AIQ Opening Bell ®

Monthly

MUTUAL FUND INVESTING

ANALYZING MUTUAL FUNDS BASED ON PRICE ACTIVITY

By David Vomund

This is the first in a series of three articles on mutual fund investing using the capabilities of TradingExpert for Windows.

DAVID VOMUND

Most people use TradingExpert for stock analysis but a case can be made that the program is an even more powerful tool when analyzing mutual funds. In this series on trading mutual funds, we'll show the type of analysis that can be performed on mutual funds, how the program can help determine asset allocation, and how the industry group capabilities in TradingExpert are used in the selection process.

In this first article, we will demonstrate the analysis that can be used simply on mutual fund price activity. All our examples are based on the 35 Fidelity sector funds, but similar analysis can be performed on regular diversified funds as well.

When plotting a mutual fund with

> *"When buying into a trend, a good report to examine is Volatility Adjusted Return. The Short Term Ranking and Return on Investment reports can help spot emerging funds."*

TradingExpert, you'll immediately notice the chart looks different. First, since there are no high and low prices for mutual funds, bar charts are not available. Instead, there is a single line which connects the closing prices.

Second, open-end mutual funds do not have volume statistics so all indicators that require volume are missing. As a result, there are no AIQ Expert Ratings. What is left are indicators that are based solely on price activity. There are momentum indicators such as the MACD and overbought/oversold indicators such as the Stochastic.

In our analysis, we'll concentrate on two technical indicators, MACD and Relative Strength, and some of the mutual fund reports found in TradingExpert. Remember, all mutual fund reports generated by TradingExpert are in weekly version only.

MUTUAL FUND INVESTING continued . . .

Buying Into a Trend

Investors can choose to buy into a trend hoping to ride the trend higher or buy a fund that is beginning its upward move. When buying into a trend, a good report to examine is Volatility Adjusted Return.

This report ranks the funds in your database by a performance measurement which takes into account both risk and return. Those funds that have the greatest return with the least volatility (as measured by standard deviation) appear at the top of the report. For those familiar with regression analysis, these funds have high alphas.

Volatility is good for short term traders but not for anyone who wants to hold a fund for several months. This report is designed for longer term investors. An example of the report is found in **Figure 1**.

Notice that the sector fund with the highest return is Air Transportation, gaining 49.82% over the last year. Despite that return, the fund is ninth best because of its high volatility.

The funds at the very top of the report will show a nice uptrending pattern with little volatility. Longtime *Opening Bell* readers know that this is a pattern that I like. In fact, each of the top six funds (Figure 1) has been held sometime in the last year in my sector

Figure 1

Mutual Fund Volatility Adjusted Return 3/8/96

Ticker	Mutual Fund	VAR	Return	Vol	RS	RCC	Grade
FBIOX	Fid. Biotechnology	28.36	44.96	1.41	113		BA***
FDFAX	Fid. Food & Ag.	24.71	34.59	1.20	105		AA***
FSPHX	Fid. Health Care	24.71	36.19	1.27	107		CA***
FSVLX	Fid. Home Finance	24.18	42.15	1.54	111		BAC**
FSDAX	Fid. Defense & Aerospace	24.11	39.49	1.43	109		BAB**
FSRBX	Fid. Regional Banks	22.20	39.04	1.54	109		AAD**
FIDSX	Fid. Financial Services	18.80	37.56	1.74	108		BA***
FSCHX	Fid. Chemicals	16.94	27.03	1.31	99		AD***
FSAIX	Fid. Select Air Transportation	16.78	49.82	2.68	117		CB***
FSPCX	Fid. Insurance	16.67	27.53	1.36	100		DB***
FSLEX	Fid. Environmental Services	14.45	26.08	1.47	99		DC***
FDLSX	Fid. Leisure	13.94	23.68	1.35	97		BB***
FSTUX	Invesco Utilities	13.03	17.32	0.95	92		FBF**
FSHCX	Fid. Medical Delivery	12.96	28.58	1.83	101		ACA**
FSCGX	Fid. Industrial Equipment	12.71	33.03	2.21	104		ADC**
FSLBX	Fid. Brokerage & Inv.	12.68	27.37	1.77	100		BD***

fund portfolio. When choosing between two funds, pick the one that is more highly ranked in this report.

