AIQ Opening Bell Newsletter

August 2003 Vol. 12 Issue 8

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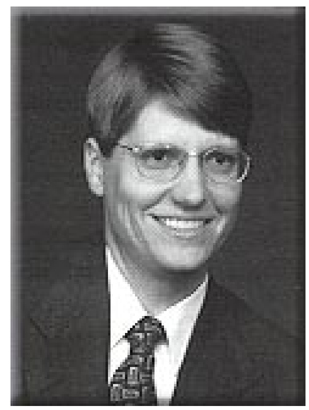
The Opening Bell Newsletter
is a publication of AIQ Systems
P.O. Box 7530
Incline Village, Nevada 89452

Active EDS Trading Model

Developing a Highly Effective Stock Entry System Using 'Top of the List' Bullish Rule

By David Vomund



DAVID VOMUND

We tested all of the pre-built Expert Design Studio (EDS) screening rules in the March 2003 *Opening Bell* and the most effective trading rules using a fixed 5-day holding period were listed. Nearly all the rules that were reported could be used as effective trading models. However, some of the rules resulted in excessive numbers of trades over the five-year testing period, so there was room to make improvements on their performance.

In this article, we'll use the information from the March 2003 issue to develop a highly effective stock entry system.

A recurring theme from the most effective rules was that it works to buy stocks on a pull-back. Many of the top screening rules required stocks to fall enough to where their indicators moved out of overbought territory. One bullish rule, however, captured our attention because it could occur when a stock's price was high or when a stock's price was low. The rule simply states that a stock's volume must be twice its average. In other words, there is a one-day volume spike.

A backtest of a screen that looks for volume spikes shows very bullish results. **Figure 1** displays the results of an Expert Design Studio backtest of AIQ's pre-built rule which states that the current day's volume is at least twice its 21-day average. The testing period is

> ***"One bullish rule (from the list of most effective rules) captured our attention because it could occur when a stock's price was high or when a stock's price was low. The rule simply states that a stock's volume must be twice its average."***

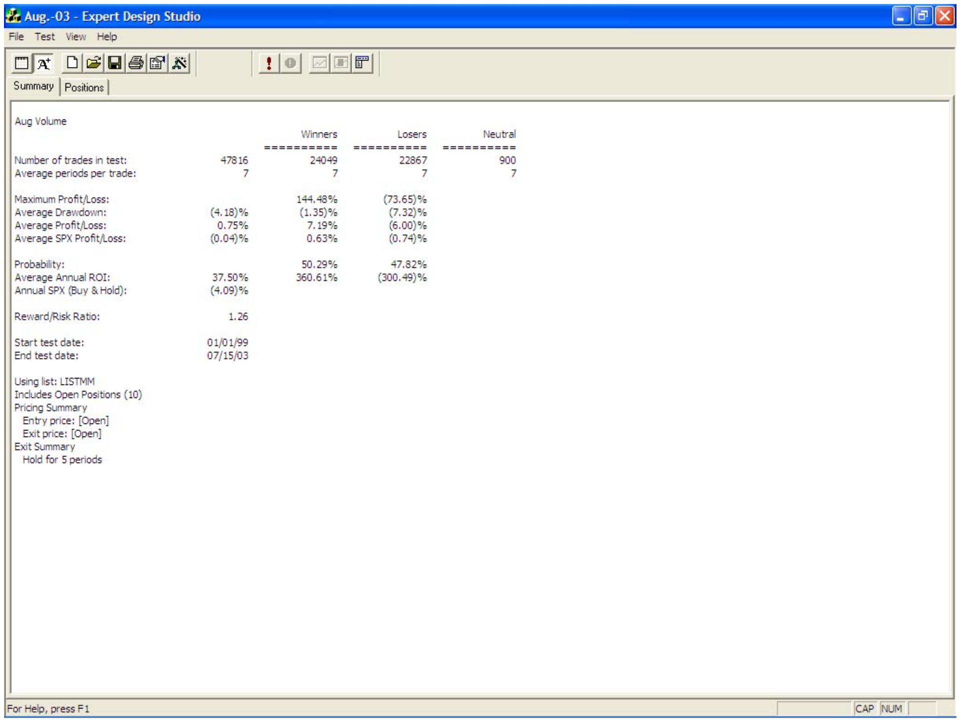
from 01/01/99 to 07/15/03. This period includes both bull and bear markets. The stocks used in the backtest are the 1300 AIQ Pyramid stocks. The sell strategy is a fixed 5-day holding period.

In Figure 1 we see that the average trade outperformed the S&P 500. The average trade gained 0.75% in the 5-business-day holding period (7 calendar days). The annual return on investment was 37.50%. That figure does not represent the return that you would have seen if you applied this strategy, but it is useful in comparing and forming a trading system. This return is in the top 15% of all the returns in the 200 pre-built EDS rules.

