AIQ Opening Bell® Monthly

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The *Opening Bell Monthly* is a publication of
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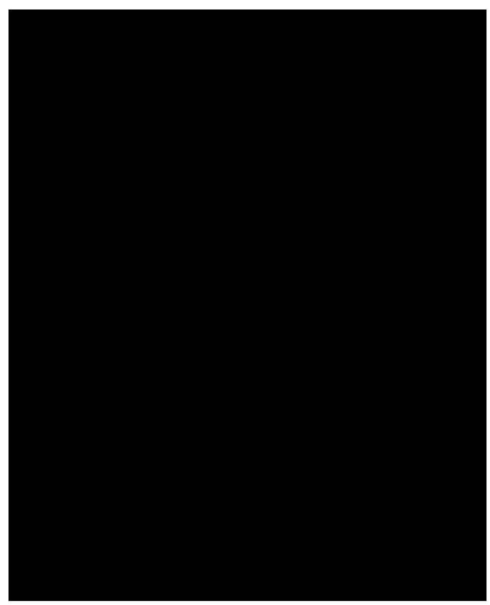
INTERVIEW

INTERVIEW WITH TECHNICAL ANALYST JOHN MURPHY

By David Vomund

This month we are pleased to present an interview with John Murphy, the keynote speaker for our seminar in October at Lake Tahoe. Mr. Murphy has been a technical analyst for over 30 years and has worked at CNBC television for seven years. He is currently the president of murphymorris.com, a company which produces educational software products and online services for investors. We recently interviewed John Murphy at the June Money Show in Las Vegas.



John Murphy

OBM: You've become the leading educator of technical analysis. What advice do you give to newcomers to technical analysis to speed up their learning curve?

Murphy: People should avoid trying to learn everything at one time. The technical field is an incredibly broad field and you can spend forever trying to learn everything. It is best to start with the basics and a handful of indicators. Pick the indicators that are the easiest to absorb and concentrate on the trend. Learn support and resistance. Support and resistance remain the guts of technical analysis. Over time you'll gain confidence and then you can begin to get into some of the more esoteric areas.

OBM: Which indicators do you recommend starting with?

Murphy: Start with moving averages. Now that most of my work is stock market oriented, I find that moving averages work extremely well. The ones that I employ the most are the 20-day

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INTERVIEW *continued* . . .

and 20-week moving averages. I tend to use these together with Bollinger Bands. In addition, the 50-day moving average works very well with stocks and stock sectors. The 100-day moving average and the 200-day moving average are also used. I find the 20, 50, 100, and 200-day moving averages work well for both stocks and for sector analysis.

The Moving Average Convergence Divergence (MACD) indicator is one of my favorites. Again, it's a moving average system but it also has some elements of an oscillator to it.

Another important indicator is On Balance Volume, which is probably the simplest of the volume indicators. I also like other types of indicators such as the RSI and Stochastics. The RSI is the better of the two but it works best to use them together. Finally, I'll use the Average Directional Index (ADX) line to determine if a trend is in place.

OBM: Other than the RSI and the Stochastic, the indicators you listed tend to work best in a trending market. Does this mean you prefer to trade trending markets?

Murphy: Trend following indicators such as moving averages only work in a trending environment. The ADX line is a very good barometer to

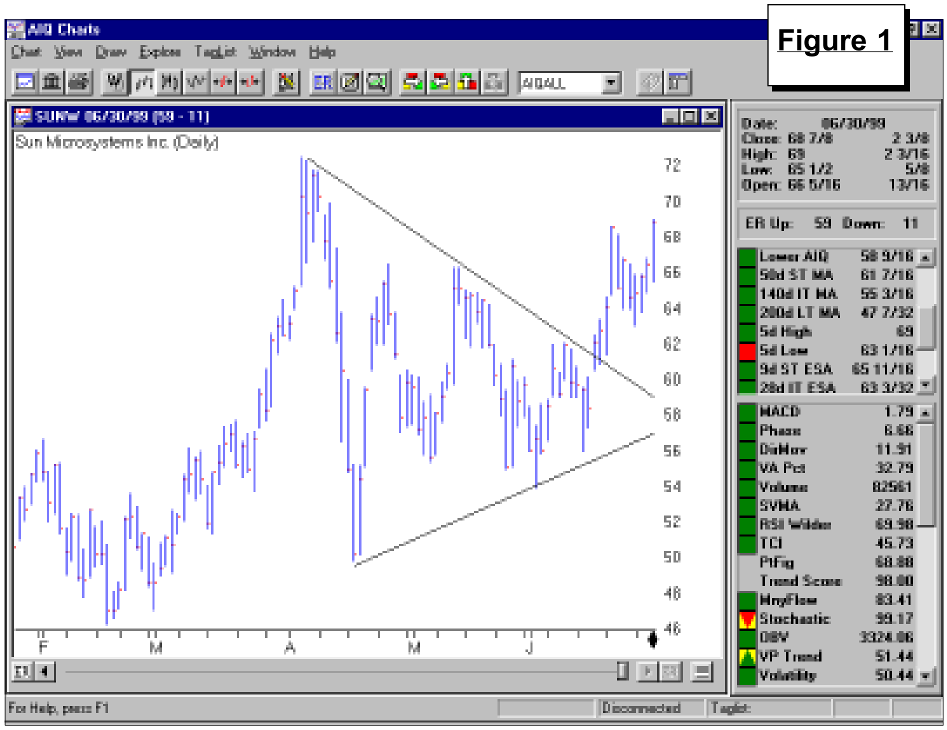

Figure 1

determine whether a trend is in place. Generally, a rising ADX line indicates that you are in a trending phase. This is especially true if it has been at a low level. If this indicator is coming from a level below 20, then the security has been in a consolidation period for a while. When the ADX line starts to turn up from a very low level, that usually indicates that you are in the early stage of a new trend. At that point, trend following systems can be employed.

