AIQ Opening Bell ®

Monthly

CHART PATTERN ANALYSIS - II

BEWARE 'FALSE BREAKOUTS' IN THE SYMMETRICAL TRIANGLE

By David Vomund

DAVID VOMUND

E very trading day, the price of a stock is determined by a struggle between supply and demand. In technical analysis, charting a security is critical because it shows the interaction of supply and demand. The demand fluctuates at any given moment from a variety of factors, some rational and some irrational.

As a stock enters into a period of fluctuation, one of several traditional chart patterns may emerge which may signal the start of a new trend. In this series of articles, we are highlighting the widely accepted chart patterns that Robert Edwards and John Magee discussed in their book *Technical Analysis of Stock Trends*.

Last month, we discussed the Ascending and Descending Triangle pattern. A more common pattern is the Symmetrical Triangle.

> *"Chart analysis plays a critical role in technical analysis but like all other tools, it is not perfect... you will want to confirm a bullish pattern with indicator readings, group analysis, and overall market timing."*

Whereas the Ascending and Descending Triangle pattern had one horizontal trendline and one sloping trendline, the Symmetrical Triangle pattern has two sloping trendlines which converge to each other. That is, a stock fluctuates up and down but each move is smaller than its predecessor. The descending tops in the price movement are defined by a downward sloping boundary line (resistance line) and the low points in the fluctuation can be defined by an upward sloping line (support line). The top and bottom boundaries need not be of equal length.

An example of a Symmetrical Triangle is found in **Figure 1**, Kaydon Corp (KDN). The December 1996 rally ended at a lower level than the August 1996 rally, indicated by our resistance trendline. Conversely, each selloff

CHART PATTERN ANALYSIS - II *continued* . . .

from September 1996 to May 1997 was less than the previous selloff. Our support trendline is drawn. A trendline must connect a minimum of two price points. We can place more confidence in the support trendline since it connects three price points.

With the Symmetrical Triangle pattern, there is seldom a clue given on the chart which tells which direction will eventually be broken. Sometimes you can get a clue by examining the activity of other stocks in the same industry group or by looking at the Money Flow and On Balance Volume indicators to see if they are stronger or weaker than the stock.

Another example of a Symmetrical Triangle is found in **Figure 2**, Alaska Airlines (ALK). This is a very strong pattern because