In order to effectively trade a system you have to be comfortable with it. Although the volume spike rule tests well, I'd be nervous trading it. Yes, high volume days are very important but what if the stock comes under extreme selling pressure on the high volume day? To help the comfort level, I added a rule stating that on the day of the volume spike the stock must close in the upper half of its daily range. In other words, by the end of the day traders wanted to be in the stock.

By adding this rule, the average return per trade increased from 0.75% to 0.98%. The average annual return on investment rose from 37.5% to 49.2%. The number of trades during the 4 ½ year testing period fell from 47816 to 29852. That's still a lot of trades, which means we can add further screening rules in order to increase the return.

In our effort to find an additional screening filter for our model, we once again returned to the research published in the March 2003 *Opening Bell*. Examining the best rules with lots of trades, we chose to use the 10th best performing rule, which simply states that the stock's RSI Wilder indicator is below 30. That implies an oversold condition.



Aug.-03 - Expert Design Studio

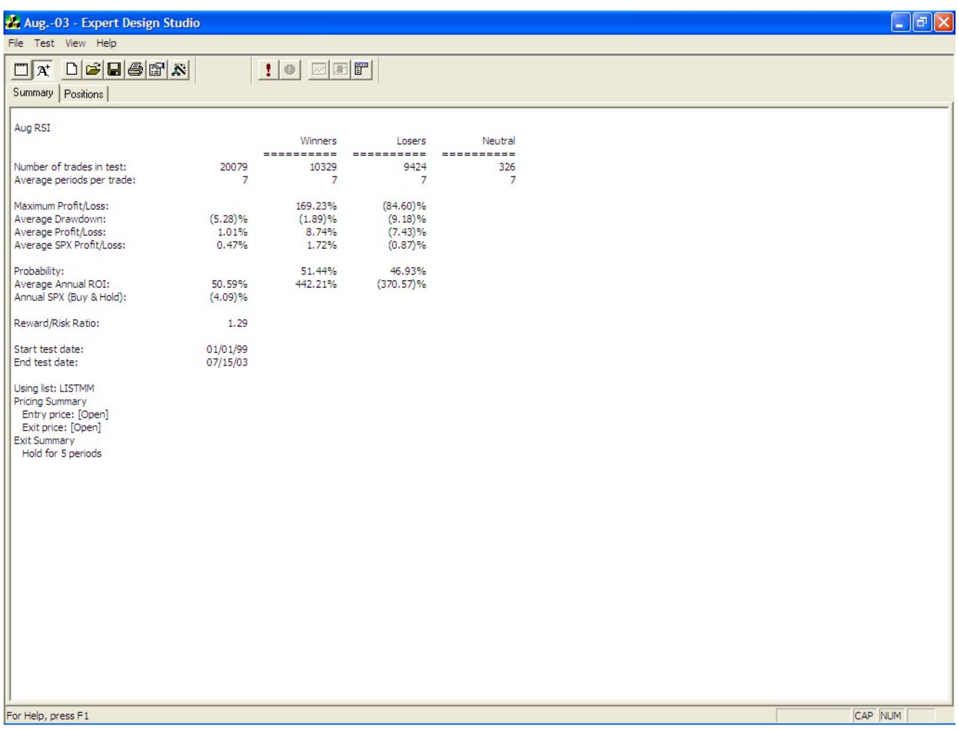
Aug Volume

		Winners	Losers	Neutral
Number of trades in test:	47816	24049	22867	900
Average periods per trade:	7	7	7	7
Maximum Profit/Loss:		144.48%	(73.65)%	
Average Drawdown:	(4.18)%	(1.35)%	(7.32)%	
Average Profit/Loss:	0.75%	7.19%	(6.00)%	
Average SPX Profit/Loss:	(0.04)%	0.63%	(0.74)%	
Probability:		50.29%	47.82%	
Average Annual ROI:	37.50%	360.61%	(300.49)%	
Annual SPX (Buy & Hold):	(4.09)%			
Reward/Risk Ratio:	1.26			
Start test date:	01/01/99			
End test date:	07/15/03			

Using list: LISTMM
Includes Open Positions (10)
Pricing Summary
Entry price: [Open]
Exit price: [Open]
Exit Summary
Hold for 5 periods

Figure 1. Results of EDS backtest run on volume spike screening rule.

"In order to effectively trade a system you have to be comfortable with it. Although having a volume spike tests well, I'd be nervous trading it…I added a rule stating that on the day of the volume spike the stock must close in the upper half of its daily range."