Of the 35 Fidelity sector funds, we'll examine the eighth rated fund, Chemicals. The two indicators we find most valuable are the MACD and Relative Strength. These indicators can whipsaw on the daily charts but show good trends in the weekly charts. An

increasing MACD is a sign of positive momentum. Ideally you want the weekly MACD to be increasing and the Phase Line to be above the Signal Line.

Relative Strength can be plotted in two formats in the Windows version of TradingExpert. The RS Indx SPX is the standard Relative Strength found in most software packages. A rising

Figure 2
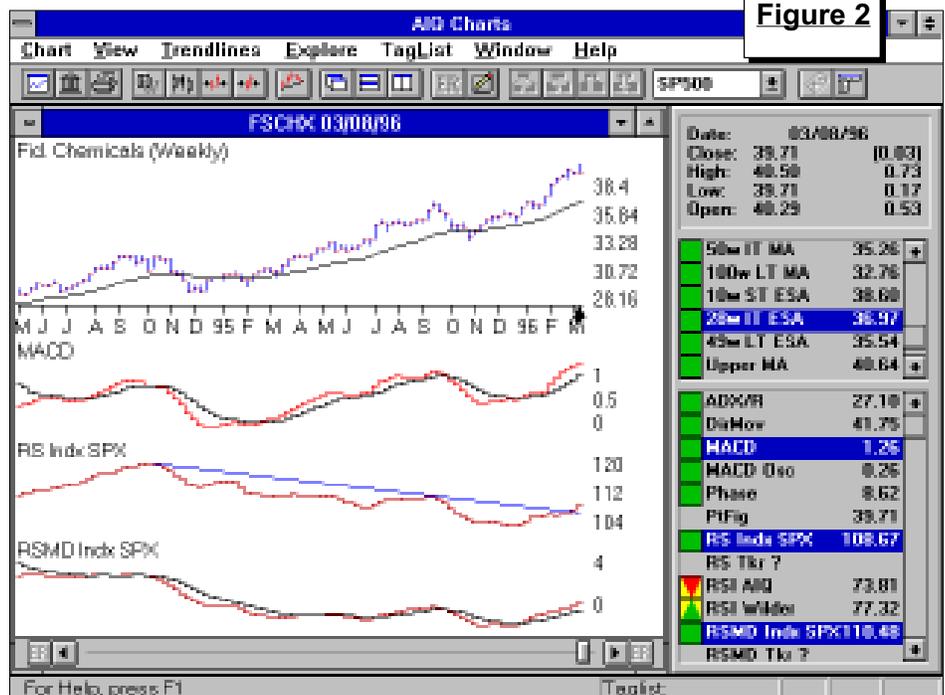
MUTUAL FUND INVESTING continued ...

Relative Strength line implies the fund is outperforming the S&P 500. The fund is underperforming when the Relative Strength line is falling.

The second Relative Strength format found in TradingExpert, RSMD Indx SPX, is the relative strength plugged into the MACD formula. I find this indicator more useful because it better pinpoints outperforming and underperforming cycles.

The Fidelity Chemicals fund is plotted in **Figure 2** along with the MACD and the two Relative Strength indicators. All three indicators are bullish. The MACD is rising, with the Phase Line above the Signal Line indicating momentum is still in favor of the fund. The RS Indx SPX just broke above a downward sloping trendline, and the RSMD Indx SPX is increasing and above the zero line.

Notice (in Figure 2) that the fund may be increasing but this does not mean that the indicators will also rise. Both Relative Strength measurements fell in 1995 even as the fund moved higher. The fund increased in value, but during that time period it underperformed the S&P 500. In 1996, it appears that the period of underperformance is over.

Figure 3

Ticker	Mutual Fund	1 Mth	3 Mth	6 Mth	9 Mth	12 Mth	Grade
FSRPX	Fid. Retailing	7	14	12	19	26	AF***
FSESX	Fid. Energy Services	3	12	17	31	41	AD***
FSCHX	Fid. Chemicals	3	15	14	22	30	AD***
FSPFX	Fid. Paper & Forest Prod.	3	6	1	4	18	DD***
FSAIX	Fid. Select Air Transportation	3	9	20	23	55	BB***
FSDPX	Fid. Industrial Materials	3	8	6	14	19	BF***
FSAVX	Fid. Automotive	2	3	3	11	17	DF***
FSAGX	Fid. American Gold	2	22	20	19	36	AF***
FSENX	Fid. Energy	1	5	11	14	20	DD***
FSLEX	Fid. Environmental Services	1	6	0	9	23	DC***
FSRFX	Fid. Transportation	1	8	9	17	16	BFB**
FSCPX	Fid. Consumer Products	1	6	14	24	29	AC***
FSHOX	Fid. Construction & Housing	1	4	10	15	24	DCF**
FDLSX	Fid. Leisure	0	8	4	17	24	BB***
FSCGX	Fid. Industrial Equipment	0	11	12	16	37	ADC**
FSTEX	Invesco Energy	(1)	3	7	13	19	FD***