On the other hand, if you have been in a trend for a period of time and the ADX line gets very high, in the 40 to 50 range, and starts to turn down, then it is usually time to take some profits.

OBM: Your books, *The Visual Investor* and *Technical Analysis of the Financial Markets* are must-reads. What other technical analysis books do you recommend?

Murphy: I'll pick another one of my books, *Intermarket Technical Analysis*. People should be aware of the inter-market aspects of the various markets. Recently we saw how the stock market is influenced by the direction of interest rates. And interest rates are affected by, let's say, the price of oil or the price of copper. All these things are very closely related. As for other books, our web site at *www.murphymorris.com* has a recommended reading list of about 15 books.

OBM: With the age of the internet, individual investors now have access to cheap real-time quotes and cheap trading commissions. The growth in active on-line investing is very remarkable. Do you think individual investors are moving too quickly into electronic day-trading?

Murphy: Definitely yes. I have advised people over the years that you have to master inter-day trading before you can master intra-day trading. The latter is much more difficult. When I walk around at various shows, such as the Money Show, I'm amazed at the number of people who ask questions about day trading. Yet, when I ask them a few questions, I find that they know very little about technical analysis. That is a terrible combination.

Being a profitable day trader is difficult and the odds are against you. To be successful you have to really

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INTERVIEW *continued . . .*

know the markets, you have to be sharp, and you have to act fast. Most people don't have those credentials.

We've been in a period of rising prices, especially in internet stocks, so it has been relatively easy to make money. Over the last few months, however, we saw internet stocks drop 50% and people lost a lot of money. In time, the day trading frenzy will sort itself out.

OBM: After having worked at CNBC for so many years, would you say that individual investors are better or worse off by watching financial programs such as those on CNBC or CNNfn?

Murphy: I think they are better off in general because they are kept aware of what the markets are doing and a lot of things are explained to them. The downside is that investors aren't getting enough of the technical side of the market because the media is extremely fundamentally oriented. As a result, I think they're getting a biased view of how the markets work. After something happens, the media wants to explain why it happened. A lot of it sounds like rationalization.

OBM: At the Money Show, nearly all the speeches focus on what to buy and rarely discussed is when to sell. What type of sell strategy do you think people should employ?

Murphy: The sell strategies are exactly the same as the buy strategies. They are just turned upside down. The exact same principals that told you a stock was going up can be used to say that a stock in going down. On the buy side, you may be looking for a stock that just broke above a basing pattern, showing good relative strength and maybe breaking above a 50-day moving average. The sell would be just the opposite. A cross below the 50-day moving average or below a trendline can work as an excellent sell point. If the stock has been moving sideways for a while, you can put some kind of a protective stop under support.

It is important to watch Relative

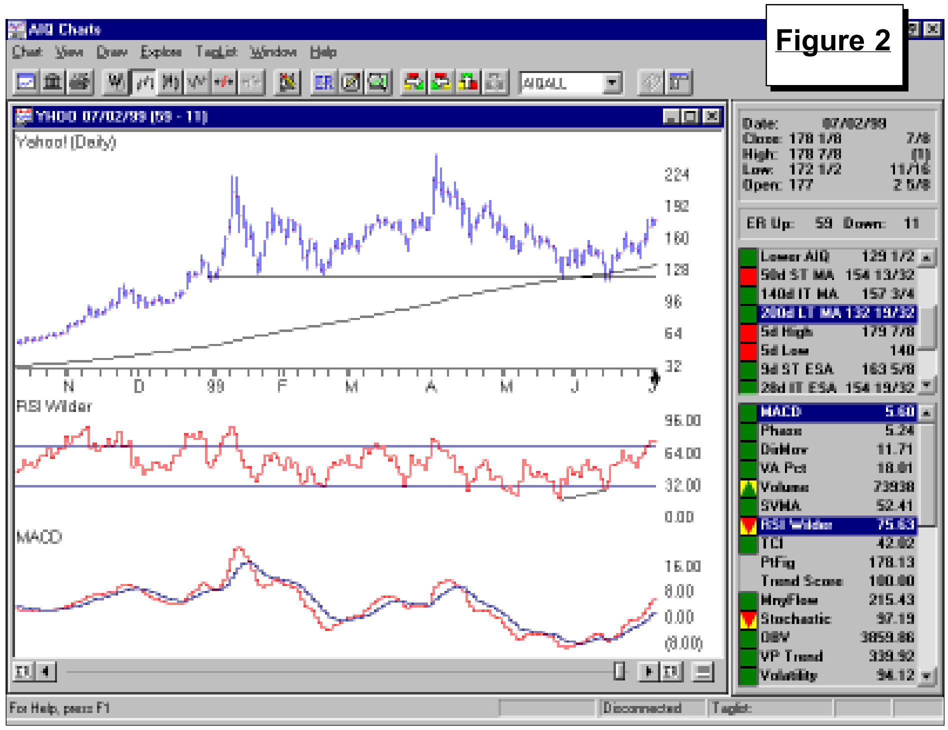

Figure 2

Strength. If you are trading a certain sector, then watch its strength relative to the S&P 500. If a group begins to lose momentum, such as the internet stocks in April, then you know something has gone wrong.