Figure 1

each trendline connects three price points instead of the minimum of two price points (see arrows). ALK
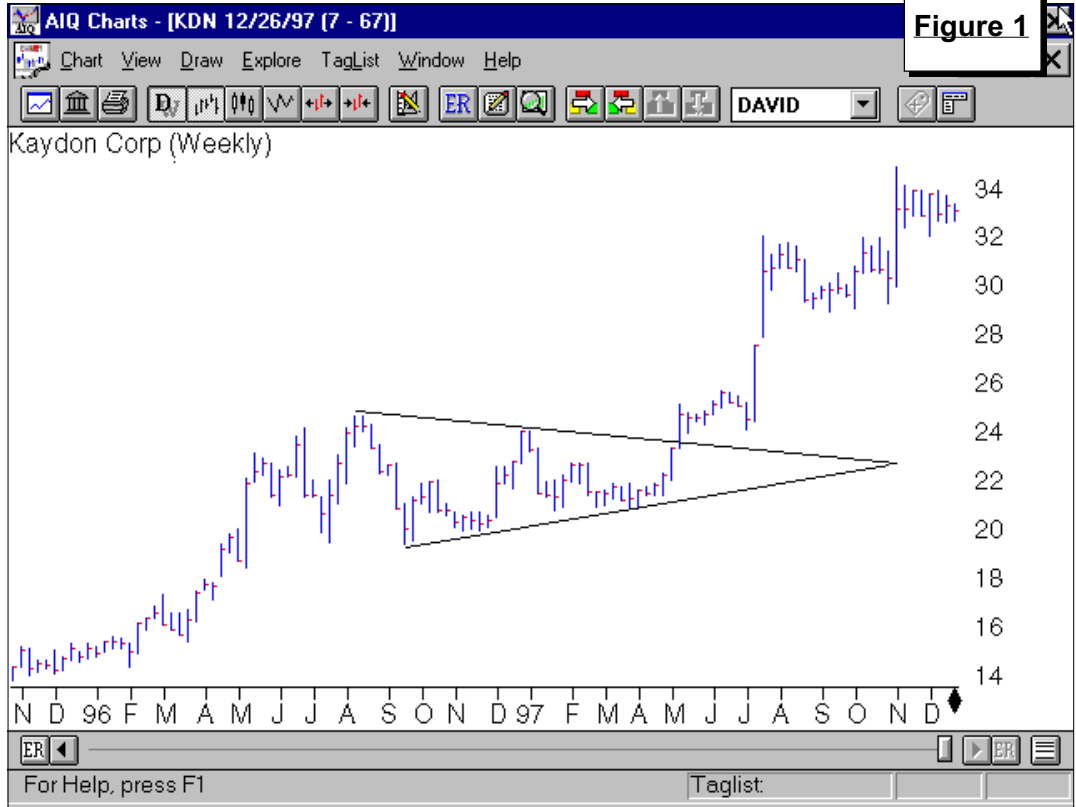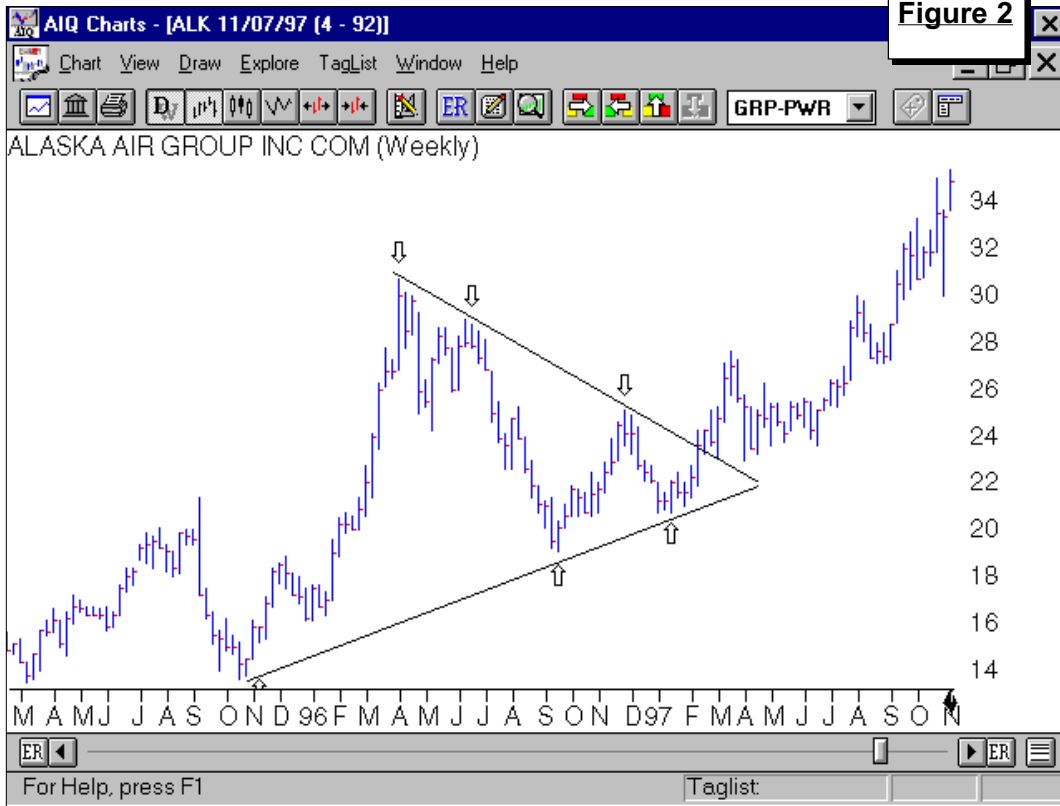

Figure 2

finally broke above the pattern in early 1997.