Buying Into a Forming Trend

Not everybody's investment style is suited to buying into a trend. Many investors prefer to buy a fund near its low point or when a trend is beginning to develop. People using this strategy make more money when they are right, but picking a fund that is beginning its upward move is often difficult — there can often be what is termed a "false breakout."

People who are successful with this "buying into a forming trend" approach know when they are wrong and are quick to sell a losing position.

Two TradingExpert reports can help spot emerging funds. For short term traders, the Short Term Ranking report will rank the funds in order of their price performance for each of the last four weeks. This report is useful in seeing how funds are performing on a week to week basis.

Another helpful report is Return on Investment. This report lists each fund's percent change figures over a 1 month, 3 month, 6 month, 9 month, and 12 month period. A report for March 15, 1996, is displayed in **Figure 3**.

The report shows that the Paper & Forest Products fund has badly lagged the market over a one year time horizon but has recently begun to outperform. In the last month, it is the fourth best fund based on price performance. But we also see that over a six month horizon, the fund has only increased 1%, and over a one year period the fund's return figure is well
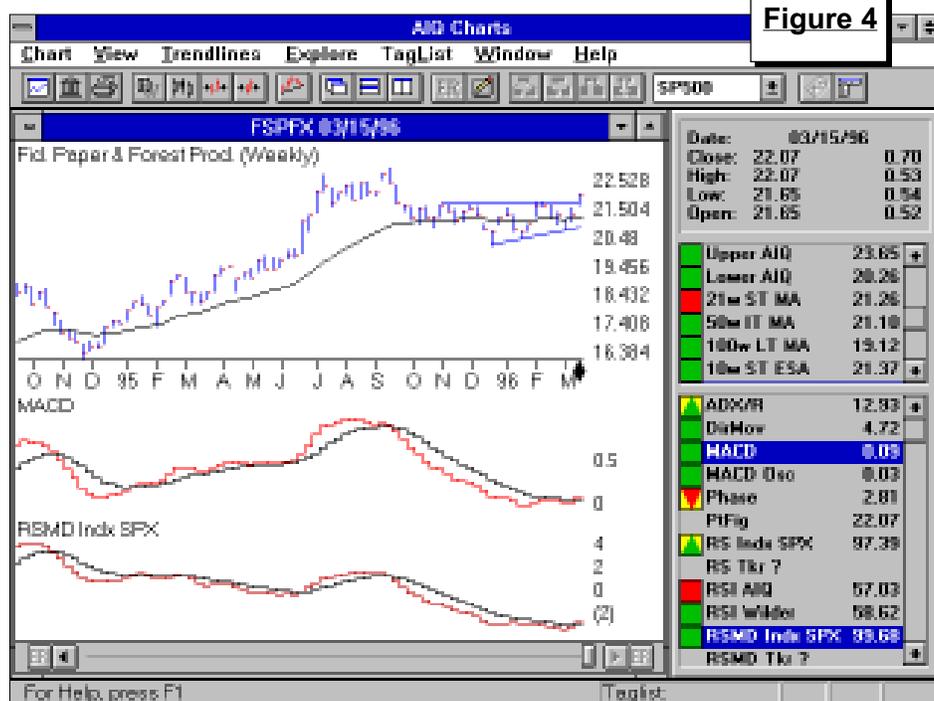
Figure 4

below the other funds listed in the report. This fund is worth further examination.

Figure 4 is a chart of Paper & Forest Products along with our two favorite indicators. Looking at early 1995, we see that only one of the two indicators was bullish. The weekly MACD was increasing, showing the fund's price increasing at an increasing rate.

Unfortunately, the Relative Strength indicator was falling, signifying that the fund was underperforming. Both indicators turned bullish in the summer of 1995 and went bearish in the fall. It wasn't until March 15 of this year that both indicators once again turned positive.

