nears the upper resistance line. After the breakout, the short-term trader will trade only in the direction of the final break.

These two examples illustrate the bullish rectangle pattern. In each case, prices could have broken below the lower trendline, in which case the pattern would have been bearish. It typically pays to wait for the breakout rather than guessing which direction the final breakout will be. With that said, it is most likely that

Figure 2

the final break will be in the direction of the long-term trend. **Figure 3** is a weekly chart of Lancaster Colony (its daily chart appears in Figure 1). Here we see that the rectangle pattern took place in an overall uptrend and during the pattern the stock simply corrected back to its 28 week moving average.

Point & Figure Analysis

A Point & Figure chart is another means of plotting a stock's price activity. In many cases, it is easier to find the patterns that we have discussed on Point & Figure charts rather than traditional bar charts because the insignificant small daily price movement is not charted under the Point & Figure method. For an explanation of Point & Figure chart-ing, please see AIQ's Technical Indicators Reference Manual. We'll simply say that in a Point & Figure chart, X's represent times when the stock is rallying and O's represent times when a stock is decreasing.

Our first example of a Point & Figure chart that shows multiple patterns is found in **Figure 4**. A symmetrical triangle formed in mid-1997. Each time the stock rallied it

Figure 3

failed to get to the level of its previ-ous rally (i.e., each column of X's is less than the previous column of X's) and each selloff was less severe than its previous selloff (i.e., each column of O's ends higher than the previous column of O's).

Near the end of 1997, the stock

Figure 4

struggled to get though $21. On two occasions it rallied to this level and then sold off. It wasn't until the third attempt that this level was broken. In Point & Figure terms this is a triple top buy signal. In bar chart terms this is an ascending triangle since there is a level top and each selloff is smaller than the previous selloff.
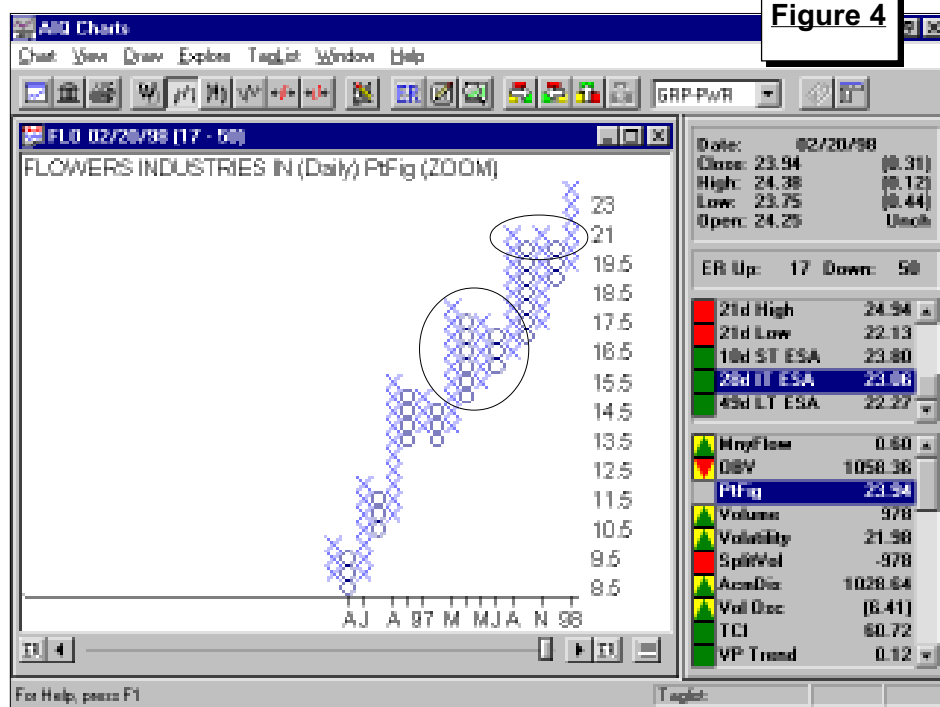
In our next example, we see Royal Caribbean Cruises (RCL) forming an ascending triangle in the first half of 1997 (**Figure 5**). RCL rallied to the same level on two occasions, each time sellers came in. Each round of selling was less than the previous round. The pattern was complete when, on its third attempt, the stock rallied and broke above the pattern.