We have used weekly charts for our two examples but this analysis works with daily charts as well. Weekly charts give a long term outlook for the stocks whereas daily charts are better suited for short term traders. The longer the time period used in forming the pattern, the longer the resulting move. In the case of Alaska Airlines, this chart was used as an example of a Symmetrical Triangle at our March 1997 seminar in Dallas. A year later, the stock has yet to experience a 15% correction.

Chart analysis plays a critical role in technical analysis but like all other tools, it is not perfect. Unfortunately the term

CHART PATTERN ANALYSIS - II *continued* . . .

"false breakout" is widely used in pattern analysis. The worst case scenario for a Symmetrical Triangle pattern is found in **Figure 3**, Muelleer Industries (MLI). Here the stock broke above a nice Symmetrical Triangle pattern in early 1997 only to change direction shortly after the bullish formation was formed. This was a false breakout and the picture quickly turned bearish when the stock fell below both trendlines. Just as shorts were established, MLI began to rally again. Stops are critical.

According to Edwards and Magee, a large number of false breakouts occur when prices have worked their way well out into the apex of the triangle. In **Figure 4** we see the Russell 2000 forming a Symmetrical Triangle in the month of November. Prices went right to the end of the formation before breaking above the pattern. This became a shakeout and prices fell.

Figure 3

Price patterns are a helpful ingredient to stock selection but you will want to confirm a bullish pattern with indicator readings, group analysis, and overall market timing. This lowers the odds of the false breakout.

Next month: the Rectangle pattern and pattern recognition using Point & Figure analysis. ■

Figure 4

Fix for TradingExpert Reports Error

Some of you may have experienced a problem with invalid page faults in module VBA232.DLL when attempting to generate reports in both v4.0 and v4.1 of TradingExpert. The error has been identified and a fix is available from AIQ's web site. Go to the AIQ web site at www.aiq.com. Click on the link to Technical Support. Next click on the link to TradingExpert v4.1 for Expert Design Studio. Then click on the link to receive invalid page fault in module VBA232.DLL error when attempting to generate reports. Follow instructions to download the fix. If you have returned v4.0 or v4.1 because of this error, please contact your sales person for availability of this new version.

TRADING TECHNIQUES

THREE STEPS TO BECOMING AN AIQ POWER USER

By David Vomund

There are thousands of traders who use AIQ TradingExpert software. A small percentage of those are what we consider "AIQ power users."

What separates an AIQ power user from other individuals who use the software? This is a question that we've had to consider when choosing users for *Opening Bell* articles since we try to only interview the most proficient users.

Is an AIQ power user someone who uses and understands most elements of the program, or is it someone who derives most of his/her yearly income from using AIQ TradingExpert? And then, maybe it's someone who can solve a problem without relying on our technical support staff!

After considering all the individuals who have been interviewed for *Opening Bell* articles, there are three characteristics that fit all of them.

1. They tried many aspects of the software and over time have developed their own styles of analysis, or trading processes.

2. They have the emotional discipline to follow the investment process they have developed.

3. They add some form of interpretation that cannot be computerized.

Developing a Trading Process

The AIQ TradingExpert package is a large piece of software. Not everyone is going to use all of the package. If everyone did, he/she

> *"AIQ power users don't wear their emotions on their sleeves. They follow their strategies without wavering."*

would never have the time to actually place a trade!

Power users probably use less than half of what is available, but the parts they use they know well. Determining which parts of the program to use and deciding on a style of analysis is a time consuming process. All power users have gone through this process. It is not easy and it typically involves paper trading and backtesting.

A trading process is as individualized as a person's fingerprint. At seminars and in this newsletter, we find many different types of analysis. Some people use a top-down approach to investing. Others use a bottom-up approach. It is not that one style is better. What works for one person may not work for another person.

I frequently use weekly charts and have loose stops. This would drive many AIQ users crazy if they adopted the same technique in their analysis. Along the same line, I'd do poorly if I tried to follow an active short-term trading technique.

