AIQ

Opening Bell
Newsletter

Pop or Drop?

Create an 'ER Breadth Oscillator' To Spot Market Reversals

By David Brodwin

Mr. Brodwin is an independent investor in San Francisco, CA, and an experienced user of AIQ TradingExpert Pro. He can be reached at david@brodwin.com

According to many experts, the trend in the overall market accounts for the majority of stock movement. Fortunately, the ability to create customized market breadth tickers (new in TradingExpert Pro version 8.0) makes one of the best market timing techniques a lot easier to apply.

buy side, the market as a whole is oversold in the short term and due for a pop in the next few days.

Conversely, if 85% of the unconfirmed signals are

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on the sell side, the market is overbought and due for a drop. This technique was developed by AIQ's David Vomund, who described it in the August 2003 *Opening Bell* (www.aiqsystems.com/aug2003obm.pdf).

Before TradingExpert Pro version 8.0, you had to track the number of Expert Rating signals manually, by running reports every night and copying down the results. Now, you can do this automatically by creating a pair of breadth tickers and charting the result as a custom indicator called the *ER Breadth Oscillator*.

One of the best ways to see if the stock market is overbought or oversold on a short-term basis is to examine the number of stocks for which unconfirmed Expert Rating buys or Expert Rating sells have fired. If 85% of the unconfirmed signals are on the

When you have the custom indicator properly set up, it looks like **Figure 1**. Let's walk through the process of creating this indicator, and then look at how to interpret it.

First, create the EDS file:

To create the ER Breadth Oscillator, begin by setting up a simple, seven line Expert Design Studio (EDS) file. Name this program "Breadth Tickers.eds." In the listing below, I've added line numbers so I can describe more easily what the program does, but you shouldn't include these numbers in your own program.
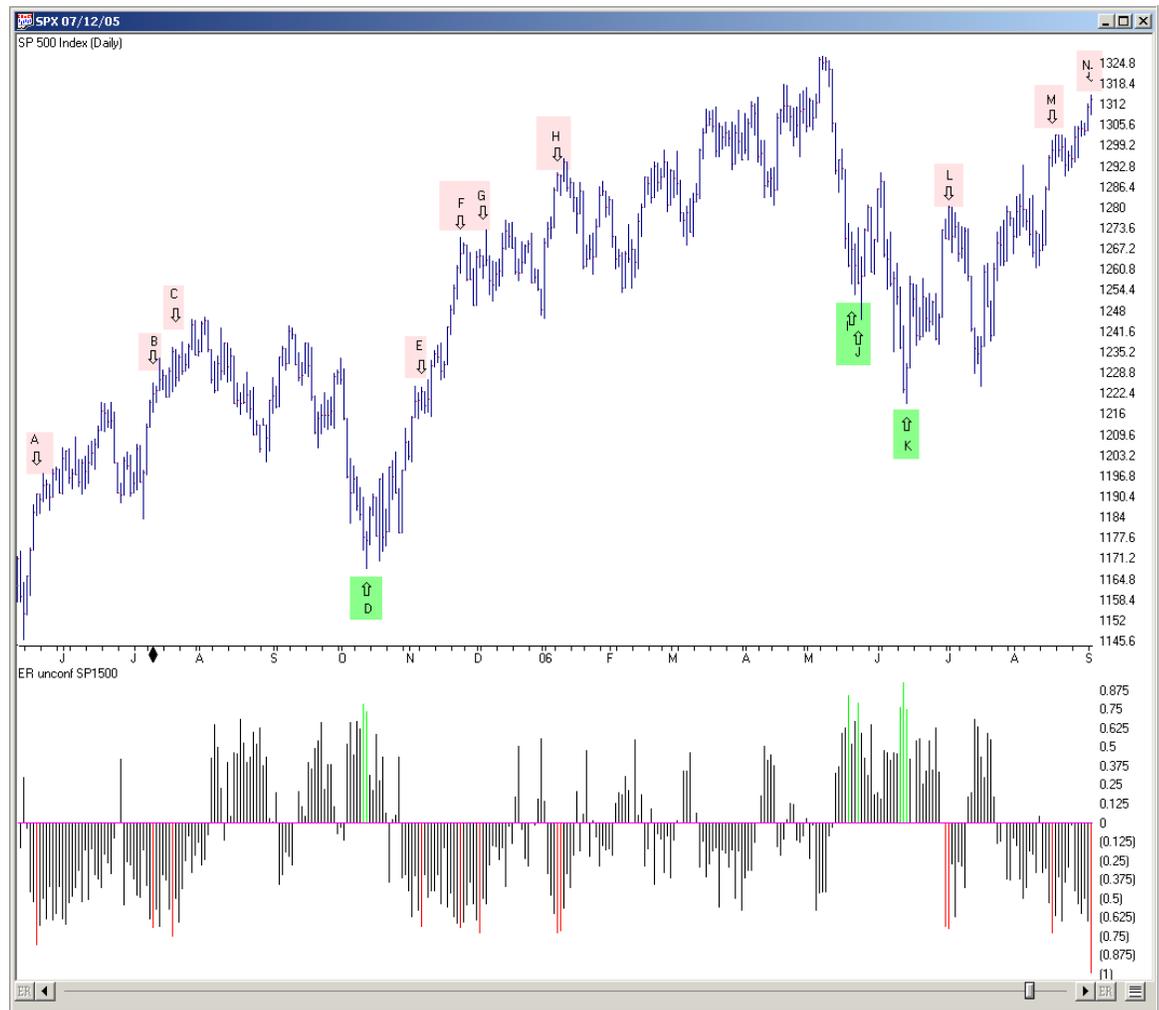