Looking at the price activity of the fund, we see the fund broke above a six month consolidation. This breakout can also be seen on a Point & Figure chart (**Figure 5**). Notice the pattern of higher highs and higher lows. (To run a Point & Figure chart for mutual funds, a weekly chart must be plotted. That way, the Point & Figure chart is constructed from the week's high price, the week's low price, and the week's closing price.)

At the time this article was written (March 16), several funds are giving Relative Strength buy signals. The majority of sector funds had a falling Relative Strength line from September 1995 until early March. This tells us that although their prices were rising, they were underperforming the S&P 500.

The evidence is in the data. On February 9, the S&P 500 was at a new high but only a quarter of the sector funds had a better year-to-date return. Picking funds that will outperform the market is easier when the majority of Relative Strength indicators point toward an underperforming S&P 500.

When analyzing mutual funds, data quality is important

Our analysis of the funds is based solely on price activity. Bad data will cause inaccurate readings in the reports

Figure 5

FSPFX 03/15/96
Fid. Paper & Forest Prod. (Weekly) PtFig (ZOOM)
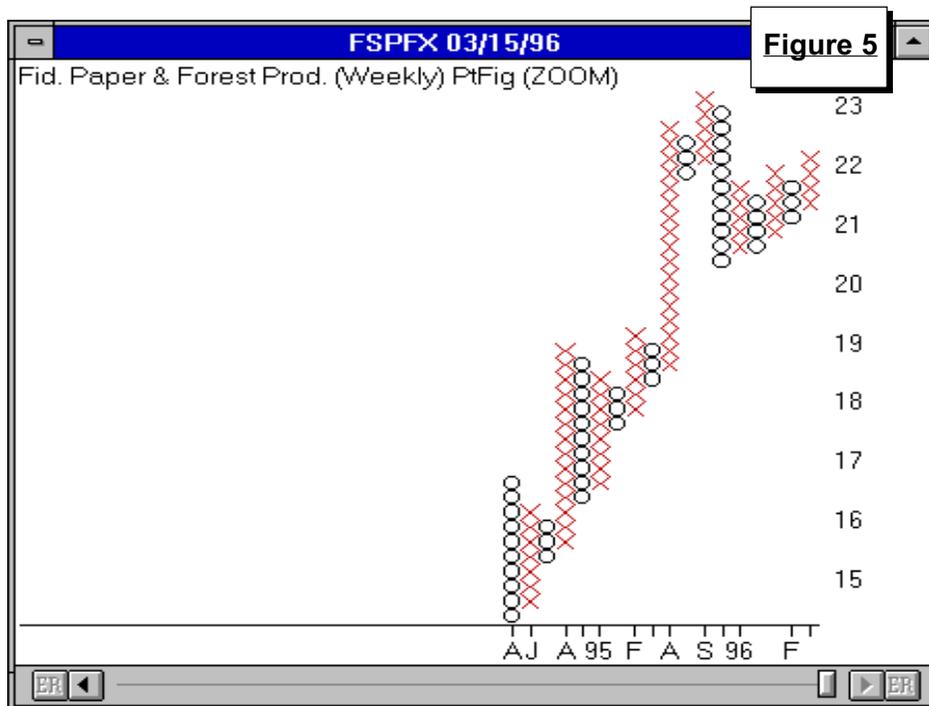
and in the indicators.

Problems can occur when mutual funds pay a distribution. Most funds pay a capital gain distribution or a dividend payment to shareholders at least once a year. On that day, the price of the fund will drop by the amount of the distribution plus or minus that day's market activity. Similar to a stock split, historical prices of the fund must be adjusted to reflect the distribution.

TradingExpert will automatically adjust for distributions as long as the data vendor sends a signal to our program that a distribution has occurred. Some are missed. When this happens, it is best to call the fund family to get the distribution amount.

To adjust the funds data, move to the day the distribution occurred and press the "**S**" key. TradingExpert will ask for the distribution amount and will then adjust your data. Distributions most often occur in the month of December, so any fund that shows a big drop at this time, especially if the overall market didn't fall, should be checked.

Here is a note concerning the use of TradingExpert's *Reload History*

function on mutual funds: Data vendors will also adjust historical prices for mutual funds after a distribution. When you perform the *Reload History* function, your data may be adjusted twice or may not be adjusted at all. When using the *Reload History* function for a mutual fund, you should always go back to the start date for that fund.

