AIQ Opening Bell ®

Monthly

MUTUAL FUND INVESTING

LOOKING FOR AN 'EDGE'? TRY SURROGATE GROUP ANALYSIS

By David Vomund

DAVID VOMUND

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

In the world of investing, you need an edge. Your tools need to be better than the other players in the game. Having a simple charting package is not enough — most people have that. Successful stock selection methods fail to work when everyone begins to use the same tools.

To get an edge, you need a selection methodology that is not widely used. That's why AIQ's TradingExpert has features such as the Market Log, group analysis, and the Artificial Intelligence screening that is unique to our system. For mutual fund investors, TradingExpert offers the ability to follow a unique and powerful trading technique that we call "surrogate group analysis."

> *"By using the industry group capabilities of TradingExpert, you can create "surrogate groups" that represent mutual funds...Because surrogate groups have volume, you can analyze technical indicators that use both price and volume."*

As we've discussed in our previous two articles, mutual funds don't have volume statistics. Without volume, half of the tools that technicians use are not available. As a result, most mutual fund traders use similar tools (i.e. momentum and relative strength). By using the industry group capabilities of TradingExpert, you can create "surrogate groups" that represent mutual funds. The surrogate groups are then analyzed instead of the actual mutual funds. Because surrogate groups have volume, you can analyze technical indicators that use both price and volume. In effect, you are getting volume statistics for mutual funds. With price and volume statistics, all the available tools in TradingExpert can be used.

I am a firm believer in the power of surrogate group analysis. So much so that in my newly formed money management program, I've chosen to trade sector

MUTUAL FUND INVESTING *continued* . . .

funds using surrogate groups rather than individual stocks. Trading funds is less flashy than trading individual stocks and you'll never latch on to a huge winner like Iomega, but when you measure overall portfolio return and factor in portfolio volatility, mutual funds can be a very appropriate investment vehicle.

Surrogate groups can be constructed in two ways. First, you can take the 10 largest stock holdings of the mutual fund and form an industry group of those holdings. Second, you can run AIQ's MatchMaker program, looking for stocks that have a high correlation to the fund. If you use MatchMaker, a combination of these two approaches may be the best method.

Most mutual fund companies will read you their 10 largest stock holdings over the phone. For those interested in Fidelity funds, there is a *Mutual Fund Guide* (800-908-0068), which is a monthly publication that lists the 10 largest holdings for most of the Fidelity funds, including all of the sector funds.

Using MatchMaker, it is best to run the correlation test over several time periods. A three month correlation using daily data, a six month correlation using daily data, and a one year correlation using weekly data works well.
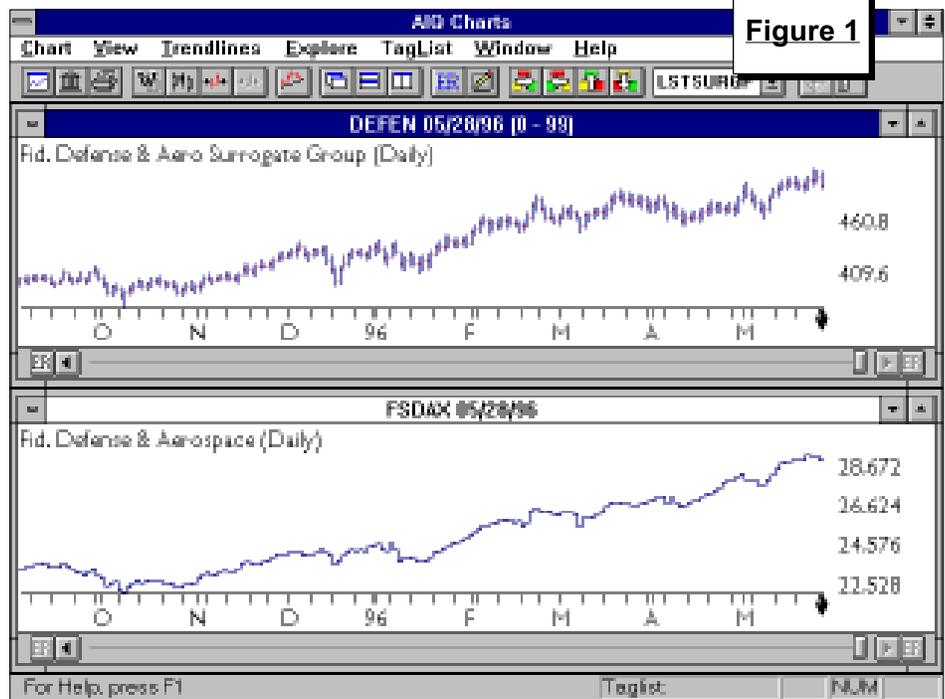