We show different investing styles so that you can take pieces from each strategy, test them, and then develop your own strategy. This takes time and it's not fun, but it is necessary.

How do you know when you've completed this process? By the time you've moved from backtesting and paper trading to using real money, you will begin to gain confidence in the methodology. You have completed the strategy development process when you can answer yes to both of the following

1) Do you ride out the rough periods without thinking that your approach should be changed?

2) Do you feel confident that years from now you'll be investing in the same manner with only small modifications?

A frequent comment I receive at our seminars is that a lot of what I talk about is along the same lines as in years past. Darn right! I wouldn't trust anyone who has a new approach every year.

Emotional Discipline

A trading strategy is worthless if you don't have the emotional makeup to follow it. If decisions are made outside of the strategy, then emotions are creeping in. Discipline is the key.

AIQ power users don't wear their emotions on their sleeves. They follow their strategies without wavering.

The Human Factor

The AIQ software system does a lot of things but there are some things that can't be computerized. Reading a chart is one of them. You

TRADING TECHNIQUES *continued* . . .

can do well with a mechanical trading system or a custom Expert Design Studio screening (see page 6) but in the end, power users will want to look at the chart. After all, when you call your broker you aren't buying the Money Flow indicator — you are buying the stock.

Power users will agree that they've become so good at looking at charts that very often they know what the indicators look like without even charting them. They will look at the chart to determine if the security is near a support trendline or a resistance trendline. They will see if a bullish or bearish pattern is developing.

This type of analysis can't be computerized so the better you are at reading charts, the more you'll add to the system. In the age of fast computers and powerful software, people are losing the ability to read a chart. Interpreting a chart gets you active in the analysis rather than

passively waiting for the computer to tell you which stock to buy.

Power-users actively participate in the decision process. They draw trendlines so they can see patterns develop. They look at whether the stock has recently closed near its high or low point. You can see a lot by looking.

Try to emulate these characteristics of power users, and become a power user yourself. ∎

MARKET REVIEW

The market entered the new year on a buy signal which was registered near the end of December. This signal didn't last long. A 96 sell signal was registered on January 8. The Phase indicator confirmed the sell signal on that same day.

The timing couldn't be better as the Dow fell 220 points the next day. This was a short-lived signal; a 97 buy came on January 12 and was confirmed by the Phase indicator on

January 14. This looked to be a better signal than most of those registered in the past because the percentage of stocks giving both confirmed and unconfirmed AIQ buy signals was over 80%. A continuation buy signal was registered on January 28.

It is important that Martin Luther King's Birthday (a market holiday for the first time this year) is designated as a holiday in your holiday file. To be sure, go to Data

Manager in the current version of TradingExpert. Select *Manager* from the menu bar, then *Properties*, and highlight the holiday file. (If you do not have the current version, select *Modify Holidays* from the *Manager* menu.) Type in 01/19/98 for Martin Luther King's Birthday in one of the empty fields, if it is not already there. Most users will have this date listed, but you should check. ∎

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
Superior TeleComm Inc.	SUT	5:4	02/03/98	Patterson Dental	PDCO	3:2	02/18/98
MTS Systems	MTSC	2:1	02/03/98	Buckeye Tech.	BKI	2:1	02/18/98
Rite Aid	RAD	2:1	02/04/98	Nipsco Inds	NI	2:1	02/23/98
Graco Inc.	GGG	3:2	02/05/98	Nobility Homes	NOBH	3:2	02/23/98
CKE Restaurants	CKR	10%	02/05/98	Microsoft Corp.	MSFT	2:1	02/23/98
Craig Corp	CRG	2:1	02/09/98	Citrix Sys.	CTXS	3:2	02/23/98
Applied Power 'A'	APW	2:1	02/09/98	AAR Corp.	AIR	3:2	02/24/98
Medical Assur.	MAI	5%	02/09/98	Quest Comm Int'l	QWST	2:1	02/25/98
SLH Corp	SLHO	2:1	02/10/98	Westamerica Bancorp	WABC	3:1	02/26/98
Casey Gen. Stores	CASY	2:1	02/10/98				