This is the first step in our analysis of mutual funds. Next month, we'll continue the subject of mutual fund analysis by covering how Relative Strength can be used to help determine asset allocation. Finally, we'll address the even more powerful "surrogate group" analysis. ∎

David Vomund is publisher of two advisories for stock and sector fund investing available by mail or fax. For a free sample of the advisories, phone 702-831-1544 or write Vomund Investment Services, P.O. Box 6253, Incline Village, NV 89450.

WINDOWS COMMENTARY

HELPFUL TIPS:
REPORTS - CONFIGURATION AND TROUBLESHOOTING

By Steve Hill

STEVE HILL

The AIQ Reports module in TradingExpert for Windows is one of the most resource intensive programs one is ever likely to encounter in Windows. Including weekly versions, we have 83 reports at our disposal.

The Reports module consists of two main components, the main report structure and the executable element. The main report structure was compiled using a runtime version of Microsoft Access version 2.0. In laymen's terms, that means we used Microsoft Access database management program to design the report structure, and then overlaid this structure with the AIQ Reports screen. The file msarn200.exe in the WINTES directory is the runtime version of

Microsoft Access. The other component to Reports is the executable that creates (i.e., performs all calculations) and provides the values that populate the reports structure. This operation is performed by the file AIQRPTS.EXE in the WINTES directory.

Figure 6

Tips on setup before generating reports

- **Report Library** - The Report Library (right section of the main Reports Window) is designed as a repository
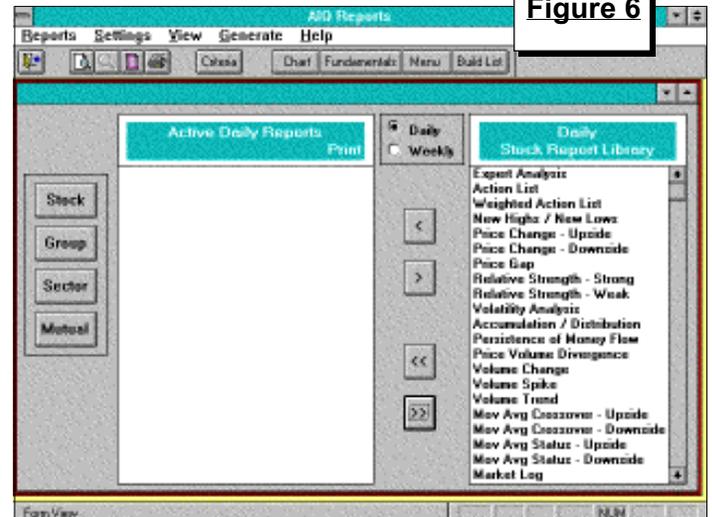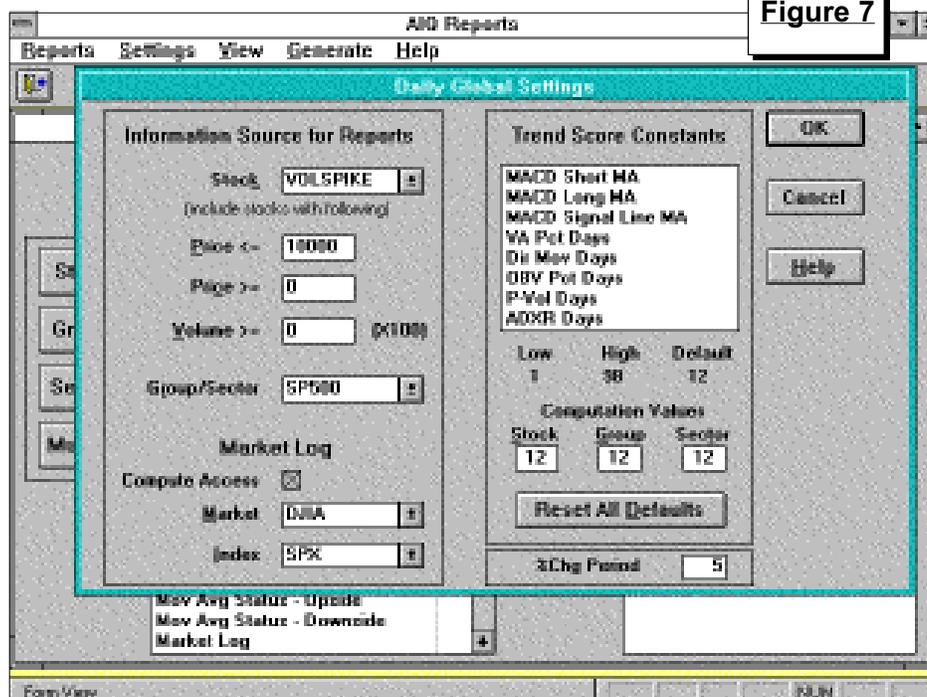
for those reports that you do not wish to examine on a regular basis. If all reports within a given section are sent to the Library (**Figure 6**), this section of reports will not be generated when reports are generated. However, if only some of the reports within a given section are sent to the Library (one or more reports active), all reports in that section, including those in the Library, will be generated with the rest of the reports.