More recently, RCL entered into a consolidation period forming a rectangle pattern. Each rally ended at the same level and each selloff ended at the same level. In early February, this sideways pattern was slightly penetrated.

The two patterns in RCL have one thing in common: they have two

CHART PATTERN ANALYSIS - III *continued* . . .

columns of level tops and a third column that penetrates the resistance. This triple top buy signal is what AIQ's Point & Figure Breakout report searches for. By examining this report, we can quickly get a list of stocks that have just broken resistance. Some of these can be classified as rectangle patterns and others can be classified as right triangle patterns. The Point & Figure Breakout report is a tremendous time saver in finding these chart formations.

Point & Figure analysis is unique because the time included in the formation of a pattern is not a factor. For the most part, the patterns on the stocks listed on the Point & Figure Breakout report typically cover a time period of a couple of weeks. ∎

Figure 5
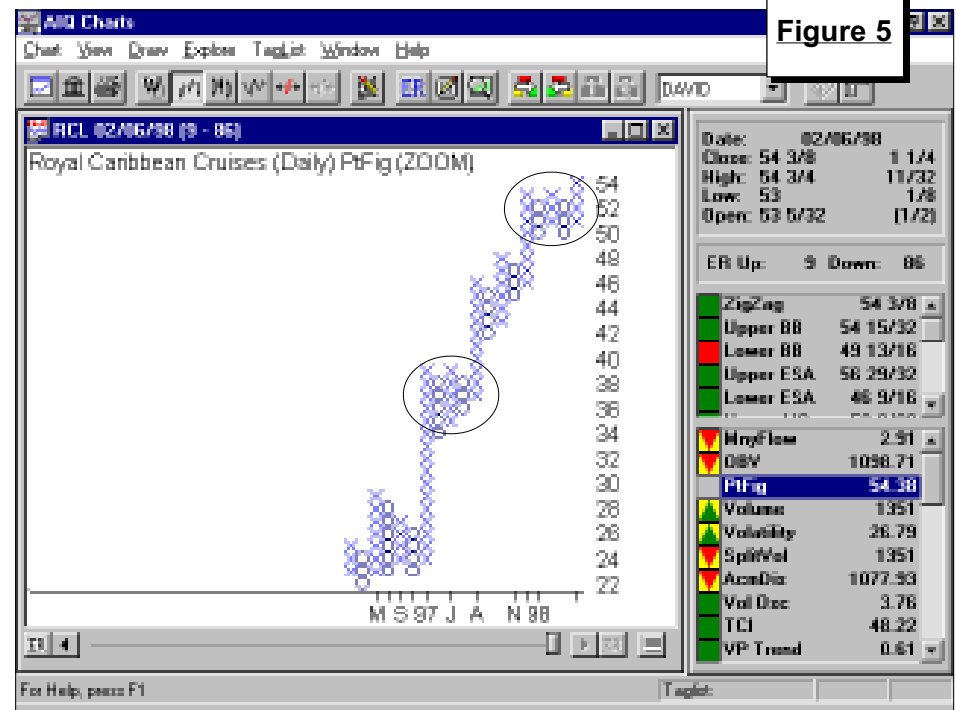
STOCK DATA MAINTENANCE

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

Stock	Ticker	Split/Div.	Approx. Date	Stock	Ticker	Split/Div.	Approx. Date
Coherent Inc.	COHR	2:1	03/03/98	ICN Pharm.	ICN	2:1	03/17/98
ACE Ltd.	ACL	3:1	03/03/98	America Online	AOL	2:1	03/17/98
Daiseytek Int'l	DZTK	2:1	03/03/98	SBC Communications	SBC	2:1	03/20/98
Greenpoint Fin'l	GPT	2:1	03/05/98	Sysco Corp.	SYY	2:1	03/23/98
Cinram Int'l	CNRMF	2:1	03/05/98	Burr Brown	BBRC	3:2	03/23/98
KeyCorp	KEY	2:1	03/09/98	Computer Sciences	CSC	2:1	03/24/98
Parametric Tech	PMTC	2:1	03/09/98	Dollar General	DGN	5:4	03/24/98
Dell Computer	DELL	2:1	03/09/98	Forest Labs	FRX	2:1	03/26/98
IPSCO Inc.	IPS	3:2	03/10/98	South Trust Corp	SOTR	3:2	03/27/98
Sapient Corp.	SAPE	2:1	03/10/98	HON Indus.	HONI	2:1	03/30/98
Black Hills Corp.	BKH	3:2	03/11/98	Trustmark Corp	TRMK	2:1	03/31/98
Del Labs	DLI	4:3	03/11/98	STAR Telecom	STRX	2:1	04/03/98
Swift Transport	SWFT	3:2	03/13/98	Winton Fin'l	WFI	2:1	04/03/98
Thiokol Corp	TKC	2:1	03/16/98	Century Tel. Ent.	CTL	3:2	04/03/98
Miller Herman	MLHR	2:1	03/17/98				

Trading Suspended:

Caliber Systems (CBB), Coast Savings Fin'l (CSA), Quick & Reilly Group (BQR), Talley Industries (TAL)

Name/Ticker Changes:

American Greetings (AGREA) to American Greetings Corp. 'A' (AM),
Chittenden Corp (CNDN) to Chittenden, Corp (CGZ), Federal Express (FDX) to FDX Corp (FDX),
Reuters Holdings (RTRSY) to Reuters Group pcl ADR (RTRYD)
Shorewood Packaging (SHOR) to Shorewood Packaging (SWD)
Watson General (WGEN) to USTMAN Technologies Inc. (USTX)

