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Feature

Sections

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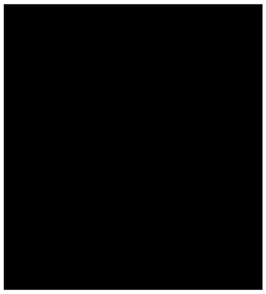
SIGNAL CONFIRMATION

TIMES ARE CHANGING: SHOULD MARKET TIMING SIGNALS BE CONFIRMED ON THE DJIA OR THE SPX?

By David Vomund



DAVID VOMUND

When a market timing signal is registered, most people use the Phase indicator to confirm the signal. Dating back to DOS days, we've always run the Phase indicator on the Dow Jones Industrial Average (DJIA) as confirmation. In fact, when TradingExpert was a DOS product the Phase indicator was calculated based on the Dow even if you charted the S&P 500 or the New York Composite. Back then, the DJIA, S&P 500, and the Nasdaq generally moved together, just to different degrees. When the Dow was up, so were the S&P 500 and the Nasdaq.

The times are changing. Using AIQ's MatchMaker, we see that the correlation of the Dow compared to the Nasdaq in 1998 was 771 (1000 equals perfect correlation). The correlation fell to 625 in 1999. In today's market, it is not uncommon to see the DJIA moving one direction while the S&P 500 moves in another direction.

> *"Last year, confirmation using the DJIA worked better mainly due to the October 25 sell signal... using the DJIA for confirmation kept investors in the market."*

Looking at Figure 1 (on page 3), we see that the DJIA made a new high in January of this year but the S&P 500 only moved to its prior high. More recently, the DJIA hit new lows in mid-February but the S&P 500 was off its lows. The difference between the indexes is due to the effect of technology stocks.

Ten years ago, only one of the 50 largest companies in the S&P 500 (SPX) stock index came from the tech sector. Now, about one-third of the SPX's top 50 companies are techs. With the

Signal Confirmation continued on page 2

SIGNAL CONFIRMATION *continued* . . .

addition of stocks like Yahoo! and America Online, the SPX is much more of a growth index than it used to be.

Dow Jones & Company has been slower to make similar changes to the DJIA. Despite adding Intel, Microsoft, and SBC Communications last year, the DJIA is more of a value index.

When technology stocks do well, the Nasdaq and the SPX outperform the Dow. When high yielding stocks do well, the DJIA outperforms the S&P 500 and the Nasdaq.

The question for people who tend to trade growth stocks is whether they should continue to use the Phase on the DJIA for market confirmation or whether they should switch to the Phase on the SPX or the Nasdaq for confirmation of market timing signals?

Those of you who want to time the Nasdaq can use the Phase indicator on the Nasdaq Composite for confirmation. This isn't ideal, however, because the Nasdaq Composite is more a measure of large-cap technology stocks than it is a measure of overall market health. Timing the Nasdaq based on an overall market timing model is akin to trading one industry group based on the health of the overall market.

Instead, users should monitor the Relative Strength of the Nadaq versus

Table 1

DJIA Expert Rating Trading
Using the Phase indicator on the S&P 500 as Confirmation

Entry Date	Exit Date	S&P 500 % Change	Entry Date	Exit Date	S&P 500 % Change
01/22/88	04/14/88	5.38	04/07/94	06/20/94	1.02
05/03/88	05/04/88	-1.02	07/07/94	08/05/94	1.94
05/13/88	07/18/88	5.35	08/23/94	09/19/94	1.36
07/29/88	10/27/88	1.94	09/28/94	09/29/94	-0.56
11/23/88	01/03/89	2.35	10/10/94	10/20/94	1.70
03/03/89	03/17/89	0.52	11/14/94	04/20/95	8.42
03/29/89	06/29/89	9.35	04/21/95	06/26/95	7.01
07/07/89	10/11/89	9.87	08/25/95	10/02/95	3.86
11/15/89	01/10/90	1.99	10/12/95	10/20/95	0.75
01/31/90	02/20/90	-0.33	11/16/95	12/18/95	1.59
02/27/90	03/22/90	1.64	01/16/96	04/08/96	5.88
05/02/90	07/05/90	6.34	04/15/96	04/17/96	-0.14
08/14/90	10/09/90	-10.10	05/09/96	06/07/96	4.32
10/15/90	12/24/90	8.80	07/18/96	08/29/96	2.15
01/16/91	04/22/91	20.49	09/09/96	01/06/97	12.64
05/09/91	06/17/91	1.80	01/07/97	03/13/97	4.82
07/01/91	07/24/91	0.19	04/08/97	08/08/97	21.85
08/21/91	09/04/91	-0.16	09/02/97	12/09/97	5.20
09/19/91	10/24/91	-0.64	12/29/97	01/08/98	0.28
11/07/91	11/15/91	-2.82	01/14/98	04/20/98	17.30
12/02/91	02/24/92	8.09	06/05/98	06/11/98	-1.73
04/10/92	05/15/92	1.43	06/17/98	07/21/98	5.24
05/29/92	06/05/92	-0.45	08/17/98	09/03/98	-9.84
06/29/92	07/20/92	1.18	09/08/98	10/05/98	-3.41
07/28/92	08/06/92	0.74	10/09/98	12/03/98	16.84
08/17/92	09/08/92	-1.50	12/29/98	01/13/99	-0.60
09/10/92	09/22/92	-0.67	01/25/99	02/25/99	0.89
10/13/92	12/14/92	5.75	04/21/99	06/10/99	-2.49
12/18/92	01/07/93	-2.39	06/29/99	07/20/99	1.90
01/14/93	02/16/93	-0.47	08/13/99	08/27/99	1.55
07/08/93	10/26/93	3.49	10/04/99	10/12/99	0.65
12/17/93	02/04/94	0.74	10/20/99	10/26/99	-0.59
03/07/94	03/24/94	-0.55	01/07/00	01/24/00	-2.74