It's also important that you don't fall in love with a stock. When it's time to sell, then sell it.

OBM: Do you prefer a purely mechanical sell strategy, such as falling below a moving average, or do you prefer to use some type of judgment?

Murphy: Nothing I do is purely mechanical. Because I'm an analyst, I take a lot of things into consideration. If a stock falls below its 50-day moving average for the first time in six months, then that would certainly be a warning signal to me. What we find very often is that when a stock breaks its 50-day moving average, then it will drop to the 100-day day or even the 200-day moving average.

OBM: How many technical indicators should people use and how should they decide on what indicators to follow?

Murphy: You will always want to use some basic charting but as for indicators, there is no reason to use more that a half dozen. The ones that I recommended to you earlier are the ones I generally recommend. I think people can do a very good job by just using trendlines, moving averages, support and resistance, and a few basic tools.

OBM: Chart patterns are obviously a critical part of your analysis. Can you give us an example of a favorite chart pattern?

Murphy: The symmetrical triangle is an excellent pattern. A good example is Sun Microsystems (SUNW), which we recently recommended. From April to June it formed a nice triangle pattern and then in mid-June it broke above its resistance line, completing its bullish pattern **(Figure 1)**.

OBM: I have talked with you on a previous occasion and it sounds like you change your stock selection technique depending on how the market is behaving. How do you know when the market environment has changed?

Murphy: This has a lot to do with interest rates and commodities. What

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INTERVIEW *continued . . .*

we saw earlier in the year, for example, was that the price of oil turned up and we started to see signs of strength in copper and some of the other markets for the first time in a long time. That started to put some upward pressure on interest rates and kicked in a very noticeable rotation within the stock market. High multiple stocks were sold and money flowed to inflation and cyclical stocks. This is where the inter-market scenario is important. It is important that people watch the relationship between commodities and bonds very closely.

OBM: Can you give us an example of a stock that you recently recommended and tell us why it was selected?

Murphy: Sure. Yahoo! is a stock that had lost 50% of its value. It fell to a major support level that had formed earlier in the year. It was also right at its 200-day moving average. On May 26, it bounced off the 200-day moving average and the $120 support level on heavy volume. It looked like a key reversal day. The stock rallied a little bit and then came back and re-tested the low. In fact, it undercut its low by a couple points and turned up the next day. On the second dip, the RSI and the MACD were showing positive divergences (the indicators were moving higher at the same time that the stock made a new low). This was the first positive divergence since the stock topped out earlier in the year **(Figure 2)**. We use Yahoo! as a bellwether for the internet sector so we became more positive on the entire sector.