TRADING TECHNIQUES

'DOGS OF THE OEX' STRATEGY

By David Vomund

The Dogs of the Dow investing strategy has gained great popularity. Mutual funds have even been formed that follow this specific strategy. The Dogs of the Dow strategy is outlined in *Beating the Dow* by Michael O'Higgins.

At the end of December, traders can even profit from the popularity of the strategy by purchasing the stocks that will be on the new year's buy list and then exiting after all the "Dog" followers enter their positions. The jump in Eastman Kodak on January 2 was not a fluke.

To quickly review the strategy, on the first trading day of each year, you buy the ten highest yielding Dow stocks and hold them for the rest of the year. The portfolio is rebalanced using the same strategy at the start of every year. This strategy has had fine historical results but it seems to be losing its effectiveness as it becomes more popular.

With the success of the strategy, we wondered whether the critical part of the strategy is that the stocks have a high yield or if the critical part is that they are all Dow stocks? We suspected that the only reason the strategy is limited to Dow stocks is that it insures that only large-cap stocks are purchased. In fact, James

> *"...we wanted to examine if there is a way to follow the (Dogs of the Dow) strategy without buying the same stocks that everyone else is buying...we decided to run a test on the stocks in the S&P 100 index, otherwise known as the OEX."*

O'Shaughnessy in *What Works on Wall Street* found that buying high yielding large cap stocks is an effective strategy. The stocks don't necessarily have to be in the Dow, but they must have a large capitalization.

With that said, we wanted to examine if there is a way to follow

the strategy without buying the same stocks that everyone else is buying. Instead of using the 30 Dow stocks as our database, we decided to run a test on the stocks in the S&P 100 index, otherwise known as the OEX. Therefore, on January 2 of each year, we purchased the 10 highest yielding stocks in the OEX and held them for an entire year at which time a new list of high yielding stocks was purchased.

To get a list of the S&P 100 stocks we went to Standard & Poor's web site, located at **http://www.stockinfo. standardpoor.com/index.html**. You can also get a list of the S&P 500 stocks and their corresponding industry groups at this site. Since we were unable to get a list of the S&P 100 stocks for previous years, we used the current list in our backtest. This is not a big issue because these stocks don't often change.