The analysis is believed to be reliable but accuracy is not guaranteed. Past performance is not a guarantee of future results.

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SIGNAL CONFIRMATION *continued* . . .

the S&P 500 to see which is outperforming. In addition, using Expert Rating signals from a Nasdaq 100 market works very well (see *Opening Bell*, January 2000).

Since technology stocks have a higher weighting in the SPX than in the Dow, and the SPX is considered by many to be the best measure of market activity, it seems like it would make sense to confirm AIQ's market timing signals using the SPX's Phase indicator.

That is, when an Expert Rating of 95 or greater is registered on the DJIA, then plot the SPX and act on the buy signal only when the SPX Phase indicator increases in value. Conversely, a DJIA sell signal is not acted on until the SPX's Phase indicator decreases.

We tested the results of confirming market timing signals with the SPX versus the Dow going back to 1988. **Table 1** lists the trade dates using the Phase indicator on the SPX as confirmation of signals.

A similar list of trades using the Phase indicator on the Dow as confirmation was published in the September 1998 *Opening Bell*.

Table 2 compares the two confirmation techniques. The return figures assume you can buy or sell the S&P 500 the day of the signal and they also assume that you place all available funds in each trade. Looking at the results, there is little difference between using the DJIA or the SPX for confirmation. Confirmation using the Dow yields slightly better results.

Looking at the last year, confirmation using the DJIA worked better mainly due to the October 25, 1999 sell signal. This bad signal was immediately confirmed by the SPX but using the DJIA for confirmation kept investors in the market until November 11. Those who used the DJIA as confirmation made an additional 7%.

Determining which market measurement to run a confirmation technique on may become increasingly important if the Dow continues to diverge from other market measurements.

Empirical testing shows that traders should continue to use the Phase indicator on the Dow as a confirmation technique but this is a course worth watching. ■

Figure 1

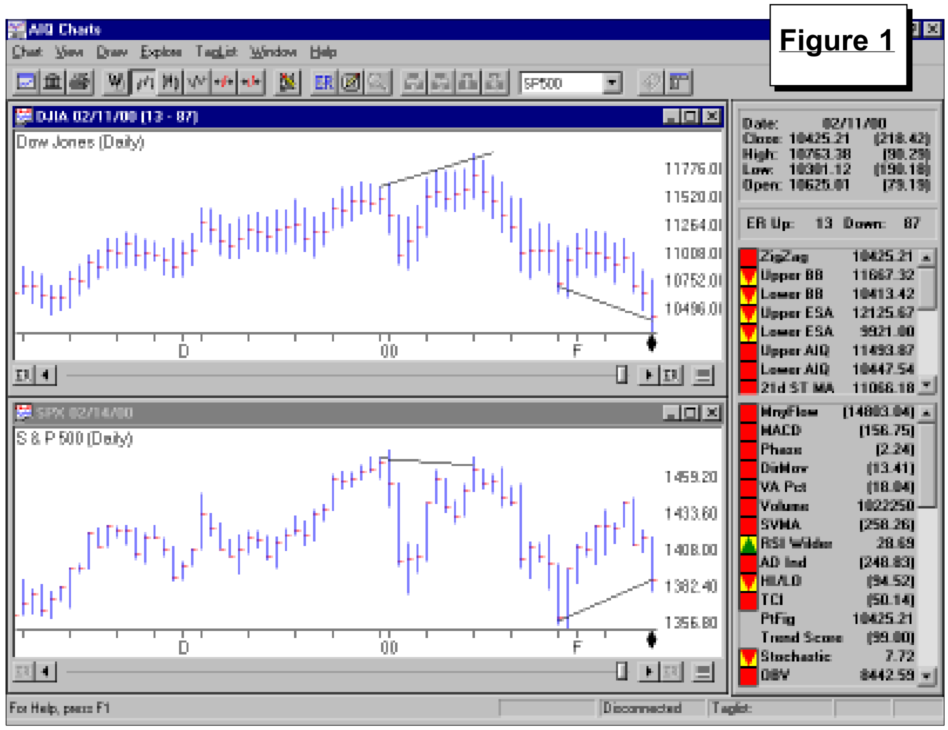


Table 2

Summary Statistics
(1990 through January 31, 2000)