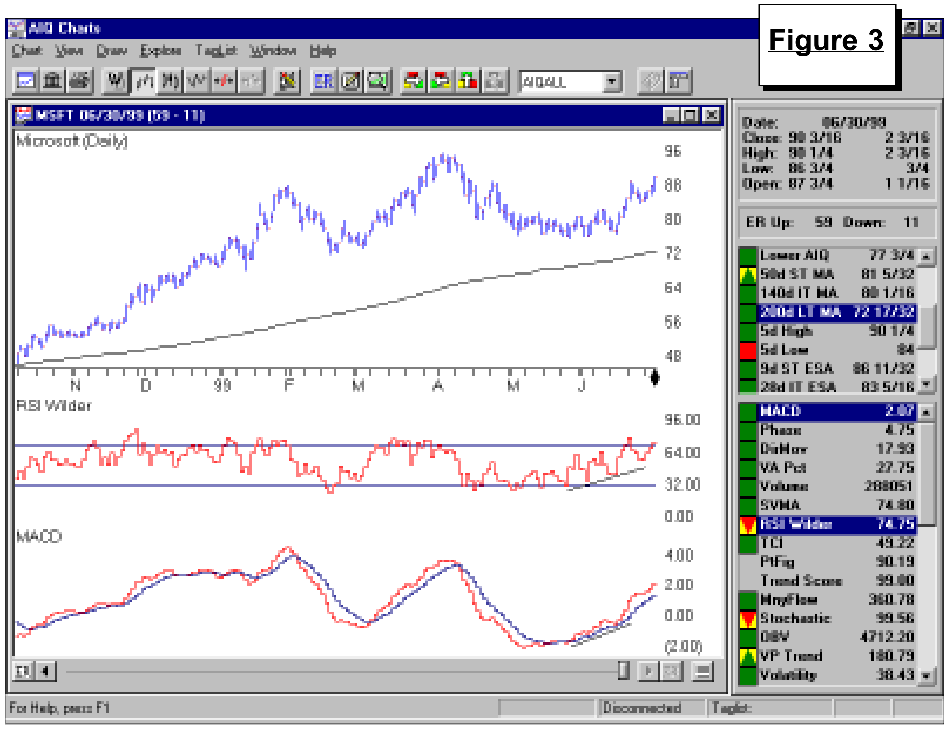


Figure 3

A similar analysis helped us to turn bullish on Microsoft **(Figure 3)**. Microsoft corrected about 20% until May when it began to move sideways. On May 26, we pointed out that its MACD had turned bullish and that the RSI was showing a positive divergence. The stock moved sideways for a week or two while both the MACD and the RSI continued to show positive divergences. Again, Microsoft is a bellwether for the technology sector so Microsoft's action turned us bullish on the sector.

OBM: Thank you for sharing your thoughts with us and we look forward to your presentation at our fall seminar. ■

John Murphy's web site is www.murphymorris.com.

MARKET REVIEW

Heading into July, AIQ was on a buy signal. The first half of the month was very bullish as new all-time highs were reached on the Dow, S&P 500, and Nasdaq Composite. Much of the strength was due to stronger than expected earnings.

The bullish tone changed on July 20 when a 97 sell signal was registered. Federal Reserve Chairman Greenspan put the focus back on increasing interest rates so stocks sold off anytime an economic report was released that hinted toward inflation.

From the July 20 sell signal to the end of the month, the market drifted lower. Both the S&P 500 and the Nasdaq Composite corrected about 3.5%.

Some of the industry groups were harder hit. Footwear fell 17%, Internet fell 10%, and Automobile Manufacturers fell 8%.

The late-month selloff left the market very oversold. Looking at the market log on July 30, about 97% of the stocks with unconfirmed Expert Rating signals were on the buy side. ■

S&P 500 Changes

Qualcomm Inc. (QCOM) replaces Transamerica (TA). QCOM is added to the Communications Equip. (COMMUNEQ) group.

Allied Waste (AW) replaces Browning-Ferris Ind. (BFI). AW is added to the Waste Management (WASTEMAN) group.

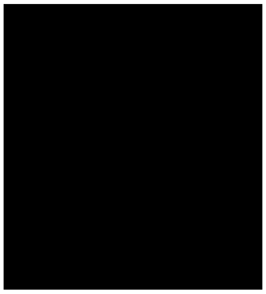
ADC Telecommunications (ADCT) replaces Nalco Chemical (NLC). ADCT is added to the Communications Equip. group.

Conoco Inc. (COC) replaces Battle Mountain Gold (BMG). COC is added to the Oil-Domestic Integrated (OILDMEST) group.

USING MATCHMAKER

How 'Matchmaking' Can Help In Your Trading Decisions

By Dr. J.D. Smith



DR J.D. SMITH

Among the many tools available in AIQ TradingExpert Pro is the MatchMaker. MatchMaker got that name because its main purpose is to search a database of stocks to find a match between two stocks or between a group index and a stock or between a mutual fund and a stock. The extent of the match is determined by the Spearman rank correlation coefficient. The correlation is a mathematical measure of the affinity or similarity between two data series.

I won't use space here to explain the mathematics or the operations of MatchMaker. That is well done in the User Manuals. The output from MatchMaker is the rank correlation, which has a range of values from plus 1000 to minus 1000.

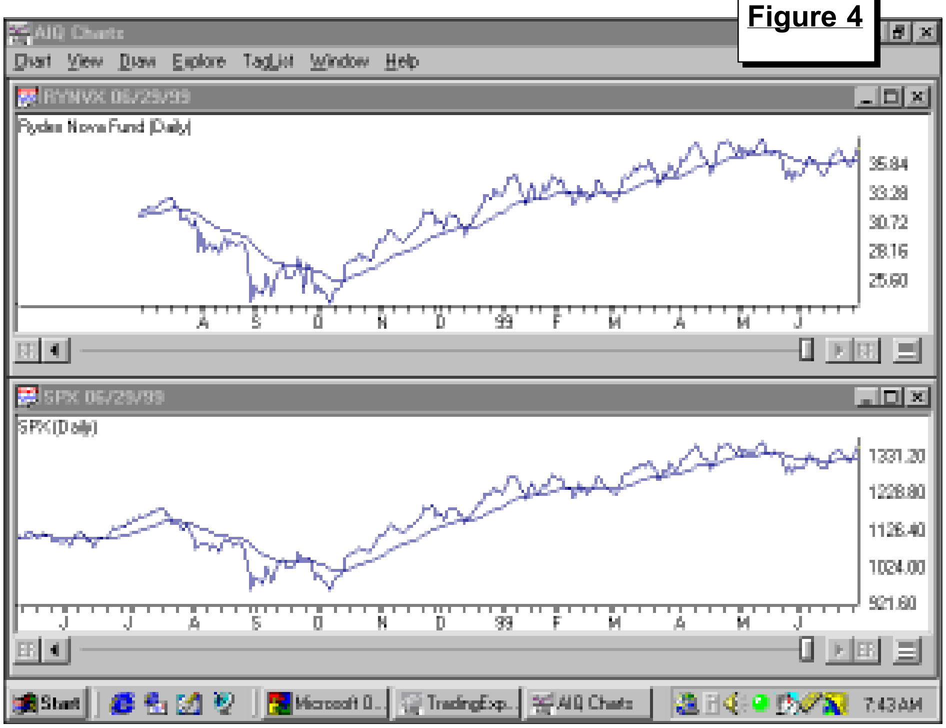
Plus 1000 means a perfect match between two data series where every price change in one series is matched exactly by a price change in the other series. This is an exact correlation. A minus 1000 means that the correlation is also exact, but in the opposite direction. Every price change in one series is matched exactly by a price change in the opposite direction in the other series. Correlations near zero signify that there is no relationship in the price movement of the two series. I accept a value of 500 to be sufficient strength to be meaningful.