Figure 1. Daily chart of S&P 500 index. Indicator window displays custom indicator showing the ratio between unconfirmed expert rating buy and sell signals firing in the SP1500 list.

1: ERup if [er up] >= 95.

2: ERdown if [er down] >= 95.

3: ERupCount is tickerudf("ERup",[high]).

4: ERdownCount is tickerudf("ERdown",[high]).

5: ERnet is (ERupCount / (ERupCount + ERdowncount) - 0.5) * 2 .

6: LikelyPop if ERnet > 0.70.

7: LikelyDrop if ERnet < -0.70 .

Lines 1 and 2 specify that an Expert Rating buy occurs if the ER UP score is greater than 95, and likewise for an Expert Rating sell signal. The number of tickers that pass either the ERup rule or ERdown rule will be recorded in the breadth tickers that we'll create shortly.

Lines 3 and 4 read the breadth tickers to find the total number of buys and sells on any given day.

Line 5 calculates a user-defined function (UDF), called "ERnet," which combines the number of buy and sell signals as recorded in the breadth tickers. The sum is then scaled so that a score of 1 means all the signals that day were buys; -1 means all the signals that day were sells; and 0 means that the number of buys and sells were equal. This UDF is plotted as the ER Breadth Oscillator. These lines refer to [high] and not [close] because of the unique way that AIQ stores breadth information in its data files. For more on this, see the User Manual documentation for breadth tickers.

Lines 6 and 7 define rules that test for extreme values of the ERnet

function (greater than 0.7 or less than -0.7), which correspond to oversold and overbought conditions respectively. These rules are used to color significant bars in the ER Breadth Oscillator so they are easier to notice.

Next, create the breadth tickers:

You must create two breadth tickers, one called ERUP which will track the number of Expert Rating buy signals, and one called ERDOWN which will track the number of sells. Go into Data Manager, select *Ticker>New* and specify a breadth ticker. Next, specify the stock list for which breadth will be tallied, the rule to be used as the basis for counting, and the EDS file in which that rule is specified.

The result will be something like **Figure 2**. In this example, I'm using SP1500 as the list, the EDS file called "Breadth Tickers.eds" and rules called ERup and ERdown. I've given the rules the same name as

Figure 2. AIQ Data Manager *Edit Ticker* screen showing entries for new breadth ticker ERUP.

> *"I use the ER Breadth Oscillator…to help determine whether to take a long or short bias for swing or position trades on individual equities. When the general market looks oversold I look for long entries, and vice-versa when it is overbought."*

the breadth tickers only for convenience; it's not necessary to do it this way if you want to give them other names.

Once you have set up the EDS program and the breadth tickers, have your computer calculate them (in Data Manager select *Utilities>Compute Breadth Analysis…*). This could take minutes to hours depending on the speed of your computer and other factors.