S&P 500 Confirmation	
Annual Return (with compounding)	37.75%
Average Holding Period	43.6 days
Largest Profit	21.85%
Largest Loss	-10.10%
Dow Confirmation	
Annual Return (with compounding)	38.82%
Largest Profit	21.85%
Largest Loss	-9.36%

David Vomund publishes VIS Alert, a weekly investment newsletter. For a sample copy go to ***www.visalert.com*** *or call (775) 831-1544.*

MARKET REVIEW

Depending on what index you use to measure the "market", stocks either did very well or very poorly in February. The Dow and S&P 500 were weak, dragged down by the "old economy" stocks. The Dow fell below the 10,000 level and near month's end was down about 12% for the year. The S&P 500's 8% loss was only slightly better. At the same time the Nasdaq Composite was up 13% for the year and up 17% just in February. It would be easy to say that the overall market was weak and only technology stocks were increasing if it were not for Russell 2000, a broad measure of small-cap stocks, which increased 10%.

The AIQ timing model remained bullish, giving a 98 buy signal on January 31, a 99 buy on February 1, a 100 buy on February 15, and a 95 buy on February 22. The Phase indicator didn't confirm the early signals but it rose in value on February 15, switching the timing model to bullish.

Looking at the individual indicators, the Dow's weekly Stochastic indicator made an infrequent appearance in oversold territory. Surprisingly, TRIN hadn't registered an oversold buy signal. The Dow's Money Flow indicator continued to hit new lows through most of the month.

There were some spectacular gains in selected industry groups. Looking at the Fidelity sector funds through most of February, Select Biotechnology gained 30%, Select Technology gained 23%, and Select Electronics gained 20%. Financial related groups were the worst performers. Select Regional Banks lost 15% and Insurance lost 14%. Retailing was another weak sector; Select Retailing lost 11%. ■

Vomund Is One of Top 10 Market Timers In the Country

AIQ's chief analyst David Vomund has been ranked one of the top 10 market timers in the country by *Timer Digest*, an independent service which tracks the market timing performance of investment newsletters.

Timer Digest rated Vomund's *Vis Alert.com* newsletter as one of the 10 best of all national newsletters tracked for the five-year period ending December 31, 1999. Vomund uses AIQ's TradingExpert Pro exclusively in his analysis to determine market direction.

STOCK DATA MAINTENANCE

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

Stock	Ticker	Split/Div.	Approx. Date
Onyx Software	ONXS	2:1	03/02/00
Jones Pharma	JMED	3:2	03/02/00
Kirlin Holding	KILN	2:1	03/02/00
Winstar Commun.	WCII	3:2	03/03/00
Group 1 Software	GSOF	3:2	03/03/00
Xcelera.com Inc.	XLA	2:1	03/06/00
Veritas Software	VRTS	3:2	03/06/00
Molex Inc.	MOLXA	5:4	03/07/00
Informatica Corp.	INFA	2:1	03/07/00
Cintas Corp.	CTAS	3:2	03/08/00
Solectron Corp.	SLR	2:1	03/09/00
Be Free Inc.	BFRE	2:1	03/09/00
Network Solutions	NASC	2:1	03/13/00
Aspect Development	ASDV	2:1	03/13/00
Broadvision Inc.	BVSN	3:2	03/14/00
Advanced Digital	ADIC	2:1	03/14/00
Advent Software	ADVS	2:1	03/14/00

Stock	Ticker	Split/Div.	Approx. Date
Brocade Comm.	BRCD	2:1	03/14/00
Applied Materials	AMAT	2:1	03/16/00
Gallagher (AJ) & Co.	ALJ	2:1	03/16/00
Wilsons Leather	WLSN	3:2	03/16/00
Analog Devices	ADI	2:1	03/16/00
Cognizent Tech. Sol	CTSH	2:1	03/17/00
Agile Software	AGIL	2:1	03/17/00
CTC Commun.	CPTL	3:2	03/20/00
Macrovision Corp.	MVSN	2:1	03/20/00
Tollgrade Comms.	TLGD	2:1	03/21/00
Immunex Corp.	IMNX	3:1	03/21/00
Westwood One Inc.	WON	2:1	03/23/00
Cisco Systems	CSCO	2:1	03/23/00
Network Appliance	NTAP	2:1	03/23/00
Pinnacle Syst. Inc.	PCLE	2:1	03/27/00
Linear Technolgy	LLTC	2:1	03/28/00
Scientific Atlanta	SFA	2:1	03/28/00

Trading Suspended:
Consolidated Nat. Gas (CNG), Illinova Corp. (ILN), Medco Research Inc. (MRE), MindSpring Ent. (MSPG), Safeskin (SFSK), Watkins-Johnson (WJ), Whitehall Jewelers Inc. (WHJI)

Name/Ticker Changes:
Dayton Hudson (DH) to Target Corp. (TGT)
First Sierra Financial (BTOB) to SierraCities.com Inc. (BTOB)
Frontline Communications (FCCN) to Frontline Communications (FNT)

STRATEGIES UPDATE - PART II

TESTING REVEALS 'HIGHLY EFFECTIVE' PERFORMANCE FOR OUR EDS MECHANICAL TRADING MODELS

By David Vomund

Since AIQ's Expert Design Studio was released, we've created and published several trading strategies in the *Opening Bell*. As we complete more tests, these strategies become more effective. Of the strategies that we have published over the past year, some are for trading long and some for trading short. Let's see how these models have performed since they were first published.