Relevant results from MatchMaker will be obtained only if sufficient data is provided to the Spearman Algorithm. This is called the sample size. I have found a minimum of 25 data points to be sufficient. This means that when you are selecting the first and last days for the MatchMaker parameters you should specify at least six months of weekly data or six weeks of daily data. Larger samples of data points will not harm the analysis but will have declining marginal value.

There are three primary uses for MatchMaker. The first is to determine the correlation between two price series in order to use that information in the trading process. The second use is to analyze the stocks in a group. If the average correlation between the group index and stocks within the group is high, then that group has a strong affinity and is easier to trade than a group with low correlations and little cohesion.

The third use is to build a surrogate group of stocks to simulate the price action of a mutual fund. Then, based on the analysis of that surrogate group, trading decisions can be made. Examples of all three of these applications follow.

Figure 4



Correlation

Look at **Figure 4**, which is a plot of the S&P 500 index and Nova, a mutual fund managed to match the performance of the S&P 500. Nova is an index fund offered by Rydex (*Rydexfunds.com*). In comparison, the two price plots look very close. Running MatchMaker and putting the two tickers against each other computes a correlation of 993 since the first of the year. That is about as high a correlation as you will ever see.

A good example of a reverse correlation is shown in **Figure 5,** which displays the Nova Fund compared with the Ursa Fund. Ursa is also a Rydex fund but it is managed to move exactly opposite to the S&P 500. If the SPX and Nova move up in value,

Using MatchMaker continued on page 6

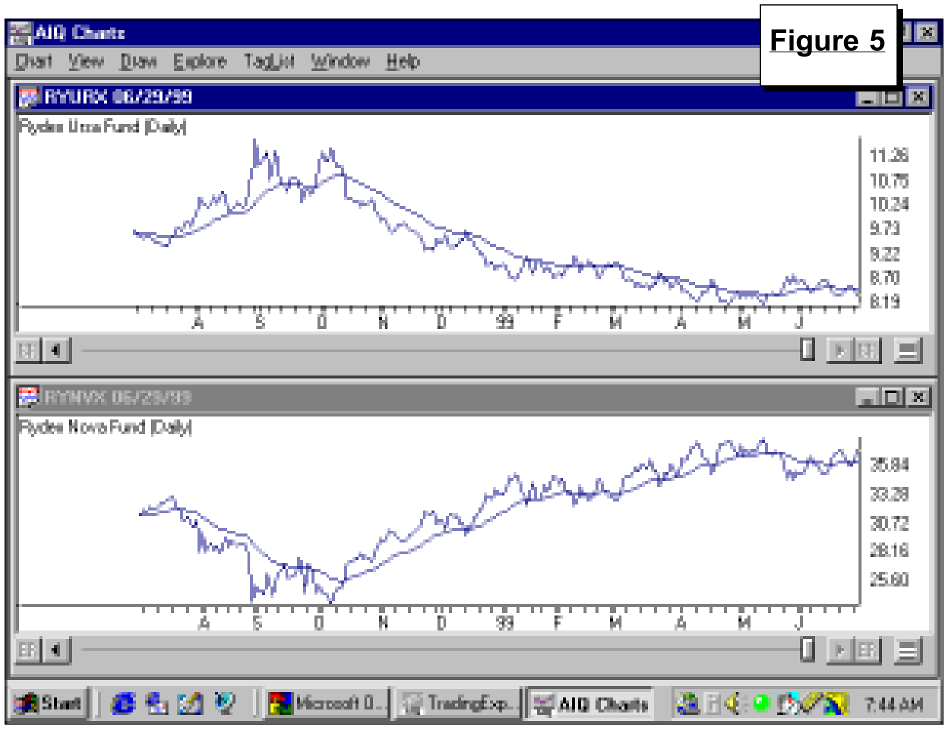
USING MATCHMAKER *continued* . . .

the Ursa Fund moves down. More importantly, when the whole market moves down, the Ursa Fund moves up.

The MatchMaker test between Nova and Ursa computes a correlation of minus 975. The concept works. Now we have a real trading tool. If we are long the market and getting nervous, the Ursa Fund is available as a hedge. Conversely, if we are short the market and need an upside hedge, the Nova Fund is available. MatchMaker gives us the confidence to perform this kind of trade.