Also, in the Data Retrieval module under *after update* click on *Update Breadth Tickers* so that your new breadth tickers will be automatically updated after each day's download. (For more details on breadth tickers go to www.aiqsystems.com, click *Upgrade,* and then *TradingExpert.*)

Finally, create the custom indicator:

In AIQ Charts, call up the custom indicator dialog box (*Chart>Settings> IndicatorLibrary>EDS Indicators…*) Click *Add* to create a new indicator, select the histogram format, and then specify the EDS file name (*Breadth Tickers.eds*), the user-defined

function you want to plot (*ERnet*), and the name you want to appear when the chart is displayed (such as *ER Breadth Osc*).

Then call up the Color Studies dialog box (*Chart>Settings>Color Studies*). Navigate to the EDS file you created. Click *Create New Color Study…* to create two studies, one to color the oversold bars green, and another to color the overbought bars red (see **Figure 3** on page 4).

Editor's note: For more information on Color Studies, please refer to the May 2001 Opening Bell. For information on creating a custom indicator, see the November 1999 issue.

Using the Indicator:

I use the ER Breadth Oscillator not to trade index funds or index options but to help determine whether to take a long or short bias for swing or position trades on individual equities. When the general market looks oversold, I look for long entries in my swing

trades and vice-versa when it is overbought. (I'd like to credit AIQ power user Steve Palmquist for helping me understand the importance of aligning swing trades with overall market bias.)

In general, I have found that when using the ER Breadth Oscillator with the SP1500 list, scores greater than 0.75 and less than -0.75 are significant. However, for the purpose of this article, I set the cutoff at 0.70 and -0.70. This gives more signals.

Depending on your trading style and which list you are using, you might set the threshold higher or lower. For example, David Vomund uses a threshold of 85% when working with the SP500 list; this works out to +/- .93 on my rescaled indicator. To change the values, simply edit the sixth and seventh line in the EDS program to whatever numerical value you prefer.

Let's look at some of the specific signals generated by the ER Breadth Oscillator. These are marked by letters and arrows in <u>Figure 1</u>. At the periods marked by D, I, J, and K, a lot of Expert Rating buy signals fired. Significant market bottoms resulted, at least in the short term.

At periods marked by H, L, and

> *"In my experience, Expert Rating sell signals that occur shortly after an intermediate-term market low usually represent a simple pause in the action rather than a serious correction."*

N, multiple Expert Rating sell signals fired for two consecutive days. Significant drops followed H and L, and N led to a short but tradable drop. Additional sell signals (at F, G, and M) marked short-term highs that could have been played profitably for a few days' gain, if tight stops were used.
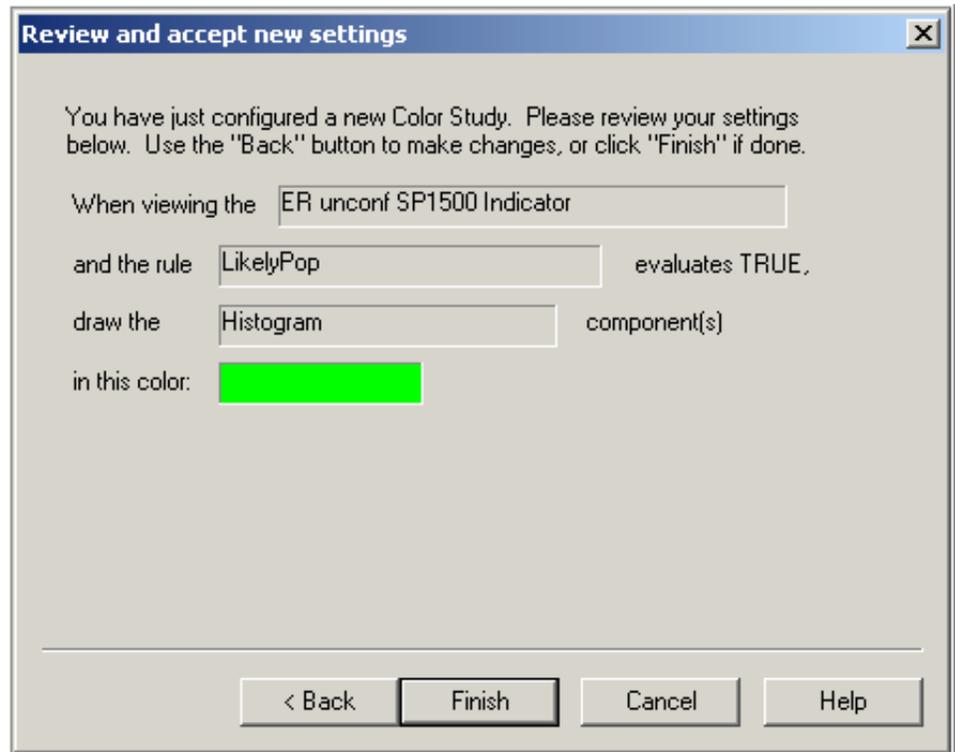