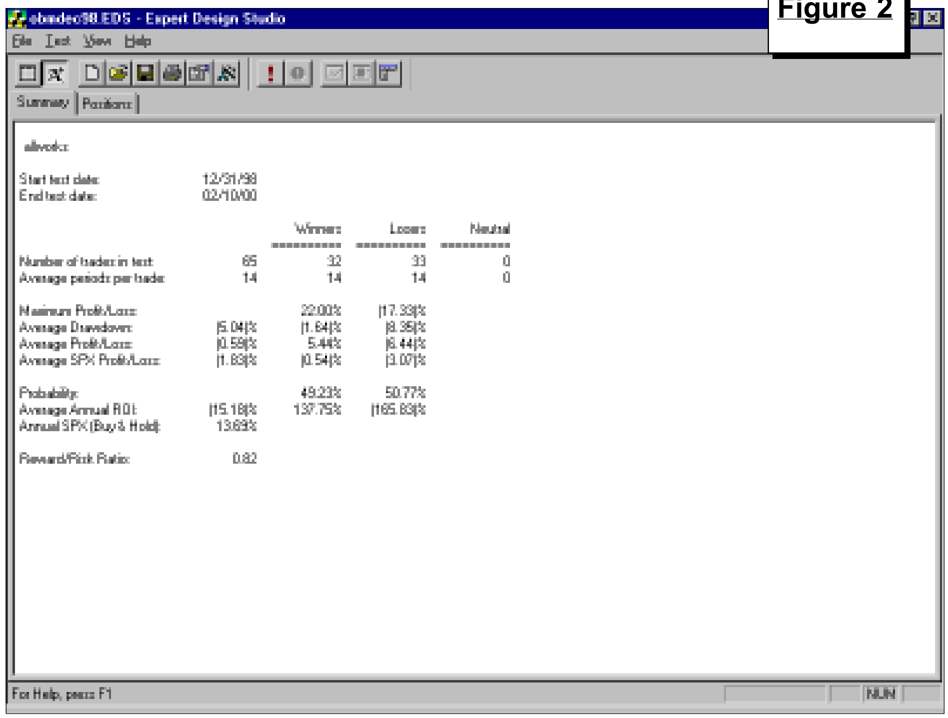
December 1998 – Short Selling Strategies

In the December 1998 issue of the *Opening Bell*, we created a short-selling Expert Design Studio (EDS) model that looked for stocks that were in an overall downtrend but were rallying over the short-term. Specifically, we searched for stocks that had a Directional Movement indicator less than negative 25 and Volume Accumulation Percent less that negative 20. We also required the stock to be crossing above its lower exponentially smoothed moving average.

In the *Opening Bell* article, we ran the EDS model on a list of the S&P 500 stocks and we discussed using several different sell strategies. The quickest sell strategy used a fixed 10-day holding period. Using a fixed 10-day holding period, we are pleased to say that since the article was published the short selections outperformed an equivalent short trade in the S&P 500 index.

Still, one would have lost money in 1999 by following such a strategy (1999 was not a good year to only follow a short selling model). The average short trade lost 0.6% whereas an equivalent short in the S&P 500 would have lost 1.8% (see **Figure 2**).

Figure 2



In the original article we also discussed using a sell strategy that protected 90% of capital, and 90% of profits above 10%. The results since publication using this sell strategy were very good.

In **Figure 3** we show a test which covers the beginning of 1999 through mid-February 2000. Using a database of the current S&P 500 stocks, the average short selection gained 1.4% whereas an equivalent short in the S&P 500 would have lost 2.5%. There were 63 trades. Not bad given the bullish market environment!

March 1999 – Growth Strategy

Last March we ran a timely article that contained an EDS model for growth investors. Little did we know that 1999 would be one of the best years ever for growth strategies.

Growth investors buy into strength rather than trying to pick lows. The theory is what is high often goes higher. Therefore, the key component in our model was that the stock must be above its 28-day Exponentially Smoothed Moving Average for all of the last 60 days. Only stocks experiencing a strong rally can accomplish this.

As we said in the original article, the pattern is so aggressive that many growth investors may be too timid to buy stocks on this basis. Yet, the model backtested well and in 1999 it continued its strong performance.

Having a stock remain above its 28-day moving average for 60 days backtested well, but in the original article we added the criteria that the stock must be below its upper AIQ Trading Band. This eliminated stocks that had run too far. In addition, we added a rule stating that the Volume Accumulation Percent indicator must be above 30. We used a fixed 30-day holding period.