For a listing of the yield for each S&P 100 (i.e., OEX) stock, we used *The Wall Street Journal*. Finding the first *Wall Street Journal* for each year required some library work so our test is limited to three years!
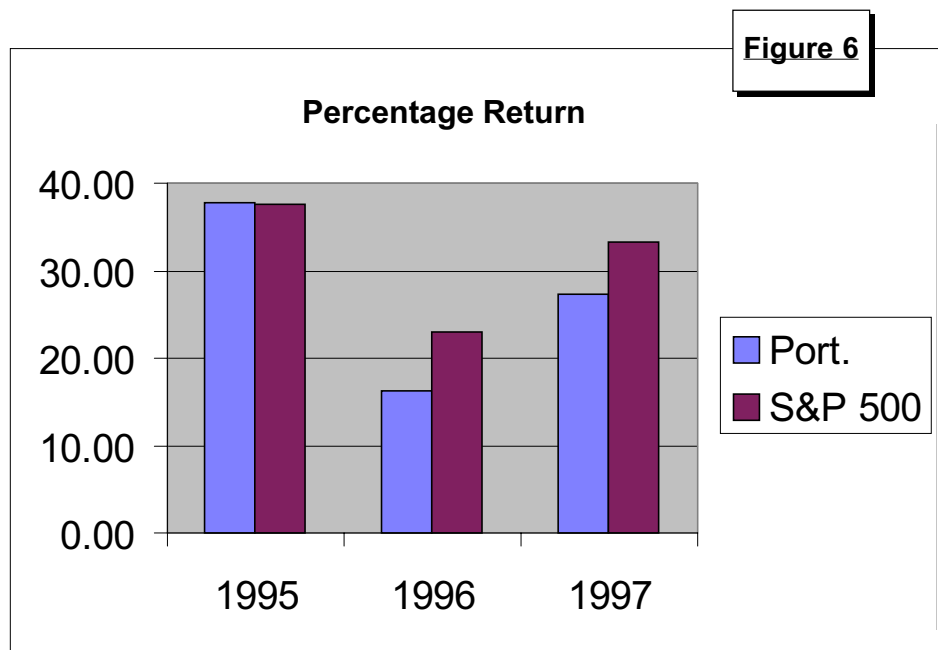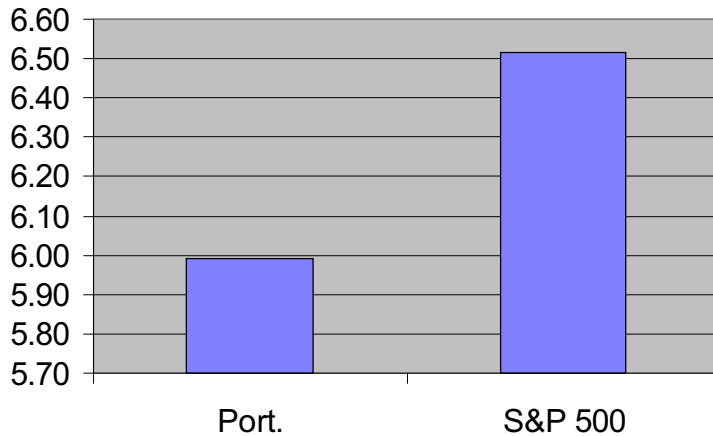
The percentage return from our testing is shown in **Figure 6**. The portfolio standard deviation is shown in **Figure 7**. The percentage return figures for both the stock portfolio and the S&P 500 index include dividends. To calculate the standard deviation (a measure of portfolio risk), we used AIQ's Profit Manager to get monthly portfolio values and then we calculated the standard deviation of the monthly percentage returns.

We see that this is a conservative strategy in that both the return and the standard deviation are lower than the market. To get an idea if the return is good or bad relative to the risk of the portfolio, we calculated a Sharpe ratio which measures perfor-

Figure 6

Percentage Return

Legend: ■ Port. ■ S&P 500 — years 1995, 1996, 1997

Figure 7

Standard Deviation

Table 1

Percentage Returns Through 02/25/98

Ticker	% Change
AN	-2.20
GM	12.76
WY	0.65
AIT	3.18
EK	8.42
IFF	-10.92
MOB	-3.46
PNU	9.56
XON	2.65
AGC	7.58
BEL	-2.34
MMM	3.89
NSC	15.67
ALT	0.96
AMP	3.27
Average	**3.31**

mance by both risk and return. Unfortunately, we found that on a risk adjusted return basis, simply buying the S&P 500 index was a better strategy than buying the high yielding OEX stocks.