Figure 3. AIQ Charts *Color Studies* function showing settings for new custom indicator.

Other sell signals, for example at points A, B, and E, were not effective. In my experience, Expert Rating sell signals that occur shortly after an intermediate-term market low usually represent a simple pause in the action rather than a serious correction. Several respected advisors (for example Investors' Business Daily and Dave Landry) suggest treating the first pause after a bottom or a major breakout as an important buying opportunity rather than a time to sell. At such times, stocks can easily "ride the bands" for several weeks, and any oscillator that responds based on overbought conditions will fire multiple false sell signals. For this reason, I always use a confirming signal with oscillators.

Finally, it's worth paying attention to signals that are not quite at the level of significance, if only to avoid taking trades in the

wrong direction. For example, on 6/27/05, <u>Figure 1</u> shows an ER unconfirmed score of 0.43, well below the threshold of 0.70 needed to trigger a long entry. But even if this is not sufficient to enter long, it's a good "heads up" that the time to enter new shorts is passed, and the smart trader will tighten up stops and begin to take profits on short positions.

Users may download David Brodwin's EDS file shown in this article by visiting www.aiqsystems.com and selecting Opening Bell Monthly.

For documentation on how to use the Breadth Analyzer, visit www.aiqsystems.com, click Upgrades, TradingExpert Upgrade Site, and then Breadth Analyzer.

S&P 500 Changes
No S&P 500 changes this month.

What to Know About Group Calculations

Quality of Your Stock Data Is Important When Calculating Industry Groups

By David Vomund

When AIQ released TradingExpert in the early 1990s, its group/sector analysis capability was revolutionary. At that time one could trade Fidelity sector funds but those were the only securities

family offers sector funds, and exchange-traded fund (ETF) families are rolling out new sector funds as well. iShares and PowerShares are leading the way. One can now run sector analysis on tradable securities.

Still, there are many advantages to using AIQ's group/sector capabilities to calculate groups specific to your needs.

How Groups Are Calculated

AIQ calculates unweighted industry groups. That means each stock's movement in a group is

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that could be traded that tracked industry sectors. That has changed.

Now the Rydex mutual fund

DAVID VOMUND

equally important. That is different from some other methods, such as the capitalization weighted calculation that Standard & Poor's uses.

Each AIQ group begins with a value of $100. To calculate the next day's value, each stock's daily percentage change is averaged, and that average is then applied to the industry group. So if on the second day the average stock in the group rose 0.5%, then the group index would show a value of $100.5 (100 x 1.005).

To calculate the volume of the group, the daily volumes on all the stocks in the group are averaged. High volume stocks play a more prominent role than low volume stocks in this calculation.

Data Maintenance Is Important

Since AIQ groups are calculated based on the stocks in your individual database, the quality of your stock data is important. Bad stock data directly affects the stock's group and sector readings, resulting in a spillover effect.