How has this strategy performed since publication? In **Figure 4** we ran

Strategies Update continued on page 6

STRATEGIES UPDATE *continued . . .*

the model on a database of about 2200 stocks. The results continue to be impressive, aided by a great market for growth investors. There were 65 trades. The average gain per trade was 6.4% with an average holding period of 40 business days.

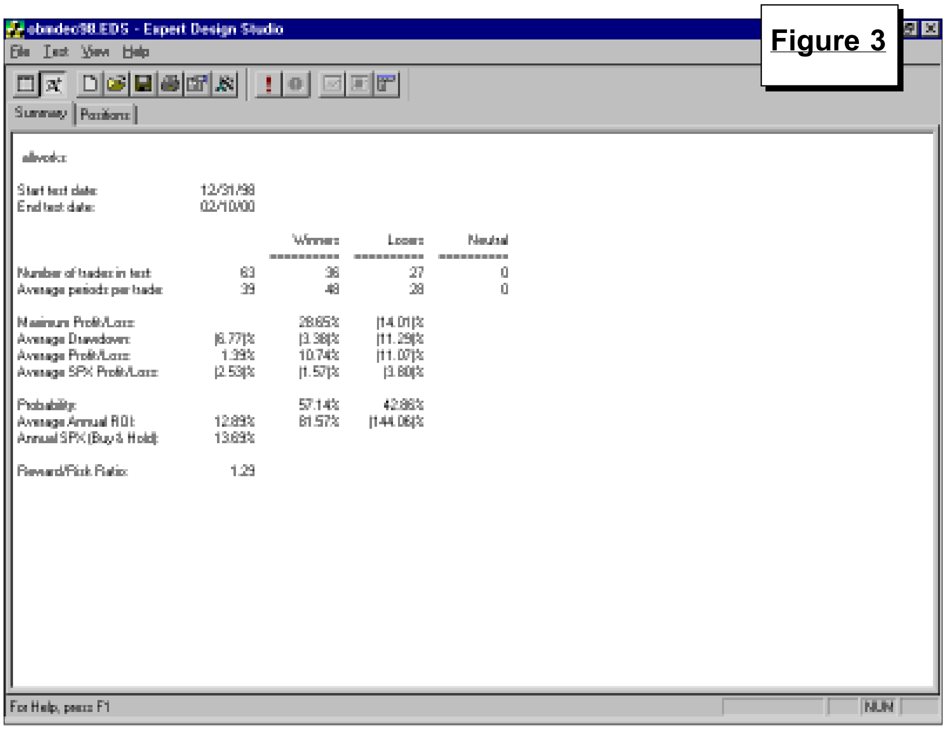
June 1999 – Bottom Fishing Strategy

In the June issue we reported testing results of all the pre-built EDS rules. We took the most effective rules and created a bottom-fishing strategy. The key rule simply stated that the stock must have corrected 30% sometime between 10 to 50 days ago. In fine-tuning the model we added a rule that required the stock's Volume Accumulation Percent indicator to be above zero.

Since June 1999 we've been in a market environment that favored growth investors and punished those who bought into weakness. Considering the environment, results of our EDS model were good. In **Figure 5** we see a backtest using a database of the S&P 500 plus the Nasdaq 100 stocks. The sell strategy was an 85% principal protect and a 95% profit protect above 15%. The average gain per trade was only slightly higher than an equivalent trade in the S&P 500.

In the original article we failed to say that only stocks above $10 should be purchased. Also, it is best to run the screening on a current set of S&P 500 stocks.

Figure 3



		Winners	Losers	Neutral
Start test date:	12/31/98			
End test date:	02/10/00			
Number of trades in test:	63	36	27	0
Average periods per trade:	39	48	28	0
Maximum Profit/Loss:		28.65%	(14.01)%	
Average Drawdown:	(6.77)%	(3.38)%	(11.29)%	
Average Profit/Loss:	1.39%	10.74%	(11.07)%	
Average SPX Profit/Loss:	(2.53)%	(1.57)%	(3.80)%	
Probability:		57.14%	42.86%	
Average Annual ROI:	12.89%	81.57%	(144.06)%	
Annual SPX (Buy & Hold):	13.69%			
Reward/Risk Ratio:	1.29			