Aug.-03 - Expert Design Studio

Aug RSI

		Winners	Losers	Neutral
Number of trades in test:	20079	10329	9424	326
Average periods per trade:	7	7	7	7
Maximum Profit/Loss:		169.23%	(84.60)%	
Average Drawdown:	(5.28)%	(1.89)%	(9.18)%	
Average Profit/Loss:	1.01%	8.74%	(7.43)%	
Average SPX Profit/Loss:	0.47%	1.72%	(0.87)%	
Probability:		51.44%	46.93%	
Average Annual ROI:	50.59%	442.21%	(370.57)%	
Annual SPX (Buy & Hold):	(4.09)%			
Reward/Risk Ratio:	1.29			
Start test date:	01/01/99			
End test date:	07/15/03			

Using list: LISTMM
Pricing Summary
Entry price: [Open]
Exit price: [Open]
Exit Summary
Hold for 5 periods

Figure 2. Results of EDS backtest run on RSI below 30 screening rule.

In **Figure 2** we show the results of testing the rule which requires the RSI Wilder indicator to be below 30. Similar to our first test, a fixed 5-day holding period was used on a time period that covered both bull and bear markets. The average trade gained 1.01% versus an equivalent trade in the S&P 500 of 0.47%. There were over 20,000 trades. This screening technique can effectively be used on its own but with so many trades it is easy to apply more rules.

For our final short-term trading model, we combined the volume spike rule with the oversold RSI Wilder rule. Here is our final model:

- The stock's daily volume must be at least twice its average.
- The stock must close in the upper half of its daily trading range.
- The stock's RSI Wilder indicator is below 30.

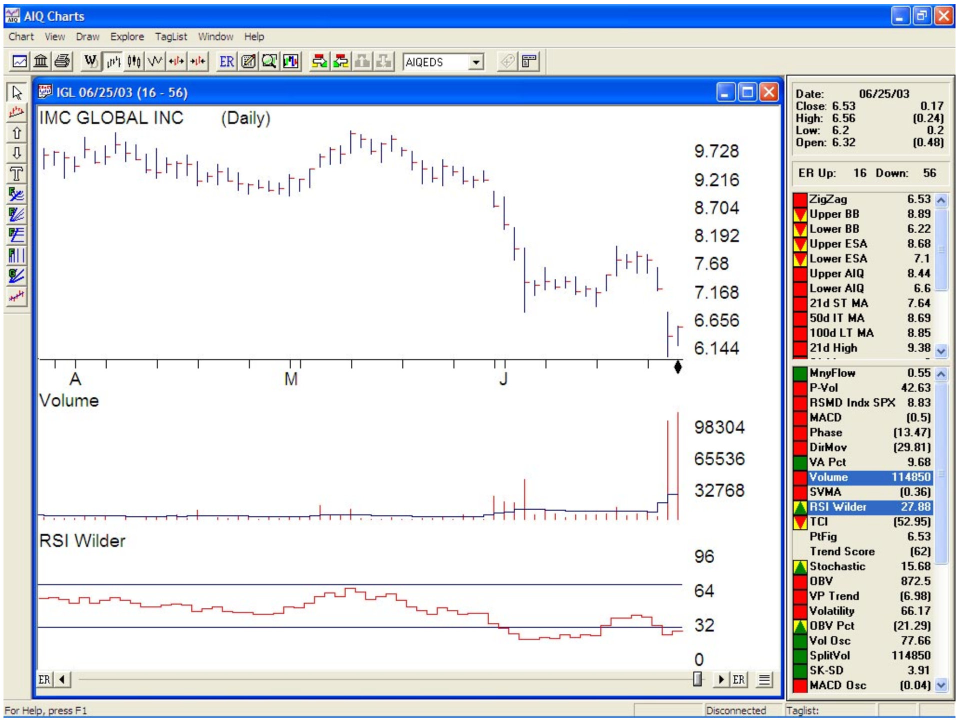


Figure 3. Daily chart of IMC Global. Stock passed screen on 6/25/03 when it closed near its high for the day with unusually high volume and an RSI value below 30.

> ***"For our final short-term trading model, we combined the volume spike rule with the oversold RSI Wilder rule...The average annual return on investment leaped to 116%."***

Here is the EDS code:

Volume if [volume] >= [volume esa] * 2.