- **Market Log** - The Market Log is a unique report in TradingExpert in that it draws information from many other reports. It is important to remember that the primary information required for the generation of the Market Log is the market timing data. DJIA is the default Market setting (Daily Global Criteria). If the Market Log is generated without the market timing data for the day of generation, most of the log will not be generated. The same problem can occur if reports used in compiling

Figure 7

the Market Log are in the Library (see above). The Market Log draws on the following reports and requires that they be in the Active Reports section of the Reports Window:

- Sector Analysis
- Group Analysis
- Weighted Action List
- Expert Analysis
- Market Log from the Daily Stock, Group, and Sector Reports categories

The Access Plot portion of the Market Log is generated only if designated. To activate or deactivate generation of the Access Plot portion of the log, go to *Settings* on the menu of the *Reports* function, then choose the *Global Criteria*, and *Daily Global Criteria* commands. In the *Daily Global Settings* dialog box, you will find the Market Log section. Check the box next to *Compute Access* (**Figure 7**). The Access Index is an analysis of your database of stocks based on various indicators. To determine what constitutes a database of stocks, the Reports module looks at the *Stock* setting under the *Information Source for Reports* section of *Daily Global Settings* (see Figure 7). If the *Source* is set to a list of stocks (for example *Volspike* in Figure 7), the Access Index will be generated on just that specified list.

- **Trendline Breakout -** Trendline Breakout reports are available in all report categories, both daily and weekly. If you have not drawn trendlines on any charts, however, these reports will be empty. The Trendline Breakout report is the same report regardless of the category — stock, group, sector, or mutual fund. All breakouts, regardless of symbol, are recorded in the Breakout report.

- **Check Technical Support Notes -** Many of the more common issues related to reports can be found by using the *Help* command on the AIQ TradingExpert menu bar. Click on the *Help* command button, select *Technical Support Notes* and then select *Reports* (**Figure 8**) to see technical notes. If you come across any errors while using the Reports function, they are likely to be documented in this area.

- **Maintaining system integrity -** AIQ Reports can become unstable if you are low on resources while utilizing this module. Here are some considerations:

  Add extra random access memory (RAM) — useful for improving report performance. These days, an 8 MB system is the minimum, especially if you are utilizing WIN95. Actually, 12 or 16 MB is recommended.
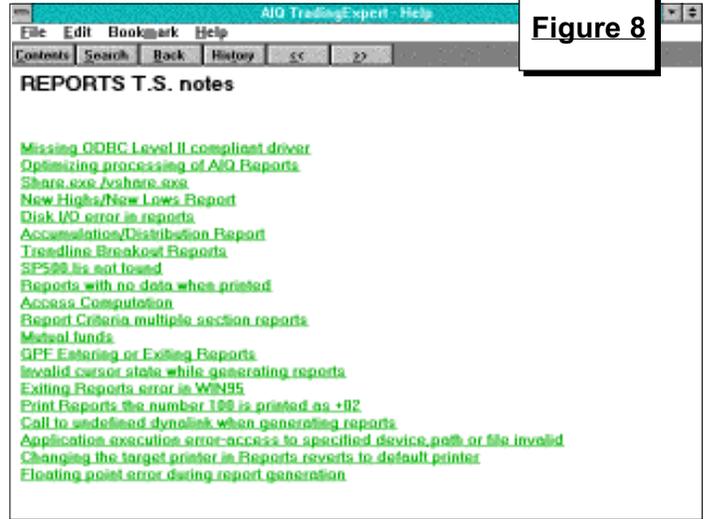
Figure 8

Run SCANDISK or CHKDSK /F on a regular basis after exiting from Windows. If you are running WIN95, you can run SCANDISK from within the desktop. Fix any errors, especially misreported Windows temporary files which could cause problems.