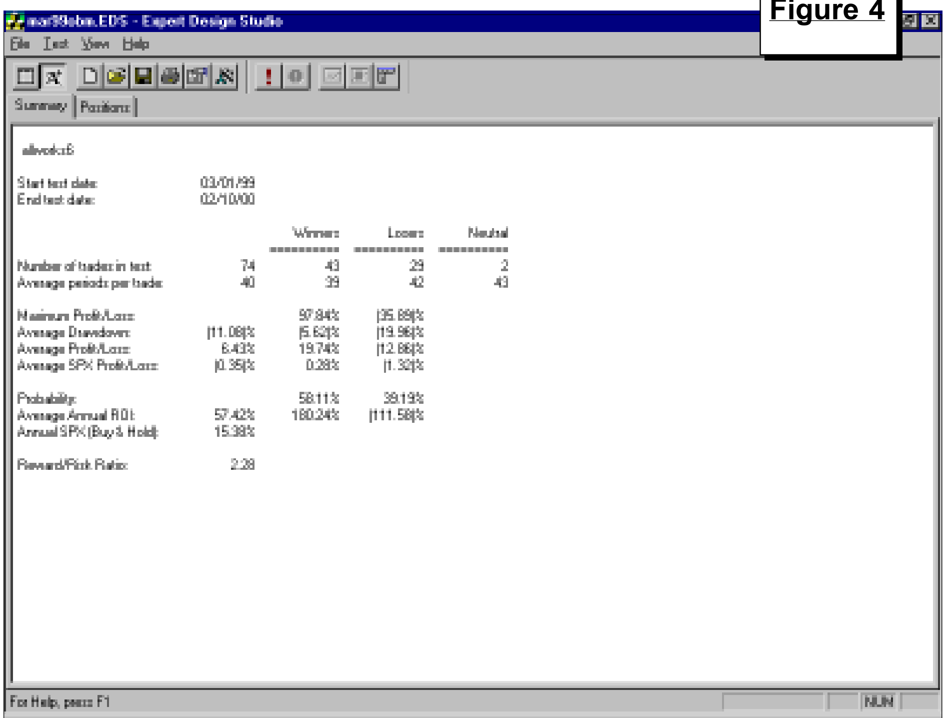
The results of this model were lowered because of several losing trades in Fruit of the Loom (FTL). FTL fell below $10 shortly after the article was published and then Standard & Poor's Corp. decided to take FTL out of the S&P 500 index. You know you are in a bad stock when it is removed from the S&P 500! By adding a rule that requires the stock to be above $10, the average stock trade increased to 3.15% compared to 2.32% for the S&P 500.

November 1999 – Candlestick Short-Selling Model

Our backtest of all the pre-built EDS rules showed that some of the least effective rules for long trading included some bearish rules that utilized Candlestick chart patterns. We ran tests on some of the least effective rules for long trading to create an effective model for short selling.

Our short-selling model consisted of only two rules. The stock must have a Harami Candlestick chart pattern and its RSI AIQ must have risen above 30 sometime in the last two days. Although it sounds simple, we believe over time this will prove to be our

Figure 4



		Winners	Losers	Neutral
Start test date:	03/01/99			
End test date:	02/10/00			
Number of trades in test:	74	43	29	2
Average periods per trade:	40	39	42	43
Maximum Profit/Loss:		97.84%	(35.89)%	
Average Drawdown:	(11.08)%	(5.62)%	(19.96)%	
Average Profit/Loss:	6.43%	19.74%	(12.86)%	
Average SPX Profit/Loss:	(0.35)%	0.28%	(1.32)%	
Probability:		58.11%	39.19%	
Average Annual ROI:	57.42%	180.24%	(111.58)%	
Annual SPX (Buy & Hold):	15.38%			
Reward/Risk Ratio:	2.28			

STRATEGIES UPDATE *continued . . .*

most effective short-selling model to date.

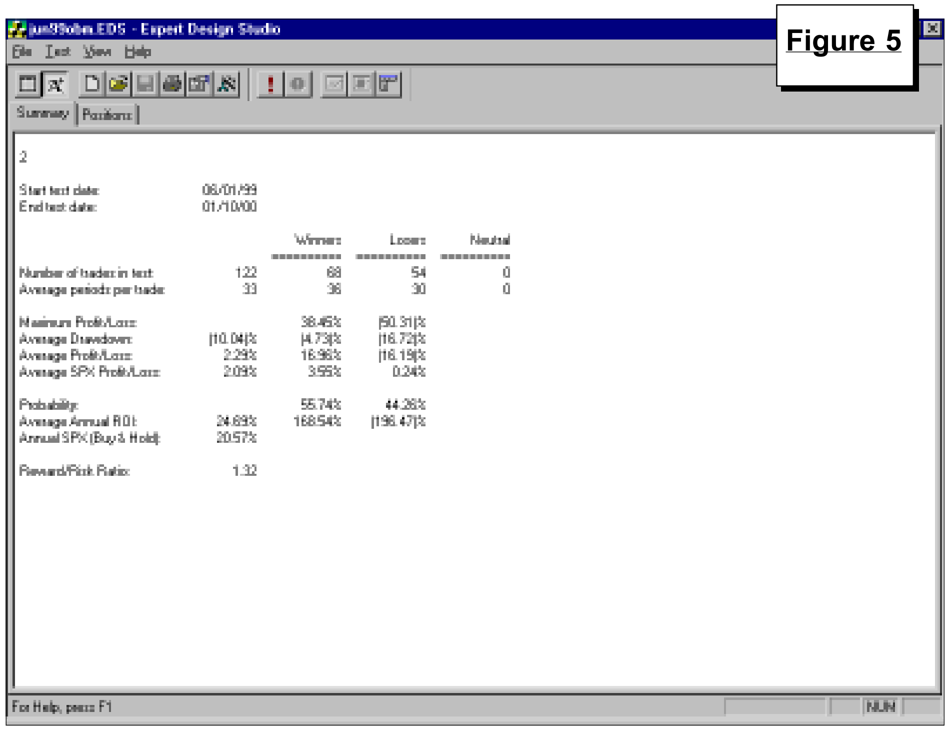
The article was published only two months ago but the model is off to a great start. In **Figure 6** we see the results of running the strategy on a S&P 500 database using a sell strategy of 85% principal protect, and 95% profit protect above 15%. There were 19 trades and the average short trade made 3.64%. An equivalent short trade in the S&P 500 would have lost 0.47%.