The thing I like about the Rydex funds is that they are no load funds, there are no fees for switching in and out of funds, and no limits on trading. That giant sucking sound is assets moving to Rydex.

Figure 5



Group Analysis

The second use of MatchMaker, analyzing specific groups in terms of how well the stocks in the group correlate to the group index, is illustrated in **Figure 6**. The example is the Bank 7 group from the AIQALL pyramid structure.

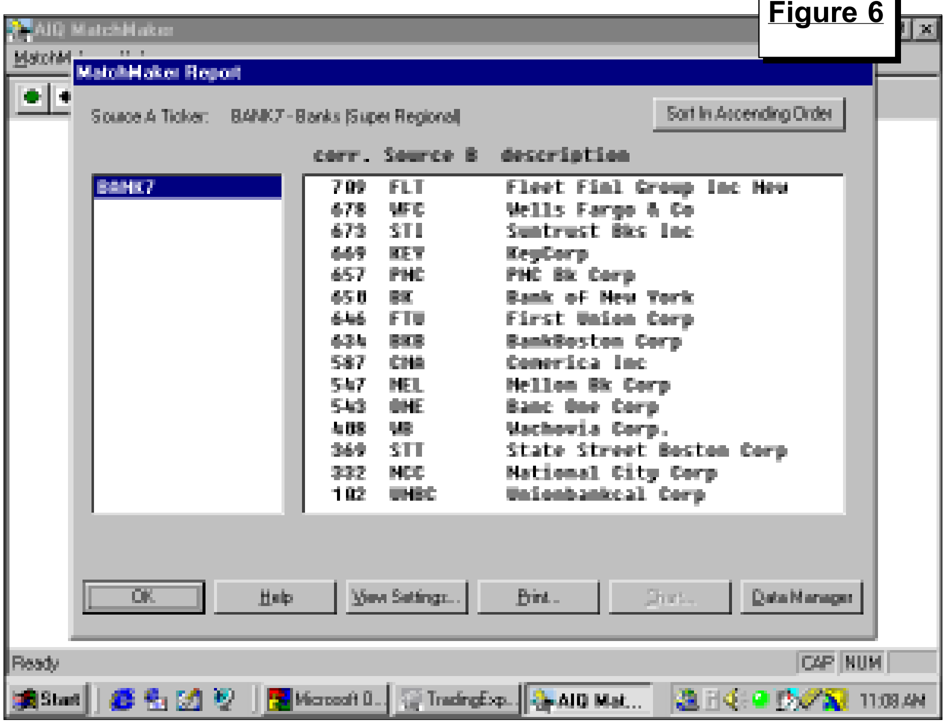
MatchMaker computes the correlations of each stock against the bank group index. The results vary from very good correlation to almost no correlation. Fleet Financial (FLT) with a correlation of 709 shows a strong cohesion to the overall group. WFC and STI also show strong correlations. This signifies that if the analysis of this group is bullish, recent history indicates that FLT, WFC, and STI will tend to move with it.

UNBC, on the other hand, shows an inclination to move independently of the group. This is not necessarily a bad thing. UNBC may have moved 10 times faster than the Bank 7 group and as a result have a low correlation. The use of the group price action should not be a basis for trading a position in UNBC. If the group is moving, then pick an FLT or a WFC because they move best with the group.

Mutual Fund Trading

One of my favorite trading strategies is to trade sector funds, mutual funds managed to match a sector of the economy and thus the market. Sector rotation, the movement of money between sectors, provides very real opportunities for profitable trades. But the problem is that the mutual fund companies do not give a lot of information. Closing net asset value, that's it. Mutual fund companies will publish the major stock holdings within the fund, but usually this information is issued only

Figure 6



USING MATCHMAKER *continued* . . .

quarterly which is a bit late for our purposes.

If I am going to use the Sector Fund report in AIQ TradingExpert, I need high and low prices for the day as well as closing prices. I also need volume. I can get this data by building a surrogate group of stocks from which AIQ then computes a surrogate index. That index has closing, high and low prices, and volume.

These are not the exact values that would come from the sector fund but merely approximations. Happily, however, when these approximations are compared with the approximations of the other surrogate group indexes in the sector report, the law of large numbers takes over. Averages rule.

Look at the example in **Figure 7**, which is the Rydex Energy fund. The first step in building a surrogate group for this fund is to download the mutual fund closing data with the ticker RYEIX. Then run MatchMaker to find stocks with the best correlations from all the stocks in your database.

In the example (Figure 7), 15 stocks were found with very strong correlations to the Energy Fund, running from 927 for BJS to 806 for APA.

This will be a strongly cohesive surrogate group. Wish I could say that it always happens this nicely, but alas that is not the case. Some sectors, such as computers or technology, are not this well behaved. I simply do the best I can.