Trading Suspended:

Reading & Bates (RB), Zytec Corp. (ZTEC), General Host (GH), Barnett Banks (BBI), Boston Technology (BSN), Computervision Corp. (CVN), Hudson Foods (HFI), MacFrugal's Bargains (MFI), Venture Stores (VEN)

Name/Ticker Changes:

CPC Int'l (CPC) to Best Foods (BFO), Tucson Elect Power (TEP) to UniSource Energy Corp. (UNS), CheckFree Corp. (CKFR) to Checkfree Holdings Corp. (CKFR), Alltrista Corp. (JARS) to Alltrista Corp. (ALC), Starwood Lodging Trust (HOT) to Starwood Hotels & Resorts Trust (HOT)
Columbia Gas Sys. (CG) to Columbia Energy Group (CG)

EDS ANALYSIS

A FIRST LOOK AT EXPERT DESIGN STUDIO – AIQ'S SCREENING/BACKTESTING SYSTEM

When we introduced the windows version of TradingExpert, our goal was to open up the system to users, enabling them to use the program in a manner that best suited their needs. Rather than telling traders what they should be doing, we wanted to offer traders a system where they could tell the program what they want to do. This is what our newly released Expert Design Studio (EDS) is all about.

EDS allows users to create their own screening reports and then backtest the effectiveness of the created reports. Users can now create their own trading systems. In this article, we'll look at the process that one typically takes in creating an effective screening technique.

Before reporting the results of our testing, we'll first give the general criteria used for all of the individual screenings. All of the screenings reported in this article are

Table 1

based on a database of the current S&P 500 stocks with a minimum price of $15. Our criteria of "when to sell" was the same in all the tests: we

told the system to protect 90% of capital and then protect 90% of our profit above 5%.

We began our test by analyzing the effect that a stock's trend has on indicator performance. We tested the MACD buy signals on both uptrending and downtrending stocks. To produce a list of uptrending stocks, we created a rule that only picks stocks that were above their 50-day and 200-day moving averages. To produce a list of downtrending stocks, we created a rule that only picks stocks that were below both their 50-day and 200-day moving averages.

Table 1 shows the results of looking at MACD buy signals on uptrending stocks. A MACD buy signal is when the Phase Line (fast line) rises above the Signal Line (slow line). Only stocks that were above their 50-day and 200-day moving averages were examined.

We see that from January 5, 1995

Table 2

to January 23, 1998, there were 4650 occasions when an S&P 500 stock gave a MACD buy signal at the same time that it was above both its 50-day moving average and 200-day moving average. The average trade lasted 29 days and had a 1.88% profit.

This sounds very profitable but the strategy actually underperformed the market. If we purchased the market (as represented by the ZALL, the index of S&P 500 stocks), we would have made 2.27% per trade. Our stocks made money but they underperformed the market.

Our next test was the same as in Table 1 but the stocks had to be below their 50-day and 200-day moving averages. The results found in **Table 2** are much more impressive. In testing the MACD crossover on downtrending stocks, we have an average gain per trade of 2.84% with an average holding period of 22 days.

The MACD crossover works better for stocks in a downtrend than it does for stocks in an uptrend. The return per trade is not only higher, but the average holding period is lower.

Table 3

ebm EDS - Expert Design Studio

File Test View Help

Summary | Positions |

OBM

		Winners	Losers	Neutral
Start test date:	01/05/95			
End test date:	01/23/98			
Number of trades in test:	418	331	87	0
Average days per trade:	20	19	21	0
Maximum Profit/Loss:		23.81%	(24.24)%	
Average Drawdown:	(4.01)%	(2.10)%	(11.28)%	
Average Profit/Loss:	2.91%	6.58%	(11.04)%	
Average ZALL Profit/Loss:	2.07%	2.91%	(1.14)%	
Probability:		79.19%	20.81%	
Average Annual ROI:	36.43%	84.27%	(136.56)%	
Annual ZALL (Buy & Hold):	29.36%			
Reward/Risk Ratio:	2.27			