It could happen that a group that should be at the top of the ranking only makes it to the midway point because one of the stocks within the group had an unadjusted stock split. If you are a top-down investor, that is an opportunity missed.
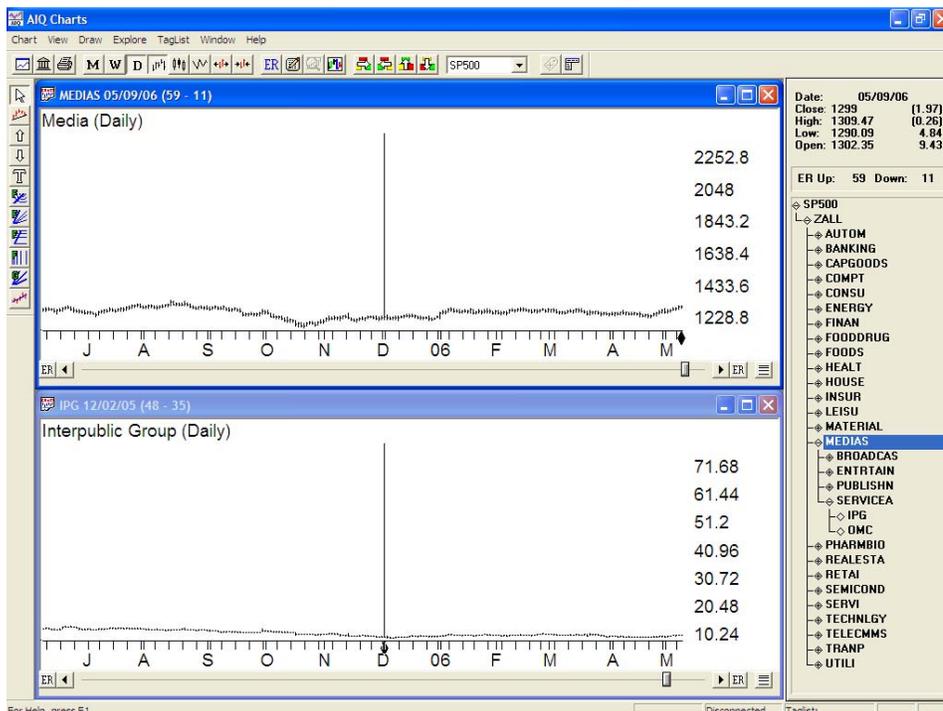
Figure 1. Charts of AIQ's Media Group (upper chart) and Interpublic Group (lower chart), a stock in the Media group. Note how stock's December erroneous price spike is reflected in the group price.

A good exercise is to browse through the sectors of an industry group structure looking for gaps in data. Since sectors rarely gap up or down, a gap often signals bad underlying data. Along the same lines, if the high or low price on a given day is clearly wrong, then it implies a bad stock price.

An example of bad data is found in **Figure 1**. The top chart shows a spike in the price of the Media group in early December. Obviously there is bad data in one of the stocks used to compute this sector. To find the problem, scroll through the groups that comprise the Media sector. When you find a similar problem in one of the groups, then scroll through the stocks within the group. In our example, Interpublic Group (IPG) had a bad high price on December 2. IPG was a $9 stock with a high price of $80 on that day.

To remedy the problem, go to Data Communications and run a *Selected Ticker* update on IPG using a start date before the bad price data (**Figure 2**). This will almost always correct the bad stock data.
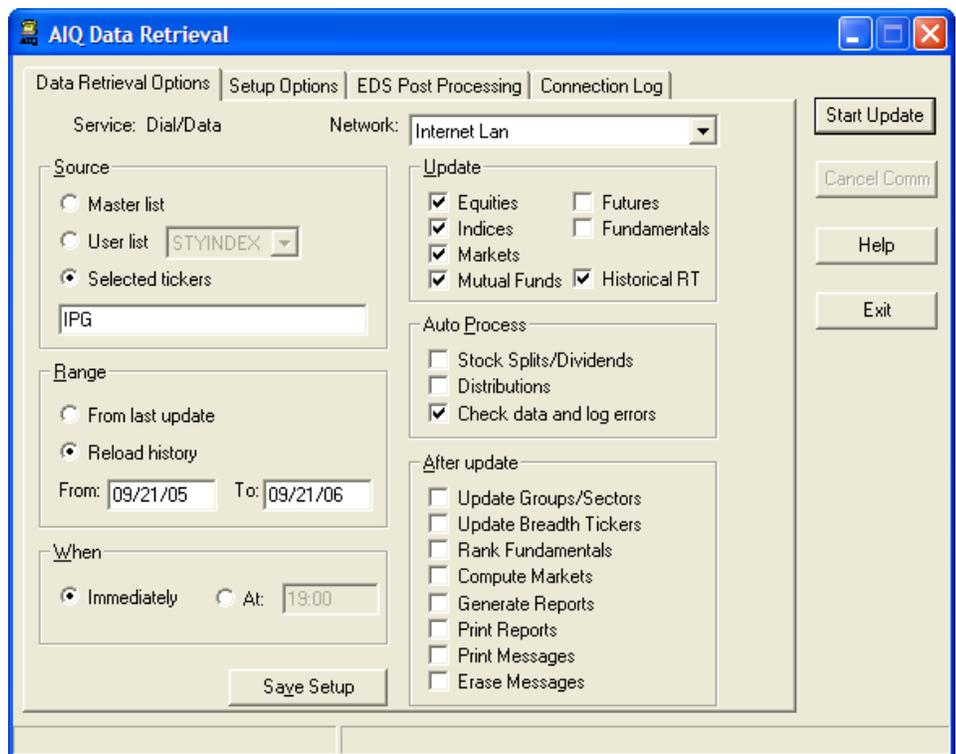