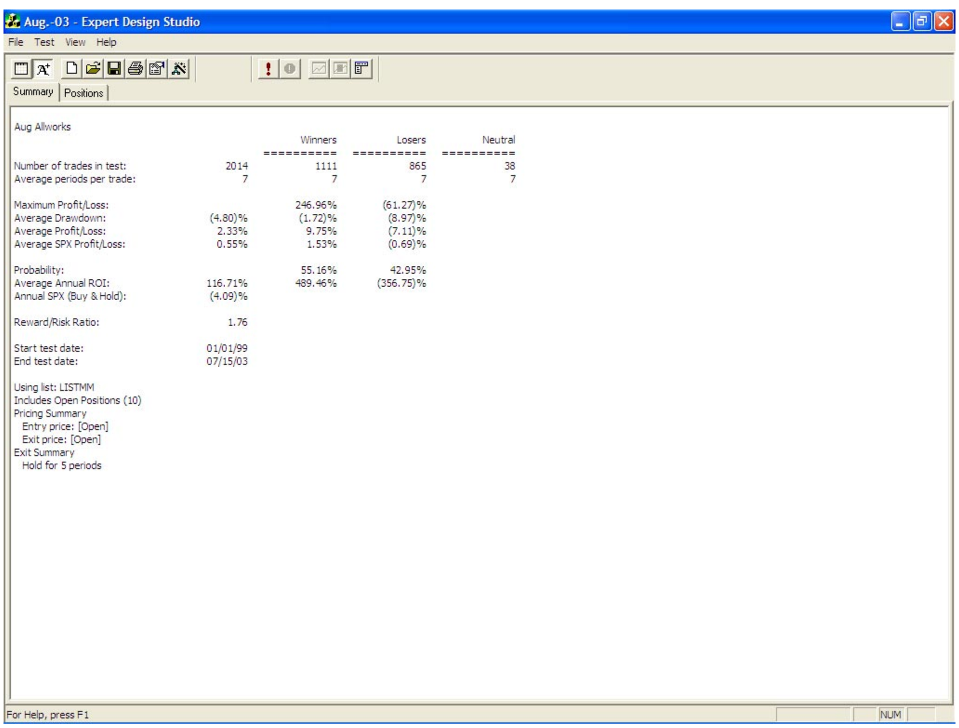
Price if [close]>([high]+[low])/2.

RSI if [RSI Wilder]<30.

Allworks if Volume and price and RSI.

This technique is simple and straightforward. That will help it to continue to work in the future. **Figure 3** shows an example of a recent stock selection. IMC Global (IGL) passed our model on June 25 when it had extremely heavy volume, an RSI below 30, and closed near its daily high. This stock would have passed the screening on the previous day except it failed to close in the upper end of its range.

While simple, the model is highly effective. **Figure 4** shows a backtest of the model. Notice that when we combine the strategies found in Figure 1 and Figure 2, the number of trades is dramatically reduced. Still, with 2014 trades there are plenty of selections. The return per trade dramatically jumped. The



Aug.-03 - Expert Design Studio

Aug Allworks

		Winners	Losers	Neutral
Number of trades in test:	2014	1111	865	38
Average periods per trade:	7	7	7	7
Maximum Profit/Loss:		246.96%	(61.27)%	
Average Drawdown:	(4.80)%	(1.72)%	(8.97)%	
Average Profit/Loss:	2.33%	9.75%	(7.11)%	
Average SPX Profit/Loss:	0.55%	1.53%	(0.69)%	
Probability:		55.16%	42.95%	
Average Annual ROI:	116.71%	489.46%	(356.75)%	
Annual SPX (Buy & Hold):	(4.09)%			
Reward/Risk Ratio:	1.76			
Start test date:	01/01/99			
End test date:	07/15/03			

Using list: LISTMM
Includes Open Positions (10)
Pricing Summary
Entry price: [Open]
Exit price: [Open]
Exit Summary
Hold for 5 periods

Figure 4. Results of EDS backtest run on final stock selection screening system.

average trade gained 2.33% compared to a gain of 0.55% in the S&P 500. The average annual return on investment leaped to 116%.

How does it perform on S&P 500 stocks? Using the same 5-day holding period and a time period from 01/01/99 to 07/15/03, the average trade gained 1.28% for an average annual return on investment of 64%. There were 672 trades.

Our tests show that the model is highly effective in screening for stocks with short holding periods. It does not, however, say how much money would have actually been made using the system. There are too many assumptions. The largest assumption being that one could act on every trade. That's impossible. Eventually, a portfolio is fully invested.

To get a more accurate picture of how the strategy would have performed, we will use AIQ's Portfolio Simulator. As inputs, we used today's S&P 500 database and ran a test dating back to 01/01/99. In addition to using the 5-day holding period, we also applied a 90% principal protect. Each stock purchase represented 10% of the portfolio value and 10 positions represented a fully invested portfolio. No stock could be purchased unless there was sufficient cash in the portfolio. A discount brokerage rate was used.

The results are found in **Figure 5**.

Account Statistics/Analysis

Start date: 01/01/99
End date: 07/16/03

		Winners	Losers	Neutral
Number of trades:	544	275	269	0
Average periods per trade:	6	7	6	0
Maximum Profit/Loss:		55.65 %	(31.54)%	
Average Drawdown:	(4.47)%	(1.44)%	(7.56)%	
Average Profit/Loss:	0.39 %	6.45 %	(5.80)%	
Average SPX Profit/Loss:	(0.09)%	0.81 %	(1.01)%	
Probability:		50.55 %	49.45 %	
Average Annual ROI:	20.41 %	323.65 %	(317.46)%	
Annual SPX (Buy & Hold):	(4.20)%			
Reward/Risk Ratio:	1.14			

Portfolio:
Starting Balance: 100000.00
Ending Balance: 121002.55
Gain/Loss: 21002.55
Gain/Loss %: 21.00 %
Annualized: 4.29 %

Account default strategy:
Volume Spike with low RSI
Using list: SP500
Pricing Summary:
Entry price: [Open]
Exit price: [Open]
Entry Summary:
Allworks

Exit Summary:
Hold for 5 periods
Cap. Prot. 90%

Capitalization
10.00% of portfolio value
Computed every 20 days
No more than 3 new trades per day
No more than 10 open positions
Capital reserve of at least 400
Leverage = 0%
Initial requirement for short positions = 50%

OK Print

Figure 5. Portfolio Simulator test results for the final stock screening system. All positions were held for a fixed period of five days. System outperformed S&P 500 by wide margin.