December 1999 – AIQ Reports Model

Our final model is mechanical but does not use the Expert Design Studio package. Instead, it uses the Weighted Action List and Relative Strength reports.

This model looks at whether the S&P 500 is outperforming or whether the Nasdaq 100 is outperforming. The AIQ reports are run on a stock database consisting of the components in the stronger index. Using the Weighted Action List and Relative Strength reports, the portfolio either holds Nasdaq 100 stocks or holds S&P 500 stocks.

Figure 5



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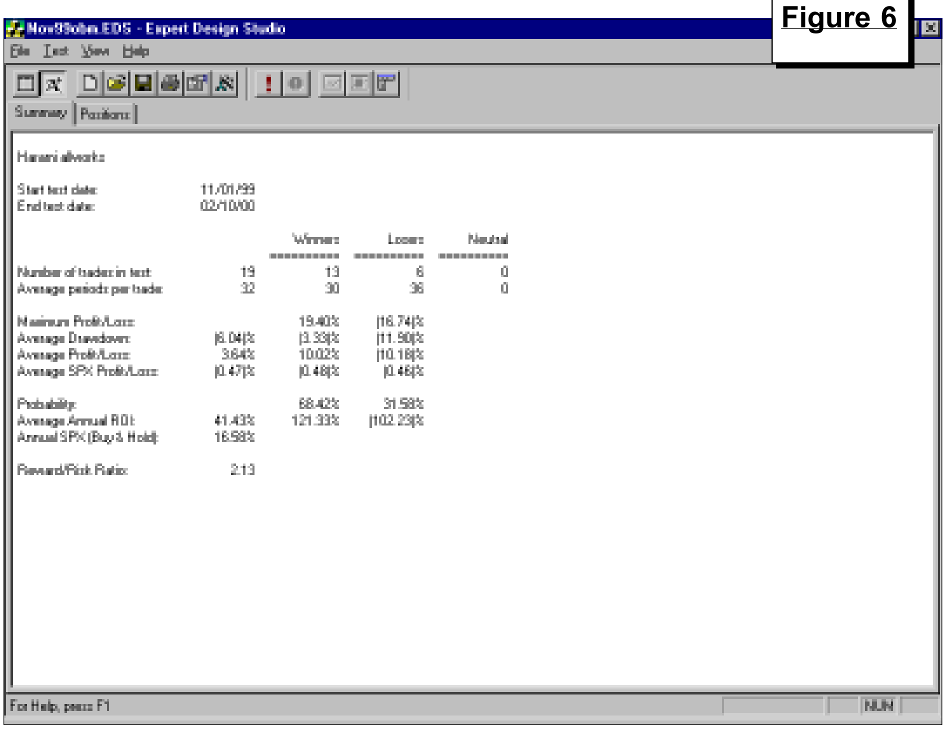
Start test date: 06/01/99
End test date: 01/10/00

		Winners	Losers	Neutral
Number of trades in test:	122	68	54	0
Average periods per trade:	33	36	30	0
Maximum Profit/Loss:		38.45%	(50.31)%	
Average Drawdown:	(10.04)%	(4.73)%	(16.72)%	
Average Profit/Loss:	2.29%	16.98%	(16.19)%	
Average SPX Profit/Loss:	2.09%	3.55%	0.24%	
Probability:		55.74%	44.26%	
Average Annual ROI:	24.69%	168.54%	(196.47)%	
Annual SPX (Buy & Hold):	20.57%			
Reward/Risk Ratio:	1.32			

This is the strategy used in my *VIS Alert.com* newsletter. When the article was written in November, the 1999 return was 58.5%. Amazingly, at the end of the year the portfolio gained 145% and we were still in the same stocks that were held when the article was published.

Figure 6



Harami alwarks

Start test date: 11/01/99
End test date: 02/10/00

		Winners	Losers	Neutral
Number of trades in test:	19	13	6	0
Average periods per trade:	32	30	36	0
Maximum Profit/Loss:		19.40%	(16.74)%	
Average Drawdown:	(6.04)%	(3.33)%	(11.90)%	
Average Profit/Loss:	3.64%	10.02%	(10.18)%	
Average SPX Profit/Loss:	(0.47)%	(0.48)%	(0.46)%	
Probability:		68.42%	31.58%	
Average Annual ROI:	41.43%	121.33%	(102.23)%	
Annual SPX (Buy & Hold):	16.58%			
Reward/Risk Ratio:	2.13			

Conclusions

In all of the above tests, commissions and slippage were not factored in. Individual returns will vary depending on the database of stocks. Yet we can see that we have developed and published some highly effective Expert Design Studio models. We can confidently say that your *Opening Bell* subscription has paid for itself!