Shut down any other applications that are running in the background. With the applications shutdown, make sure there is sufficient system resources still available. In Windows v3.11 and v3.1, click *Help* on the Program Manager menu and go to *About Program Manager* (**Figure 9**). Important information here is *System Resources*. If the percentage is below 60%, exit Windows and then come back in again. This may free up resources that were not released by other applications. Generally, low resource percentage is not a problem in WIN95. ■

Figure 9

INVESTMENT CHAT

Want to talk to other users about market timing and stock selection techniques using TradingExpert? AIQ has created a forum on America Online. The key word "AIQ Systems" will take you to the new forum.

TOOLS OF THE TRADE

ADVANCE/DECLINE OSCILLATOR

By David Vomund

The Advance/Decline Oscillator was developed by Sherman McClellan and is most often called the McClellan Oscillator. This indicator uses market breadth (number of advancing and declining issues on the NYSE for each given day) in its calculation so it is only available for a market index that has breadth associated with it.

In TradingExpert, the Advance/Decline Oscillator will appear in the indicator section of the Charts control panel when the Dow Jones Industrial Average (DJIA) is plotted.

The Advance/Decline Oscillator (AD Osc) is calculated as the difference between two exponential moving averages using the daily advances minus the daily declines. By default, the two averages are for 19 and 39 day time spans. The oscillator is, in effect, a MACD formula run on market breadth. Positive values are recorded when the short-term average moves above the longer-term average. The reverse is true for the sell side.

With this indicator, a buy signal is registered when the AD Osc crosses above the zero line, and a sell is registered when the indicator falls below the zero line. As with most oscillators, there can be frequent whipsaws so it is best to combine the activity of this indicator with other available indicators.

An example of how our AIQ system combines the reading of this indicator along with other indicators can be seen from the rules that fired on the day of the 5/31/95 market buy signal. (With the DJIA plotted for 5/31/95, click the ER button on the toolbar to see the rules that fired.)

Many people look for divergences in the AD Osc to help determine future market direction. A positive divergence occurs when the market falls to a new near-term low but the indicator fails to make a new low. A negative divergence occurs when the market reaches a new high but the AD Osc fails to make a new high. Unfortu-

nately, we found that there are too many false readings using this interpretation.

Using divergence analysis, a great positive divergence came at the market low in December 1994. But there were several cases of negative divergences during 1995's spectacular advance.

AIQ's market timing model only looks for extreme divergences, such as when the market reaches a new high but the AD Osc is still in negative territory (for example, see the 11/15/95 sell signal).

A final method of analysis is the use of this indicator to spot overbought or oversold conditions. We found that when the indicator rises above 100, a market advance often begins to stall. Conversely, when the oscillator falls below -100, selling is overdone and a market advance follows. Surprisingly, this interpretation seems to work in both sideways and trending markets.

In **Figure 10**, we plotted the AD Osc in 1994's choppy market. To help identify overbought/oversold levels, we drew a horizontal trendline at +100 and -100. Notice how the market tends to rebound when the indicator falls below -100. There was only one case (in early June) where the indicator rose above +100. The market fell a few weeks later.

Turning to our current advancing market, **Figure 11** again shows the AD Osc with horizontal trendlines drawn at +100 and -100. Surprisingly, despite the strength in the market, there were more buy signals than sell signals. The only sell came in early December, right before the market began to consolidate.

Using the AD Osc as an overbought/oversold indicator is useful but, again, far from perfect. What is oversold can remain oversold when the market makes sharp declines. Back in 1987, the indicator gave an oversold reading on October 12, one week before the crash.

The Advance/Decline Oscillator can be an effective tool not only for

Figure 10

TOOLS OF THE TRADE *continued . . .*

forecasting market direction but also as an indication of market participation. Since its calculation is based on the number of advancing and declining issues, we know that few stocks are participating in an advance when the indicator is flat or negative. Unless you buy just the Dow stocks, picking winners is easier when the Advance/Decline Oscillator is giving a bullish reading. ∎