"These are backtests and past performance does not guarantee future returns. We've seen, however, that previous EDS models that were published in the Opening Bell have stood the test of time. I believe this one will as well."

Although the number of winning trades is only slightly higher than the number of losing trades, the average return per trade is 0.39% and the portfolio gained 21% over the time period. The S&P 500 fell over the same time period. Running the same test from the start of the bear market through July 15, 2003 produced a 32% total return. Results are higher when the model is run on a larger database.

These are backtests and past performance does not guarantee future returns. We've seen, however, that previous EDS models that were published in the *Opening Bell* have stood the test of time. I believe this one will as well.

A link to this EDS model is attached with the newsletter. In addition, the model can be downloaded at AIQ's web page at *www.aiqsystems.com.*

*David Vomund publishes VIS Alert, a weekly investment newsletter. For sample issues, visit **www.visalert.com.***

Understanding AIQ's US Score

‘US Score’ Is Widely Used Market Timing Tool – Plus It Helps Keeps Your Emotions In Check

By David Vomund

An article on the US Score and how it can be used to control your emotions appeared in last December’s *Opening Bell*, and since that time this score has been widely followed and has served traders well. Based on AIQ’s Expert Rating technology, the US Score is working well at a time when the market timing ratings have faltered. In this article, we’ll take a close look at the behavior of the US Score to gain a better understanding of how it works.

Expert Ratings are either “confirmed” or “unconfirmed.” A confirmed buy signal occurs when a stock has a recent Expert Rating up signal of 95 or greater along with an increasing Phase indicator. The opposite is true for confirmed sell signals. Unconfirmed signals, however, occur when there is an Expert Rating of 95 or greater but the Phase indicator fails to move in the direction of the signal. It is the unconfirmed signals that are of interest.

AIQ’s Market Log report lists the percentage of stocks giving unconfirmed signals (US). The US Score is found near the top of the report. A US score of 80-20 implies that of the stocks giving unconfirmed signals, 80% are on the buy side and 20% are on the sell side.

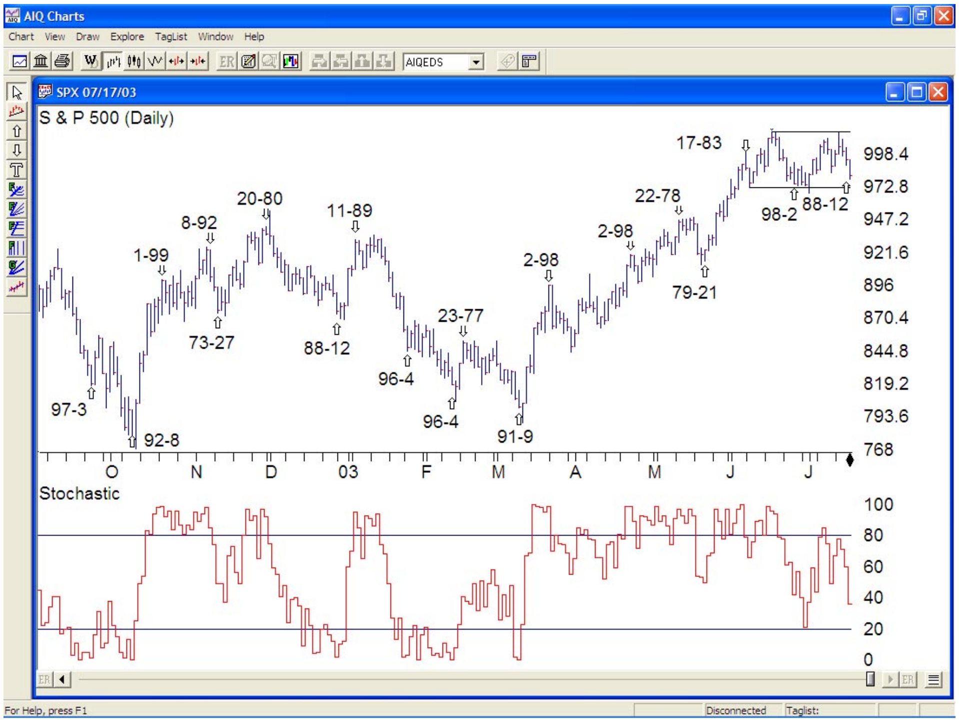


Figure 1. Daily chart of the S&P 500 with the Stochastic indicator plotted in lower window. Arrows show short-term price inflection points and US Scores computed for S&P 500 stocks. Notice that US Scores tend to mirror Stochastic values.`

“When a lot of stocks are giving unconfirmed AIQ Expert Rating buy signals, a market rally may be near. Conversely, when a large number of stocks are giving unconfirmed AIQ sell signals, a market decline may be approaching.”