In our testing we noticed that there were several occasions where only one or a few of the top yielding stocks were bad performers. The most obvious case was Kmart which was the highest yielding stock in 1995. This was truly a "dog". On December 31 it was purchased at $13, down from $25 in just three months. A year later when it was sold, it was $7 1/8, a 45% loss.

In order to eliminate some of the worst performers and to lessen the negative effect of one bad stock on the entire portfolio, we changed our strategy. We began with the 20 highest yielding OEX stocks and then eliminated the five highest yielders. The remaining 15 stocks were then purchased. Trading results were greatly improved. The portfolio equaled the market's return in 1997 but outperformed in 1995 and 1996 (Figure 7). Thus far, the stocks are lagging the S&P 500 in 1998. Through February 25, the 15 stocks are up 3.31% (see **Table 1**).

Holding 15 high yielding large-cap stocks for an entire year without a stop level isn't a strategy that a typical AIQ user will follow. Next month we'll use TradingExpert as an asset allocation tool which will tell us when to use the high yielding strategy and when to follow an opposing strategy. ∎

*Vomund publishes VIS Alert, a weekly investment newsletter. For a sample copy go to **www.visalert.com** or call (702) 831-1544.*

MARKET REVIEW

February was an impressive month for the market but a quiet one for AIQ. No market timing Expert Rating buy or sell signals were registered during the month. The timing model continues to be on a January 12 buy signal. The most significant event came in late January/early February when the S&P 500 registered a very strong Point & Figure buy signal. This signal marked the continuation of the market's long term uptrend.

During February, the Dow rose 8.1% and the S&P 500 was up 7.0%. The advance was not confined to large company stocks. The Nasdaq rose 9.3% and the Russell 2000 rose 7.4%.

The strongest groups were Computer Networks up 20%, Retailers up 16%, and Health Care up 16%. Even the big three auto manufacturers rose about 14%. ∎

AIQ Chat Forum

Looking for an AIQ on-line forum? A non-AIQ sponsored chat forum can be found at Silicon Investor located at **www.techstocks.com**. At the Silicon Investor home page, perform a search for AIQ.

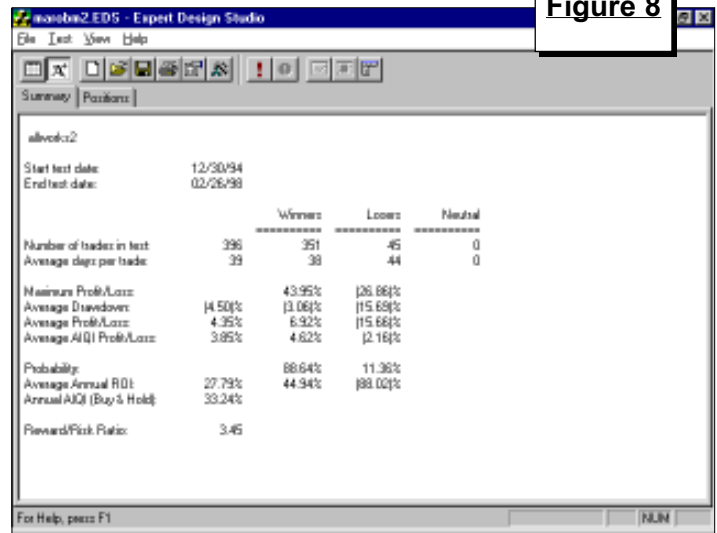# TREND SCORE TESTING WITH EDS PRODUCES INTERESTING RESULTS

Before the release of our Expert Design Studio (EDS) package, much of our testing for the *Opening Bell* was labor intensive. We quantified our analysis whenever possible and gave our opinions on what we felt worked well with the system. With the release of EDS, we can now quickly and easily test our earlier conclusions. In this article, we'll tackle the Trend Score and Delta Trend Score readings on both industry groups and individual stocks.