Figure 2. AIQ Data Retrieval screen with setup to reload data for ticker IPG for period 09/21/05 to 09/21/06.

Now it is time to recompute the industry group. In Data Manager, click *Utilities* and *Compute Groups/Sector Indices*. Under *Selected Group Symbol(s),* highlight the industry group and enter a date range that covers the bad price date through the current date (**Figure 3**).

TradingExpert Pro has a data correction program in

place and some bad stock data is corrected automatically after the following day's download. Therefore, you might find a group with a bad data spike but proper data in the underlying stocks. In this case, simply recalculate the group.

Longtime AIQ users know that correcting issues with bad end-of-

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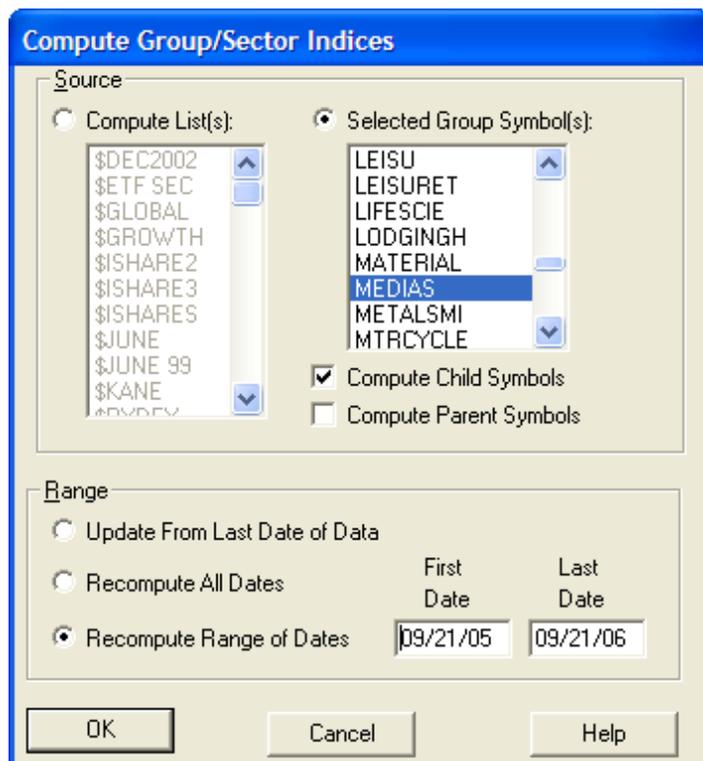
day stock data is greatly improved, so the process of fixing group data isn't required as often.

Group Structures

TradingExpert Pro comes with two industry group structures: the Standard & Poor's structure and the AIQALL structure. The advantages and disadvantages of each structure

Figure 3. AIQ Data Manager *Compute Group/Sector Indices* screen with Media group selected for recalculation.

were detailed in the last (September) issue of the *Opening Bell*. Users can also create their own group structures, which is an advantage even if they track tradable securities. For information on how to create your own group structure, see the February 2006 *Opening Bell*.

Mutual fund traders have very little data to analyze. That's because mutual funds only have closing prices. Therefore, nearly all mutual fund investors are relying on relative strength analysis.

AIQ's group/sector tools give you an edge. By calculating an industry group based on the largest holdings in a mutual fund, users can get high/low price bars along with volume statistics based on an industry group that moves with the actual mutual fund.