The US Score can be used as a market timing tool. When a lot of stocks are giving unconfirmed AIQ Expert Rating buy signals, a market rally may be near. Conversely, when a large number of stocks are giving unconfirmed AIQ sell signals, a market decline may be approaching.

In the December *Opening Bell* article, we suggested that the US Score can be used to control your emotions. That is, don’t buy when the sell side number of the US Score is more than 85 (85% of the stocks are giving sell signals). Conversely, don’t short when the buy side number is more than 85 (85% of the stocks are giving buy signals). Unfortunately, your emotions usually tell you to do just the opposite.

Since the US Score measures unconfirmed signals, it serves as an overbought/oversold indicator. As the market heads lower, many stocks give AIQ buy signals. Yet they are unconfirmed buy signals because the stocks are moving lower. Whenever the US Score indicates a large number of buy signals you can be assured that the market is falling. Once the market rises, many of the signals become confirmed and the US Score turns more neutral. The opposite occurs when the market rallies.

Looking at the overbought/oversold indicators, the one that most resembles the action of the US Score is the Stochastic. When the market rallies, the Stochastic moves above 80 representing an overbought condition. That can be an indication that no new long positions should be added. A Stochastic sell signal occurs when the indicator falls below 80. Conversely, when the market is falling the Stochastic will hit oversold when it falls below 20.

“The US Score can be used to control your emotions. That is, don’t buy when the US Score has more than 85% of the stocks giving sell signals. Conversely, don’t short when the US Score has more than 85% of the stocks giving buy signals.”

Figure 1 shows the US Score calculated on the S&P 500 stocks along with the Stochastic indicator. Notice the similarities. At the start of the chart in late September, 97% of the stocks giving unconfirmed signals were on the buy side. The Stochastic also moved below 20. The actual low came in early October when there was a high percentage of stocks giving buy signals and the Stochastic was still oversold.

The market rallied and in mid-October 99% of the stocks giving unconfirmed signals were on the sell side. About that same time, the Stochastic moved above 80 and hit overbought.

During the spring rally, the US Score had a high percentage of stocks on sell signals but there wasn’t a serious correction. At the same time, the Stochastic remained at or near overbought during the entire rally. At nearly all of the swing highs and lows, the US Score and the Stochastic were in agreement.

There are cases where the two indicators diverge. On the last day shown in Figure 1, the S&P 500 had fallen enough to generate a high percentage of stocks giving unconfirmed buy signals but the Stochastic had not yet fallen to oversold.

By studying a chart of the Stochastic, we can learn the behavior of the US Score. Specifically, the overbought and oversold readings tend to time the market very well when the market is drifting sideways. When the market is near the top of its trading range, the US Score tends to have a high percentage of sell signals. Along the same lines, when the market is near the bottom of its trading range, then there is often a high percentage of stocks giving unconfirmed buy signals.

“Based on AIQ’s Expert Rating technology, the US Score is working well at a time when the market timing ratings have faltered.”

When a trend develops, then the signals in the direction of the overall trend are very accurate but the signals against the trend are less effective. During the bear market, the best shorting opportunities were often marked by a bearish US Score. Once a prolonged bull emerges, the opposite will be true.

I repeat, the US Score is helpful in market timing and in keeping your emotions in check. It is not foolproof, however. It is important to determine the trend of the market before deciding how to apply the US Score. Similar to the Stochastic, the US Score works best in a non-trending market.

Market Review

After experiencing a very strong April and May, the market was stuck in a trading range in June and July. For the S&P 500, the upper end of the trading range was 1015 and the lower end was 973. The eventual break of this trading range may tell the direction of the next trend.

As a result of the trading range, the S&P 500 had minimal gains in July, rising 1.62%.

The Nasdaq was stronger than the S&P 500 and had a more positive chart pattern. It broke above its trading range on July 7 and retested the breakout in mid-July. For the month, the Nasdaq Composite rose 6.91%.

Not surprisingly, the strongest sectors were those typically associated with Nasdaq stocks. Biotechnology rose 13% and Electronics rose 12%. Basic Materials performed well, gaining 9%.

Energy and utility stocks were the losers in July. Energy Services fell 8%, Utilities fell 6%, and Energy fell 3%.

August is historically a bad month for the Dow and we all know about September and October. We’ll see if fall weakness brings a buying opportunity this year.

Afraid to Trade?