The EDS models covered in this article can be downloaded from AIQ's web page. Simply go to *www.aiq.com* and click on *Educational Products*. Then click on *Opening Bell*. The models are on the lower right portion of the screen. The original March 1999 EDS file does not work with the current software version so users should re-download that file from the internet.

If you would like to receive back issues of the *Opening Bell*, you can purchase a collection of the 1998 and 1999 issues for $75. To order the collection, call your AIQ sales representative at 800-332-2999. ■

GROUP/SECTOR ANALYSIS

NOW AVAILABLE - UPDATED VERSION OF THE GROUP PYRAMID, AIQ'S INDUSTRY GROUP STRUCTURE

The AIQ Group Pyramid, an industry group structure that is classified on both a fundamental and technical basis, has been updated and the new version is now available.

Most industry group structures are classified only on the basis of fundamentals—stocks with comparable products are placed into an industry group. AIQ has taken it a step further by performing a technical test to ensure that all the stocks in each group are behaving similarly with respect to price action.

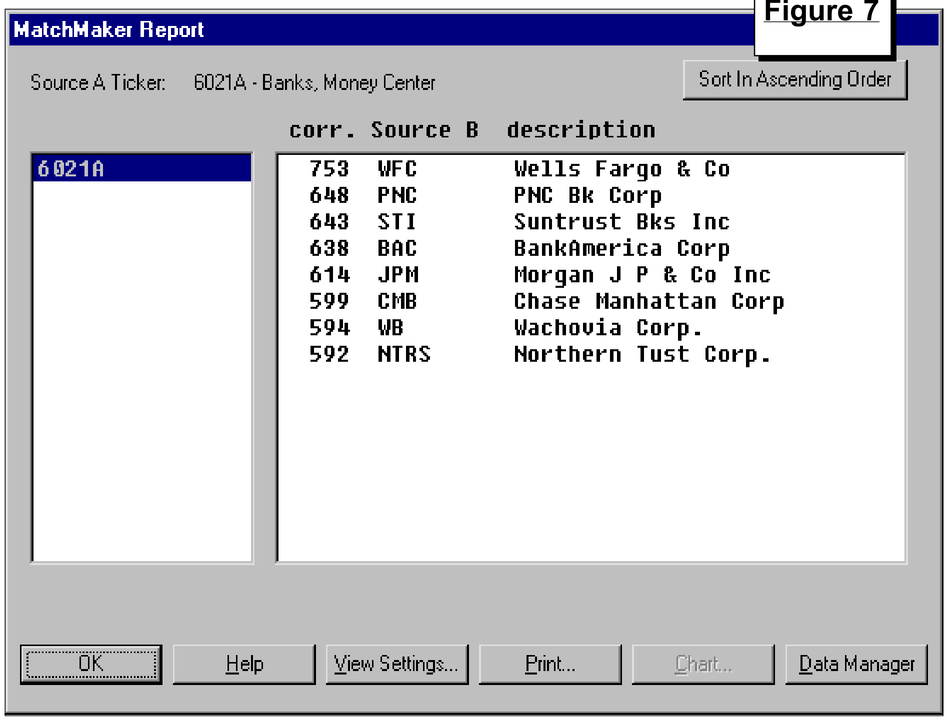
The AIQ MatchMaker program is used to test the correlation of the stocks within an industry group to industry group index. Only stocks with high correlations are kept in their respective groups.

To create the Pyramid structure, we begin with the Dow Jones industry group structure and run the MatchMaker program to test the correlations. Then, only those stocks that demonstrate a high correlation to their industry groups are kept.

We then compare each industry group to a database of 2000 stocks, looking for new stocks to add to the structure. Only those that fit on a technical and fundamental basis are added. The industry group index then becomes a better representation of the underlying stocks.

An example of a MatchMaker output for an industry group is found in **Figure 7**. The correlation values are shown to the left of the ticker symbols. Any stock with a correlation between 500 and 1000 is highly correlated, with 1000 representing a perfect correlation.

Figure 7



The AIQ Pyramid structure is primarily designed for investors who use a top-down approach and prefer large company stocks. The structure has approximately 450 stocks classified into 67 industry groups (an average of 6.7 stocks per group).

A similar correlation test is run on sectors. The 67 groups are classified into 15 sectors.

The AIQ Pyramid sells for $188. If you are a registered owner of a previous version of the AIQ Pyramid, you can purchase the newly updated version for $44.

If you are interested in ordering the Pyramid or the updated version, call your sales representative at (800) 332-2999. ■

S&P 500 Changes

There are no changes to the S&P 500 Index and Industry Groups this month.

Year-End Index of 1999 Articles

Opening Bell subscribers may obtain a free Index of 1999 Opening Bell articles by calling 1-800-332-2999.