Figure 1

With surrogate groups, a common concern is the time lag that takes place between the time a fund manager sells a stock to when you actually find out the stock was sold. Because of this time lag, the surrogate group technique works best for sector funds. These funds concentrate on specific industries so the fund manager of an energy fund may sell a holding but he is replacing it with another energy related stock. These stocks tend to move in and out of favor at the same time.

Another advantage of sector funds is that the 10 largest stock holdings typically represent a larger portion of the total portfolio. For large diversified mutual funds, the 10 largest stock holdings typically represent only 10% to 20% of the total portfolio. For sector
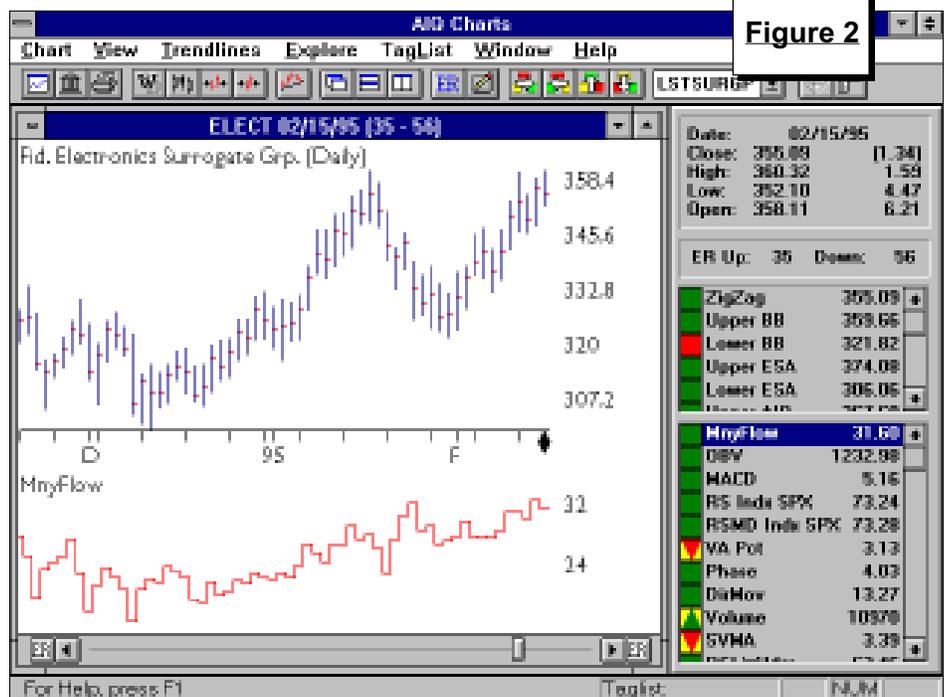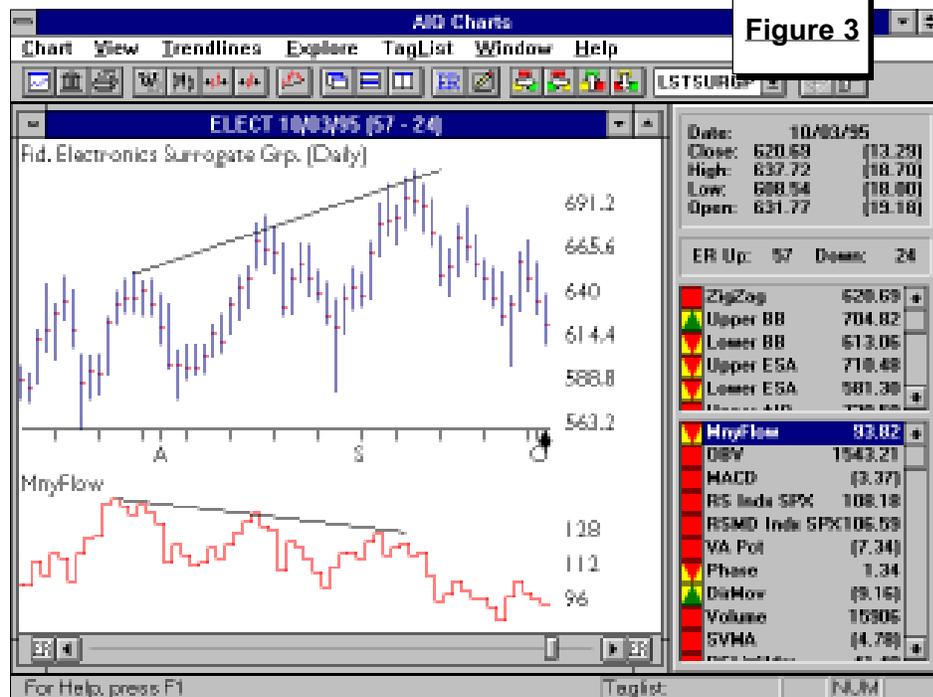
Figure 2