Successful Traders *Believe* They Can Succeed — This Confidence Is the Gateway to Power

By David Vomund

Many of us have seen a perfect trade go by exactly as we predicted it would. The problem was…we weren't in it. We watch stocks behave as predicted but are afraid to put money to work for fear of picking the one stock that won't work. After three years of a brutal market, many people want to begin trading again but they don't for fear of getting burned.

> ***"To have confidence you must have a solid belief system…without a firm belief in your system and your ability to trade the system, your results will disappoint."***

A proper attitude is essential in good trading. Negative thoughts lead to negative returns. Even if you have an outstanding trading system, your trading results will suffer if you can't always follow the system for fear of being wrong.

An article by Dr. J.D. Smith that was reprinted in the May 2003 *Opening Bell* dwelt on the attitudes of a successful trader, summarized by the DOFPIC concept. The "C" in DOFPIC stands for confidence. At this stage of the market cycle, confidence is the most difficult attitude to master. Both amateurs and professionals alike have been humbled during these last three years.

To have confidence you must have a solid belief system. AIQ provides the tools necessary to effectively trade the market but without a firm belief in your system and your ability to trade the system, your results will disappoint. The human mind can be a very powerful tool, or an unbelievably destructive one. Your belief about your trading ability and potential will ultimately affect your trading decisions. Successful traders share a common belief: *they can succeed*. This confidence is the gateway to power.

As a trader, your goal is to develop a positive trading environment. It's about developing a plan that has the potential to succeed. This takes work.

In this issue's cover article we've produced an effective Expert Design Studio (EDS) model. While this model tests well, it won't initially work for you. That's because you have little confidence in it. Knowing that we like it might allow you to begin trading it but once there is a losing streak, you'll question the model's validity. You'll question our ability to create and publish good models. Finally, you'll stop following it or will switch to another system.

You can't rely on us, or anyone else, to give you confidence in a model. You have to build confidence by relying on your own abilities. Backtest the system. Look closely at its trades. Paper trade the model. Only after you test a model will you believe in it. Once you believe in it you'll have confidence to act on it. Because you acted confidently on it, you will gain results. Because you gained results you will have a greater belief in your potential. That's a positive cycle. That's what you strive for.

Gaining confidence in a system may involve a manual backtest or walk-forward paper trading. If you prefer a more automated approach, it will involve EDS backtests along with Portfolio Simulations. Your success lies in market knowledge and system awareness.

Do your homework before you enter the market. This is easy but can also be time consuming. How many times have you said, "Every time I see this setup, X always happens." That's the beginning of your plan! Creating and backtesting an EDS model helps. It forces you to consider exactly what the entry point is. It requires you to determine what the stop will be.

> ***"You have to build confidence by relying on your own abilities. Backtest the system. Look closely at its trades. Paper trade the model. Only after you test a model will you believe in it. Once you believe in it you'll have confidence to act on it."***

Running EDS backtests of your plan will help you to gain confidence. When the model is complete, run Portfolio Simulations. This forces you to consider money management decisions. Through your research and your work sheets, you'll learn the good and bad aspects of your trading plan.

It's very important that you do this work ahead of time, because the last time that you are objective about the market is before you enter it. Once you enter the market you'll have all the components of the trade figured out ahead of time so you'll be subject to actions that represent your ideas.

Without a plan, you'll go into a trade without a sell rule and you'll find yourself saying, "Well, I really don't want to get out yet and I don't want to be wrong so I'll ride it out a while longer." What happens is that you end up riding it out too long, and you're hit with a loss far greater than it would have been if you had stuck to a plan.

Many times it takes more than running EDS backtests and Portfolio Simulations to gain confidence in a system. You may choose to also paper trade the account for a while. You may also choose to put the model aside for a few months and then see how it would have performed. I gain a lot of confidence in the models we've published in the *Opening Bell* when we do follow-up articles that continue to show good results. It's nice to see models work as you move forward in time.