I now form a new surrogate group using the ticker RYEIZ. Using the *Data Manager's* list building function, I select the top 10 stocks from the MatchMaker list and place those tickers under RYEIZ. I then compute the new group index using the *Compute New Indices* function. The new surrogate group is plotted in **Figure 8**. Notice that the mutual fund

Using MatchMaker continued on page 8

Figure 7

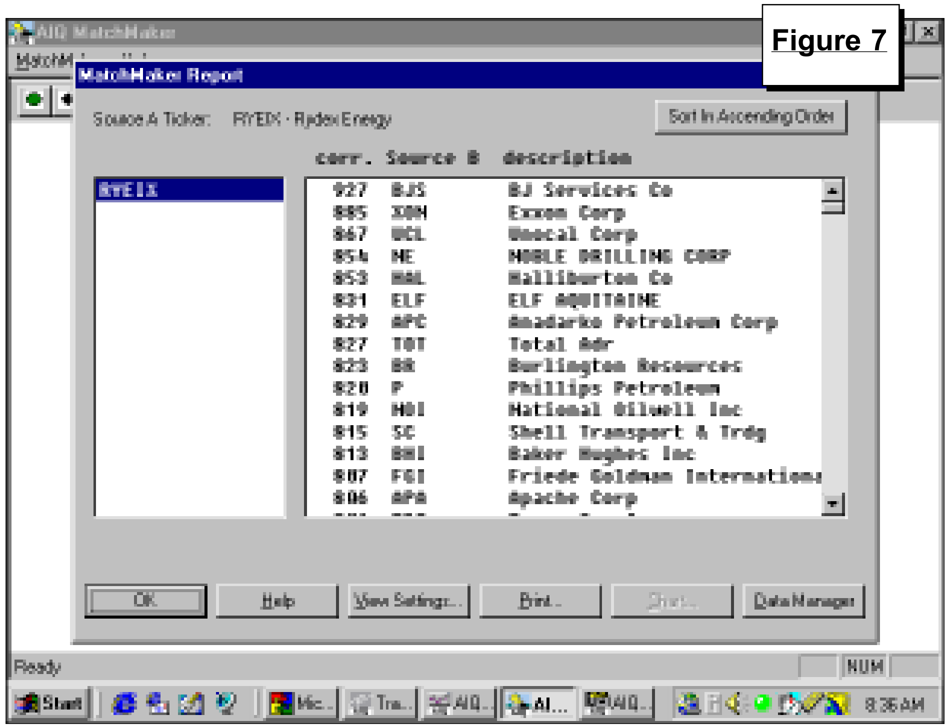
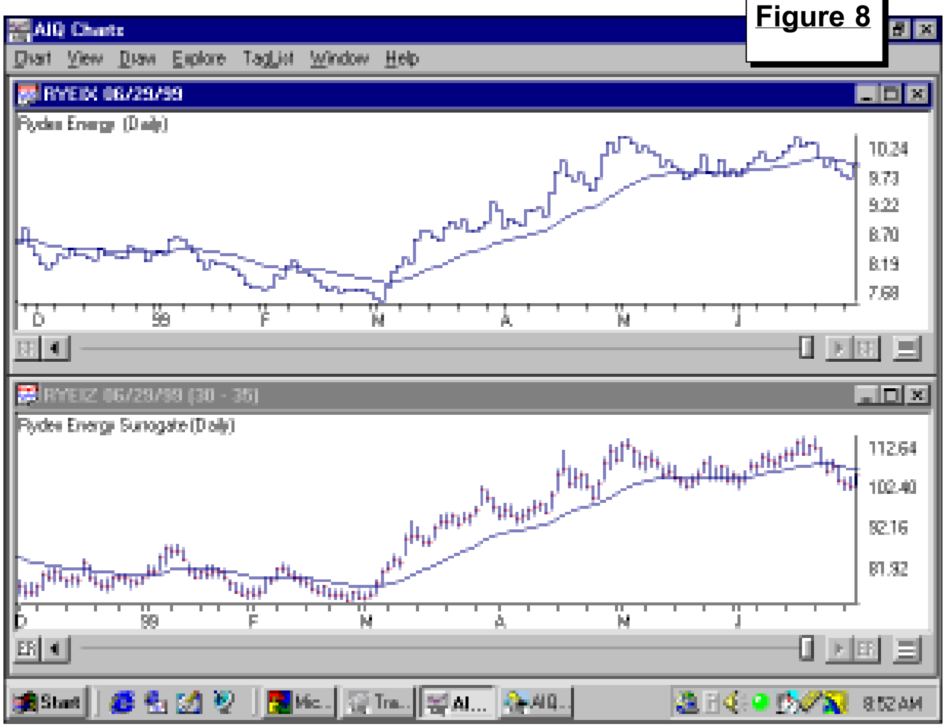