For Help, press F1   NUM

With the promising results of MACD crossovers on downtrending stocks, we'll add more variables to the model used in Table 2 to see if we can improve performance. The next test adds a Stochastic buy signal to the equation. A Stochastic buy signal occurs when the indicator moves from below 20 to above 20. For our model, a stock was purchased when a stock gives both a MACD buy signal and a Stochastic buy signal at the same time that it is above both its 50-day and 200-day moving average.

The results of this test are found in **Table 3**. By adding the Stochastic screening, the number of trades is greatly reduced from 1678 to 418. The average trade is slightly more profitable with about the same holding period. We now have a 2.91% return per trade with a 20 day holding period. This compares to a 2.07% return if we traded the market instead of the individual stocks.

Next, we'll add the CCI indicator to the analysis. This indicator can be used in a variety of ways. Some use it as an overbought/oversold indicator where a buy signal occurs when it rises above -100. In our model, we found better results by looking at high CCI numbers, which implies that the stock is moving higher over the short term.

We created a rule that required the CCI to be above +100. We changed the CCI indicator to use 10 days instead of the 90 day default

Table 4

ebm EDS - Expert Design Studio

File Test View Help

Summary | Positions |

OBM

		Winners	Losers	Neutral
Start test date:	01/05/95			
End test date:	01/23/98			
Number of trades in test:	7	7	0	0
Average days per trade:	12	12	0	0
Maximum Profit/Loss:		8.44%	0.00%	
Average Drawdown:	(1.39)%	(1.39)%	0.00%	
Average Profit/Loss:	5.19%	5.19%	0.00%	
Average ZALL Profit/Loss:	2.08%	2.08%	0.00%	
Probability:		100.00%	0.00%	
Average Annual ROI:	102.84%	102.84%	0.00%	
Annual ZALL (Buy & Hold):	29.36%			
Reward/Risk Ratio:	100.00			

For Help, press F1   NUM

value. The indicator will fluctuate more with this lower value so more buy signals are triggered.

The result of combining the CCI, Stochastic, and MACD on downtrending stocks is found in **Table 4**. Here we see what initially looks like tremendous results. The average trade gained 5.19% with a 12 day holding period. That is more than double the market's return. The annualized return is 102.84%. The problem is there were only seven trades over the three year time period. With so few trades, we don't know if the screening system is good or just lucky.

In our final screening, we've loosened the parameters in order to increase the number of trades. Instead of requiring that the CCI be above 100, we lowered the minimum CCI value to 50. Also, we changed the Stochastic to allow a buy when the crossing is above the 30 level.

The result is found in **Table 5**. There are now 174 trades. The average trade is 3.84% with a 21 day holding period. This screening outperformed the market by about 1.4% per trade. This outperformance is reflected in the 44.7% annualized

Table 5

return compared to the 29.36% annual return on the market.

Table 6 displays our final model. Remember, our intermediate term moving average (IT MA) is set in TradingExpert Charts to 50 days, the long term moving average (LT MA) is set to 200 days, and the CCI is set to 10 days. You can download an

Table 6

EDS file for the model shown in Table 6 on AIQ's internet home page at www.aiq.com. Go to Technical Support and then TradingExpert 4.1 and EDS Support.

It is always best to test a model on a different database or, if on the same database, with a different time period to see if the results continue to outperform. If it works under one scenario and not the other, then the model is over-optimized.

We tested the model used in Table 5 on a database of 2000 stocks, adding a minimum volume screening of 200,000 shares. The model still outperformed but by a lesser degree. This model works best with large company stocks. Large company stocks are less likely to remain in a downtrend than the more volatile small company stocks.

If you have questions about EDS, send a note to Opening Bell Q&A at AIQonline@aol.com, or mail questions to P.O. Box 7530, Incline Village, NV 89452. We'll address your questions in a future issue. ∎