As many of you know, Trend Score (TS) is an indicator found exclusively in TradingExpert. It is a composite reading of several indicators. These indicators include Directional Movement, ADXR, MACD, Positive Volume, On Balance Volume, and Volume Accumulation. The Delta Trend Score (DTS) measures the rate of change in the Trend Score.

In the development of TradingExpert, the TS and DTS indicators were created to help identify group rotation. That is why both the Group Analysis and Sector Analysis reports sort the groups and sectors by TS, with the next column being the DTS score. People analyze these reports in a variety of ways. In AIQ's Advanced Group Analysis training video-tape, two methods of analysis are given. We'll test these two techniques using EDS.

The first technique is for those who like to buy into trends rather than attempting to enter at or near the lows. A trend following technique that many people use to identify attractive groups is to look at the top quarter of the Group Analysis report and purchase those groups with the highest DTS values. This means that the group's indicators are not only strong (i.e., high TS) but that they are still gaining strength (i.e., high DTS).

In creating a formula for EDS, we are unable to limit selections to the top quarter of the report but we can specify actual limits for the TS and DTS values. Therefore, in creating the formula for EDS we stated that an attractive group is one in which its Trend Score was

Figure 8

greater than 90 and its Delta Trend Score was greater than 25. The EDS formulas are simple:
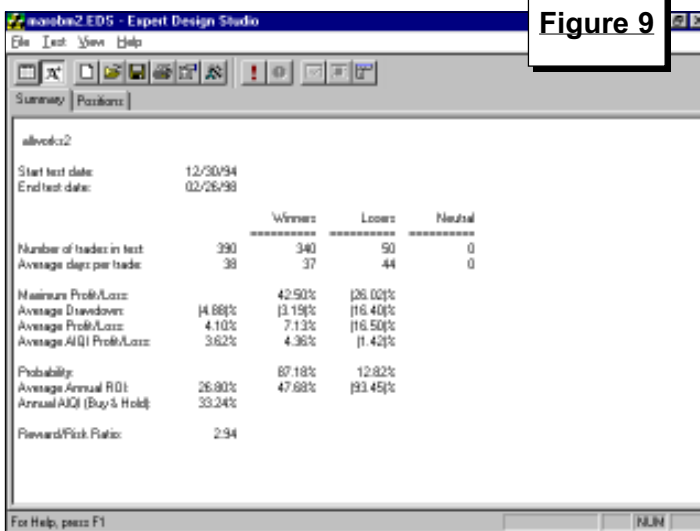
> TS if [TS]>90.
>
> DTS if [DTS]>25.
>
> Allworks if TS and DTS.

In our backtest, we test Allworks, a rule which states that the prior two rules must be true.

Our backtest was for three years using the AIQ Pyramid industry group structure. The results are found in **Figure 8**. There were 396 occasions where groups met our criteria. Using an 85% principle protect, 85% profit protect, and a 5% trigger, we get an average holding period of 39 trading days. The most important statistic for this analysis is the average profit per trade on the groups versus the average profit per trade on the market. We see that our results are good. The average trade gained 4.35%, whereas the average trade on the market over the same time period gained 3.85%. For a measure of the market we used the AIQI, an index of the Pyramid

Figure 9

industry sectors.

An interesting statistic is that the annualized returns of these trades are actually less than if we had bought and held the market over the entire testing period. Trading the groups produced an average annual rate of return of 27.79% versus 33.24% for the market. Since the individual trades outperformed an equal trade in the market but underperformed a buy-and-hold, we know that the majority of trades were placed when the market was becoming weak rather than when it was forming a bottom.

In a sense, the annualized returns tell whether the system can be used effectively for market timing. If the majority of trades come at market lows, the system will outperform buy & hold returns. If the majority of trades take place at market tops, then it will underperform buy-and-hold even if the individual trades outperform.

With our first test complete, we turned to the second technique that people use to identify attractive groups. This method is more for bottom-fishers. With this technique, we purchase those groups with the highest DTS values. These are typically found in the lower half of the report (i.e., lower TS values). These groups have been weak but the rate of change or momentum of their

technical indicators is showing great improvement.

In this test, we simply changed our earlier EDS formulas to look for groups with a TS less than 0 and a DTS value greater than 30. The results are found in **Figure 9**. Once again, the results are good. The average group that met the criteria gained 4.1% with a 38 day holding period. This compares to a 3.62% gain for the market. Not bad for two simple rules.