funds, the 10 largest holdings usually represent 40% to 50% of the total portfolio. Despite the fact that the 10 largest holdings represent 50% or less of sector fund portfolios, MatchMaker correlation tests that compare the sector funds to their corresponding surrogate groups show high correlations.

As a visual demonstration of how the mutual fund and the surrogate group move together we've plotted both the Defense & Aerospace surrogate group along with the price of the actual fund (**Figure 1**).

With surrogate group analysis, we have access to price and volume indicators such as On Balance Volume and Money Flow. Taking a look at one of last year's best performing funds, we see the advantage of using these indicators. In early 1995, the surrogate group for the Fidelity Electronics fund began its advance and its Money Flow indicator was very strong (**Figure 2**). Even as the surrogate group fell in late January, the Money Flow indicator moved higher. This fund was holding semiconductor stocks and had a spectacular 90% profit through mid-year.

Beginning in August, however, we

Figure 3

began to see bearish readings. In August to September, the surrogate group made a series of new highs but the Money Flow indicator was making lower highs (**Figure 3**). Underlying distribution was taking place. Semiconductor stocks proceeded to correct in the fourth quarter.

In today's strong market, it is hard to spot positive divergences because

the surrogate groups are making new highs. In this market environment, you simply want to make sure the indicators are hitting new highs as well. An example is the Brokerage & Investments fund found in **Figure 4**. The surrogate group has just reached a new high and we see both the Money Flow and On Balance Volume indicators are hitting new highs as well.

To the TradingExpert system, a surrogate group is just another industry group structure. That means you can run both the daily and weekly group analysis reports on surrogate groups. I like the groups that are in the top third of both reports and have a positive daily Delta Trend Score.

Using surrogate groups is a powerful technique for analyzing mutual funds. By examining indicators like Money Flow and On Balance Volume, we can often get an indication as to whether the fund's stock holdings are being accumulated or distributed. This analysis requires constant upkeep on the group holdings but the maintenance time is well worth the effort. ■

In addition to managed accounts, David Vomund publishes two advisories for stock and sector fund investing. For information, phone 702-831-1544.