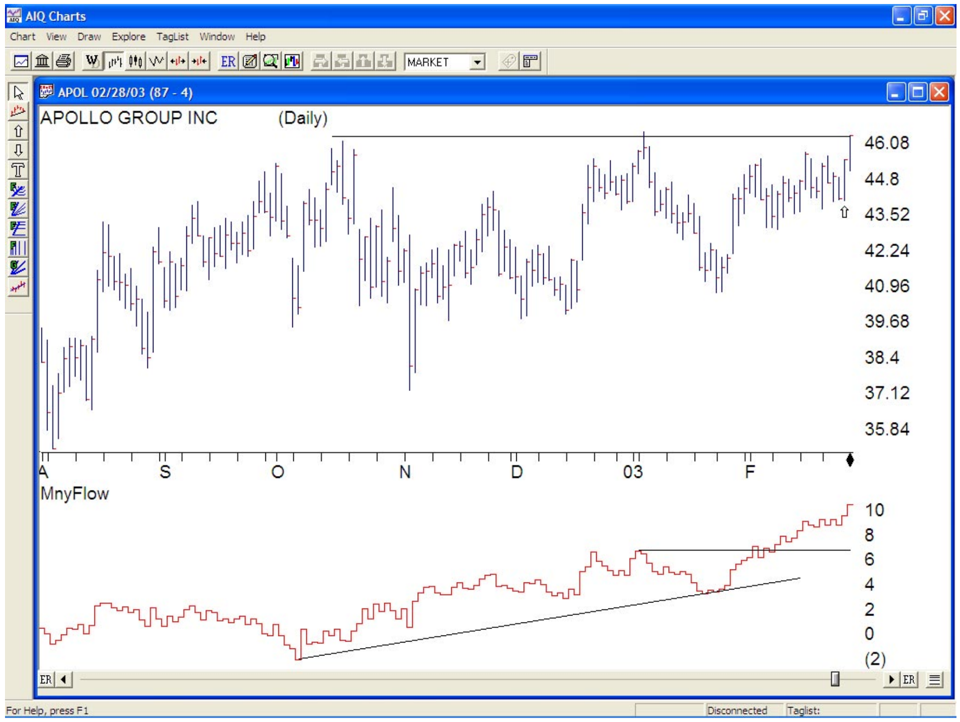


Figure 1. Daily chart of Apollo Group. In late Feb. of 2003, stock looked like a potential winner.

Once you are ready to trade a system, concentrate on your actions. Make sure they are consistent with your backtest. If your trading plan is good, you can see the potential for success immediately. However, sometimes your results do not reflect that potential. If so, you must determine if you followed the plan or deviated from it.

If you follow the plan and have disappointing initial results, make sure they are consistent with your testing. In our cover article in this issue, there was a period in 2003 where 10 out of 12 trades were losing positions. The next ten trades were winners. To give up on the model after the losing trades would have been a mistake.

If, however, your results were disappointing because you didn't follow the plan, then it implies your confidence level was not as it should be. Run more backtests and paper trade until you are ready.

Another pitfall is that you don't act on the buy date and when the stock is a winner you buy at a much higher price. Instead, your focus should be on finding the next winning trade. As an example, I recommended Apollo Group (APOL) in my VISalert.com newsletter but failed to act on it myself. APOL had all the ingredients I like—a long sideways consolidation period with a very strong Money Flow (**Figure 1**). It turned into a huge winner. Do I wish I had bought it? Definitely yes. Does it bother me? No, it is off my radar screen.

As you trade, assume that all your trades are created equal. This means that all the trades within your plan are important, none are better than the others. If you abandon some of the trades in the plan, then you abandon the plan itself. Your results are not based on just one trade, but on a series of trades. If you have confidence in the plan, you believe in its potential and execute it without emotion.

AIQ Opening Bell Newsletter

David Vomund, Publisher
G.R. Barbor, Editor
P.O. Box 7530
Incline Village, NV 89452

AIQ's 14th Annual Lake Tahoe Seminar Focus: Hands-on Trading System Design

October 13, 14, and 15, 2003

This year's AIQ Seminar will be entirely hands-on, with attendees using PCs to follow sessions focusing on trading system design. Day 1 is geared to getting started with AIQ's Expert Design Studio, and Days 2 and 3 are dedicated to advanced trading system design. AIQ users already experienced with the Expert Design Studio can skip Day 1 and enroll for the two-day advanced sessions only.

Seminar Location
Harvey's Resort and Casino, South Lake Tahoe

Seminar Agenda

DAY 1 Monday Oct. 13 - Getting Started with Expert Design Studio

This entire day is devoted to getting you up to speed. Starting with the building block basics, **AIQ's David Vomund and Steve Hill will guide you through the process of creating a trading system.** Included will be an EDS overview, basic pre-built rules and filters, combining pre-built rules, modifying settings, pre-designed EDS strategies, backtesting strategies, and writing a simple rule.

DAY 2 Tuesday Oct. 14 - Developing and Testing Trading Systems

Starting with pre-scan filters and rules, AIQ s Dean Kasparian and Mary Jane Evans will move onto **narrowing the list of tickers and trading ideas by analyzing and developing advanced testing techniques**. Common pitfalls like over optimizing and over backtesting will be discussed as crucial elements to system design.

DAY 3 Wednesday Oct. 14 - Advanced Trading Systems

AIQ pros Steve Palmquist and Rich Denning will conduct Day 3 sessions. Steve Palmquist's sessions will include development and testing of several trading systems, including **using market conditions to determine whether to focus on the longs or shorts, and running the system on current data to show the trades for the next day.** Steve will also show scans to find the strongest stocks in the market, the ones mutual fund managers are buying. Rich Denning's sessions will include developing a **portfolio approach to using multiple trading systems with low correlations,** and tips on using the program for system trading that are not "in the manual." Rich will also lead you through the design, test, and monitoring of a trading system.

LIMITED SEATING: Call 1-800-332-2999

All 3 days (Oct. 13, 14, 15) $885

Days 2 and 3 only (Oct. 14 and 15) $590