Figure 11
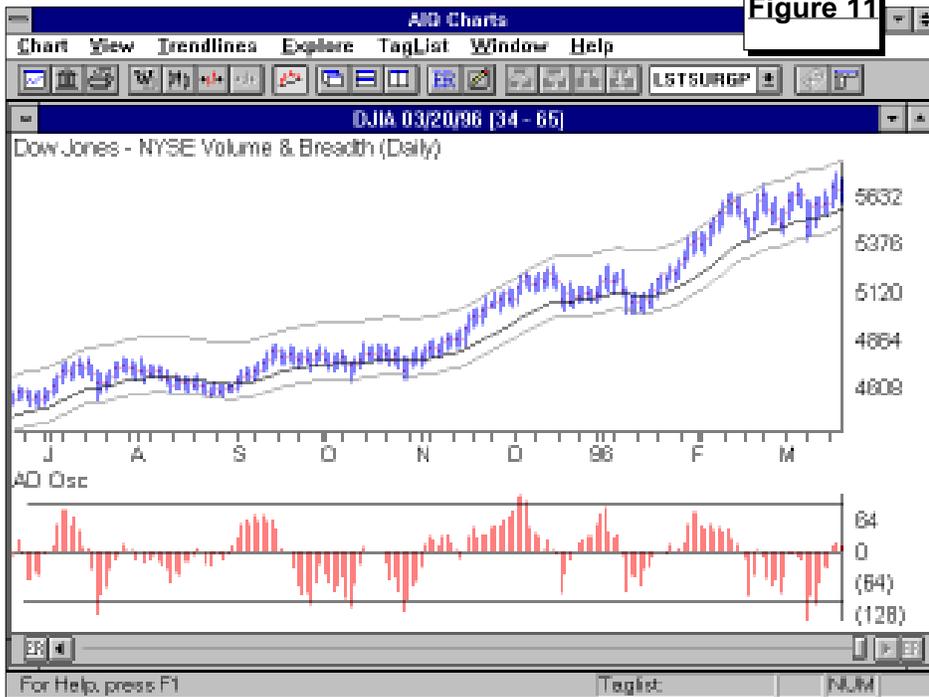
MARKET REVIEW

The month of March saw increased volatility in the market but no market timing buy or sell signals were registered. The month began with a shaky start as the Dow fell 170 points on March 8. News reports talked about the third biggest one day drop in the market. They didn't talk in percentage terms because that wouldn't have made the story as good. By the same measurement, we had our third biggest one day advance on the following Monday, March 11. Small company stocks assumed leadership and the Russell 2000 was in new high ground only two weeks later. At the end of the month, the S&P 500 was still below its old highs but the Russell 2000 continued its march into new highs.

After a 37% advance in 1995, the market surprised most analysts and continued to post good returns in the first quarter of 1996. Both the S&P 500 and the Russell 2000 rose about 4.8% in the first quarter of the year. ∎ **D.V.**

STOCK DATA MAINTENANCE

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

Stock	Ticker	Split/Div.	Approx. Date	Stock	Ticker	Split/Div.	Approx. Date
Oxford Health Plan	OXHP	2:1	04/02/96	Airgas Inc	ARG	2:1	04/16/96
MTS Systems	MTSC	2:1	04/02/96	ITT Educational Svs.	ESI	3:2	04/16/96
Conseco Inc.	CNC	2:1	04/02/96	Amtech Systems	ASYS	2:1	04/16/96
Goodrich (BF)	GR	2:1	04/02/96	LG&E Energy	LGE	2:1	04/16/96
HNC Software	HNCS	2:1	04/04/96	Oracle Systems	ORCL	3:2	04/17/96
Integrated Systems	ICST	2:1	04/05/96	Fuisz Technologies	FUSE	3:2	04/17/96
Rexall Sundown	RXSD	3:2	04/05/96	Granite Const	GCCO	3:2	04/22/96
PPT Vision Inc.	PPTV	3:2	04/08/96	Nat'l City Bancshares	NCBE	2:1	04/22/96
Thomas & Betts	TNB	2:1	04/10/96	Heico Corp	HEI	3:2	04/25/96
Gap Inc.	GPS	2:1	04/11/96	McGraw Hill	MHP	2:1	04/29/96
Amer. Travellers	ATVC	3:2	04/11/96	Kohls Corp	KSS	2:1	04/30/96
Infinity Broadcasting	INF	3:2	04/12/96	Old Republic Int'l	ORI	3:2	05/01/96
Ciprico Inc.	CPRI	3:2	04/15/96				

Trading Suspended:

Vigoro Corp (VGR)   Pentair Inc (PNTA)
CBI Industries (CBI)   Federal Paper Board (FBO)
Hornbeck Offshore Services (HOSS)

Ticker/Name Change:

Atlanta Gas & Light (ATG)   to AGL Resources (ATG)
Morrison Restaurants (MRN) to Ruby Tuesday (RI)