An example is found in **Figure 4**. This industry group tracks closely with the Rydex Internet fund, but because it has high, low, and closing prices, we are able to see price bars that represent the mutual fund. Also, there are volume statistics so indicators such as the Money Flow indicator can be used to analyze
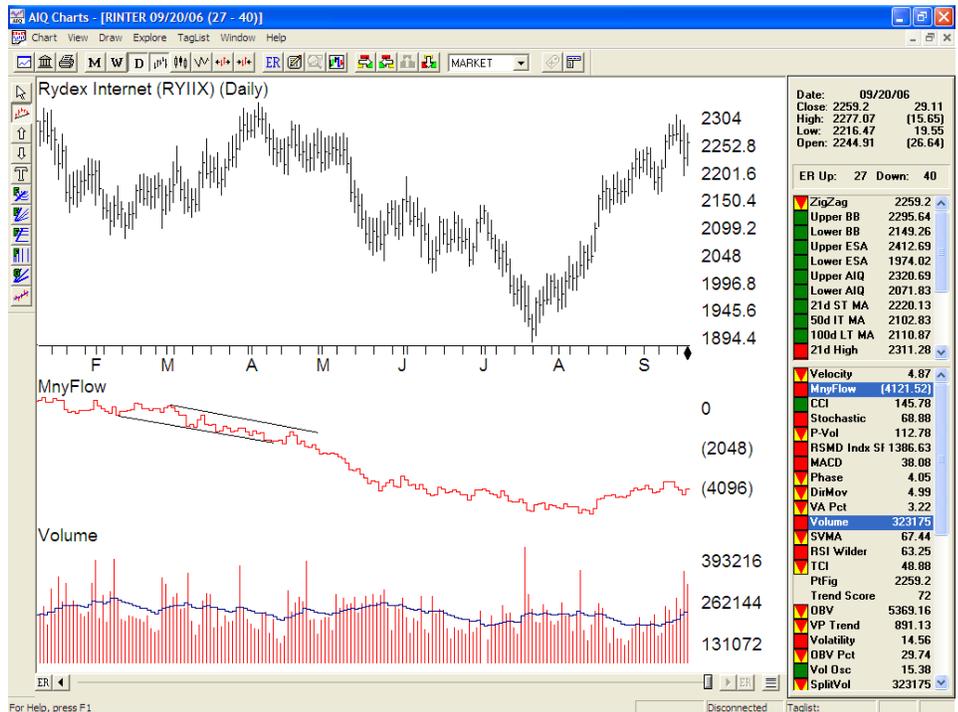

Figure 4. Chart of user created group that is designed to track the Rydex Internet fund and provide volume information. Group was built from the fund's largest stock holdings. Volume data allows computation of volume-based indicators such as Money Flow, which is displayed in lower window.

the fund.

Next month we'll examine group rotation techniques using AIQ's pre-built group reports.

David Vomund publishes VIS Alert, a weekly investment newsletter. For free trial issues, call 775-831-1544 or go to **www.visalert.com.**

STOCK DATA MAINTENANCE

The following table shows stock splits and large dividends:

No stock splits yhis month

Trading Suspended:

Advanced Digital Information Corp (ADIC)
Alliance Semiconductor (ALSC)
Aviall Inc. (AVL)
Boykin Lodging (BOY)
CFC Int'l Inc. (CFCI)
eLinear Inc. (ELU)
GNC Corp. (GNC)
Gtech Holdings (GTK)
Price Communications (PR)

Name Changes:

Cendant Corp. (CD) to Avis Budget Group Inc. (CAR)
Digital Generation Systems Inc. (DGIT) to DG FastChannel Inc. (DGIT)
Matrix Bancorp (MTXC) to United Western Bancorp (UWBK)
SFBC Int'l (SFCC) to PharmaNet Development Group Inc. (PDGI)

Market Review

Strength of Stock Market 'Overstated'

I n September the S&P 500 gained 2.7% while the Nasdaq Composite rose nearly 4%. Large-cap stocks led the way but the advance became very selective.

The financial press focused on the Dow, which closed near its all-time high. That overstates the strength of the stock market, and even overstates the strength of the 30 Dow stocks.

The average Dow stock is off 32% from individual all-time highs.