Figure 8



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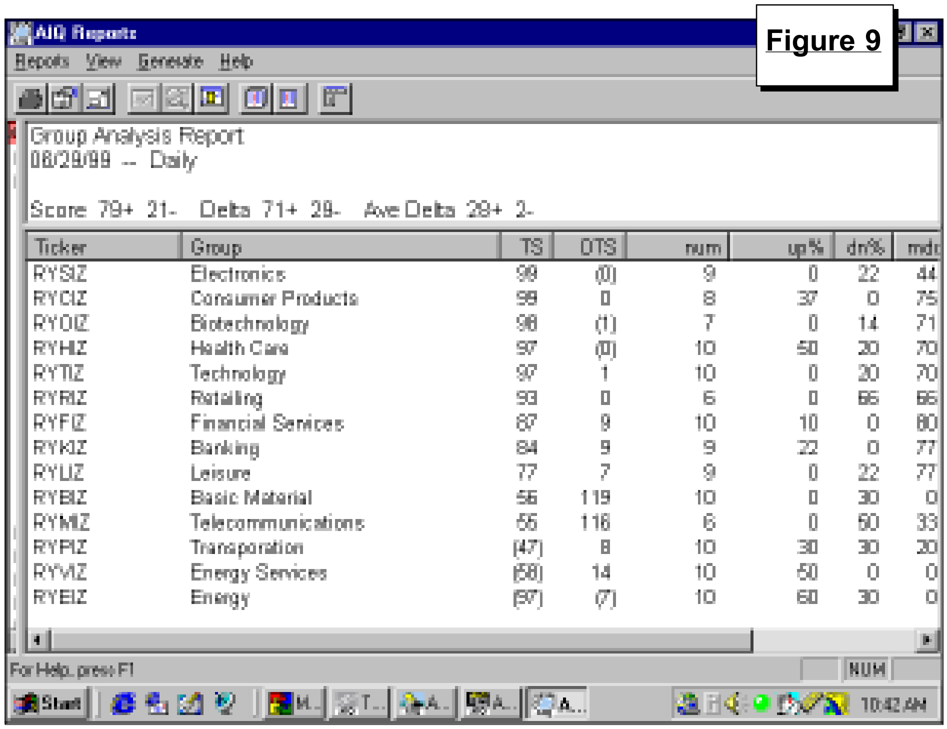
USING MATCHMAKER *continued* . . .

RYEIX and the surrogate group RYEIZ are very, very close. MatchMaker gives a correlation between the two of 962. And this surrogate index gives me high, low, closing values and volume which allows group analysis of the surrogate index.

This process of building surrogate groups is now repeated for all the sector funds to be traded. The end result is shown in **Figure 9**. The Rydex sector funds are evaluated every day using the Group Analysis report. By following the Trend Score and the Delta Trend Score over time, the rotation between the sectors is very apparent. Try it. You will like it.

Good luck and good hunting. ■

Figure 9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Group Analysis Report
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Ticker	Group	TS	DTS	num	up%	dn%	md
RYSIZ	Electronics	99	(0)	9	0	22	44
RYCIZ	Consumer Products	99	0	8	37	0	75
RYOIZ	Biotechnology	98	(1)	7	0	14	71
RYHIZ	Health Care	97	(0)	10	50	20	70
RYTIZ	Technology	97	1	10	0	20	70
RYRIZ	Retailing	93	0	6	0	66	66
RYFIZ	Financial Services	87	9	10	10	0	80
RYKIZ	Banking	84	9	9	22	0	77
RYLIZ	Leisure	77	7	9	0	22	77
RYBIZ	Basic Material	56	119	10	0	30	0
RYMIZ	Telecommunications	55	116	6	0	50	33
RYPIZ	Transporation	(47)	8	10	30	30	20
RYVIZ	Energy Services	(58)	14	10	50	0	0
RYEIZ	Energy	(97)	(7)	10	60	30	0

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STOCK DATA MAINTENANCE

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

Stock	Ticker	Split/Div.	Approx. Date
U S Foodservice	UFS	2:1	08/05/99
Montana Power	MTP	2:1	08/09/99
Jones Pharma Inc.	JMED	3:2	08/09/99
Laser Vision Centers	LVCI	2:1	08/10/99
Zomax Inc.	ZOMX	2:1	08/12/99
Advanced Digital Info.	ADIC	2:1	08/12/99
CTS Corp	CTS	2:1	08/13/99
Exodus Communication	EXDS	2:1	08/13/99
Enron Corp	ENE	2:1	08/16/99
Xeta Corp	XETA	2:1	08/16/99
Legato Systems	LGTO	2:1	08/16/99
PMI Group	PMA	3:2	08/17/99
Advent Software	ADVS	3:2	08/17/99
Texas Instruments	TXN	2:1	08/17/99
Legato Systems	LGTO	2:1	08/17/99
Fossil Inc.	FOSL	3:2	08/18/99
Profit Recovery Group	PRGX	3:2	08/18/99
Redback Networks	RBAK	2:1	08/20/99
OshKosh Truck	OTRKB	3:2	08/20/99
Cognitronics Corp	CGN	3:2	08/23/99
Verio Inc.	VRIO	2:1	08/23/99
Clorox Corp.	CLX	2:1	08/24/99
Immunex Corp.	IMNX	2:1	08/27/99
Eagle USA Airfreight	EUSA	3:2	08/31/99

Trading Suspended:

Ascend Communications (ASND), Coltec Ind (COT), GeoTel Communications (GEOC), Platinum Technology (PLAT), Transamerica Corp (TA), Whittaker Corp (WKR)

Name/Ticker Changes:

7th Level Inc. (SEVL) to Learn2.com Inc. (LTWO)
Borg-Warner Security (BOR) to Burns Int'l Services (BOR)
Chancellor Media (AMFM) to AMFM Inc. (AFM)
Hong Kong Telecom (HKT) to Cable & Wireless HKT Ltd. (HKT)
Uniphase Corp (UNPH) to JDS Uniphase Corp. (JDSU)