As we said earlier, the TS and DTS formulas were designed for industry group analysis. It wasn't until the release of the Windows version of TradingExpert that we included Trend Score as an indicator, allowing users to apply TS to stocks as well as groups and sectors. With this in mind, we performed the same test that worked for industry groups on a stock database consisting of the S&P 500 stocks.

The results of scanning for stocks with a TS greater than 90 and a DTS greater than 25 are found in **Figure 10**. Since the test is on 500 stocks instead of 80 industry groups, the number of trades dramatically increased and is now 3302. With that many trades, we could easily apply a further filter and that will be done and reviewed in a future *Opening*
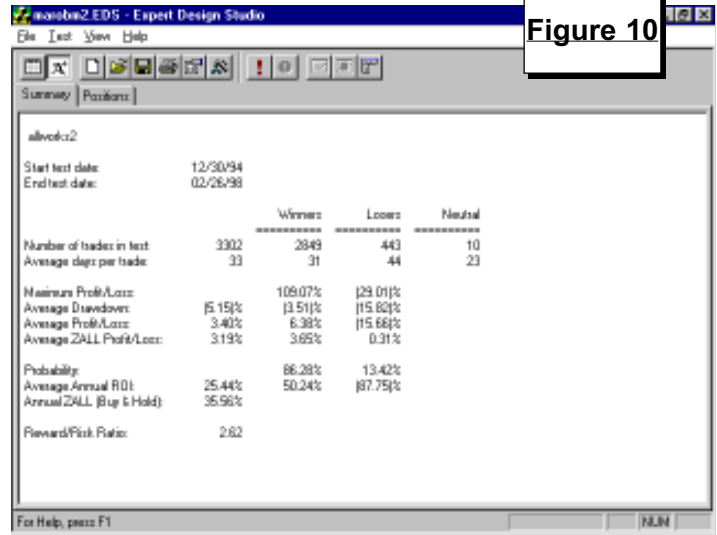
Figure 10

Bell article.

Once again, the average trade outperformed the market (3.40% compared to 3.19%). The majority of buy signals didn't come at market lows so the annualized returns once again lagged.

Our final test used the model which required the TS to be below 100 while the DTS was greater than 30 (**Figure 11**). The average stock trade gained 3.52% compared to the 3.2% gain in the market.

Our screening techniques are slightly more effective for industry groups than for stocks but it is comforting to see that the same conclusions can be made whether the test was performed on industry groups or on stocks. When a test works for two different databases, we can be assured that our model was not over-optimized. ∎
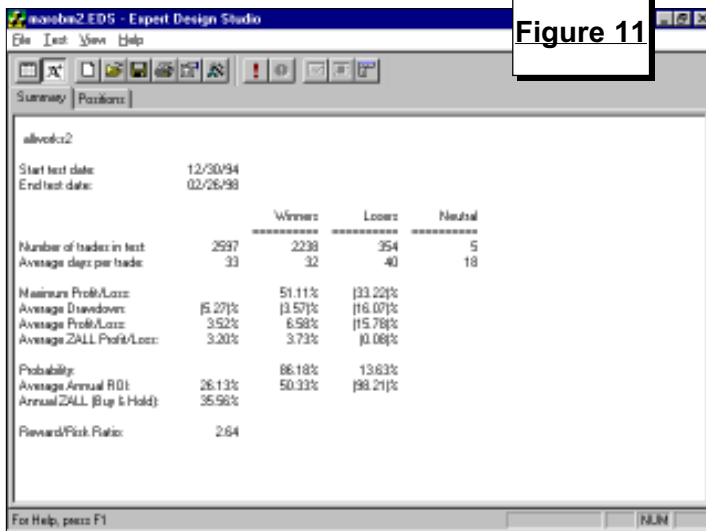
Figure 11

Share your EDS reports

We'd like to publish effective EDS screening techniques developed by AIQ users. E-mail your best EDS files to Opening Bell at AIQ online@aol.com and include your name and phone number. If yours is published, we'll extend your Opening Bell subscription one year.