Figure 4
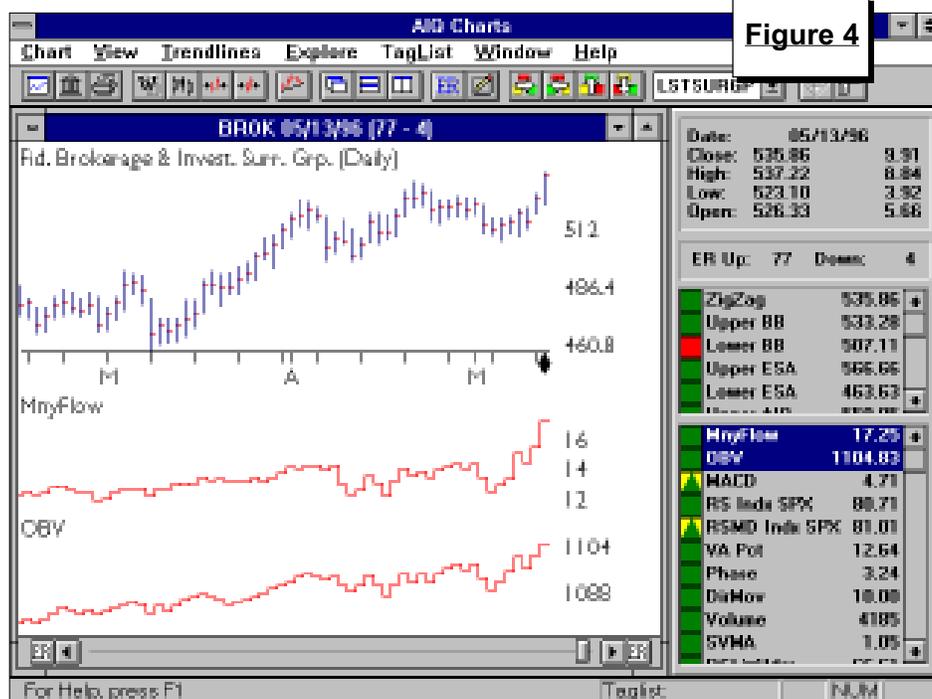
FUNDAMENRAL ANALYSIS

AIQ's Fundamentals Module Can Be a Powerful Filtering Tool

By Steve Hill

STEVE HILL

This article is not intended to promote the validity of fundamental analysis, but merely to examine some of the ways AIQ's fundamentals module can be incorporated into the technical side of TradingExpert for Windows. Although TradingExpert is primarily a technical analysis-based system, Fundamentals for TradingExpert provides a means for users to include fundamentals in their daily trading decision processes.

Overview of AIQ's fundamentals module

Fundamentals for TradingExpert allows the AIQ user to import fundamental data, to compute rankings for specific items of fundamental data, and to compute an overall AIQ Fundamental Rating for stocks. This overall AIQ

Figure 5

Select Market Guide Strategy

Strategy

Name	Description
M-DEBTH	– Stocks with high risk and high debt
M-DEBTL	– Stocks with low risk and low debt
M-EARNH	– High Earnings growth with relatively low current P/E ratio
M-EARNL	– Low Earnings growth with relatively high current P/E ratio
M-HIDIV	– Stocks with highest dividend
M-LOSSM	– Non-Profitable stocks which follow the market
M-PROFM	– Profitable stocks which follow the market
M-STRNG	– Stocks w/strong fund. and are more volatile than the market
M-WEAK	– Stocks w/weak fund. and are more volatile than the market

Select Strategy   Cancel   Help...

rating, which combines data items weighted according to a user-selected fundamental strategy, provides a quantitative measure of the fundamental attractiveness of a stock.

The Fundamentals for TradingExpert module allows download of fundamental data from all three AIQ-compatible data services — Dial/Data, Interactive Data Corporation, and

Telescan. After fundamental data is downloaded and the field rankings and the overall AIQ Fundamental Ratings are generated, TradingExpert provides a number of ways for users to access and utilize fundamentals. These include:

- Current fundamental data for stocks is displayed at any time on the TradingExpert stock charts by simply pressing the "**F**" key. Displayed data includes the user's specified fundamental data fields, the data values and their rankings, and the AIQ Fundamental Rating for the stock.

- A Fundamental Report is produced that lists stocks with the highest overall Fundamental Ratings.

- Users are allowed to build lists of stocks from the Fundamental Report. These lists provide a quick and easy way to view the charts of fundamentally attractive stocks.

- The AIQ overall Fundamental Rating or the rank of a particular data item (field) may be displayed on most TradingExpert reports through the User Report Code (URC). The fundamental URC also appears on the Master Ticker List.
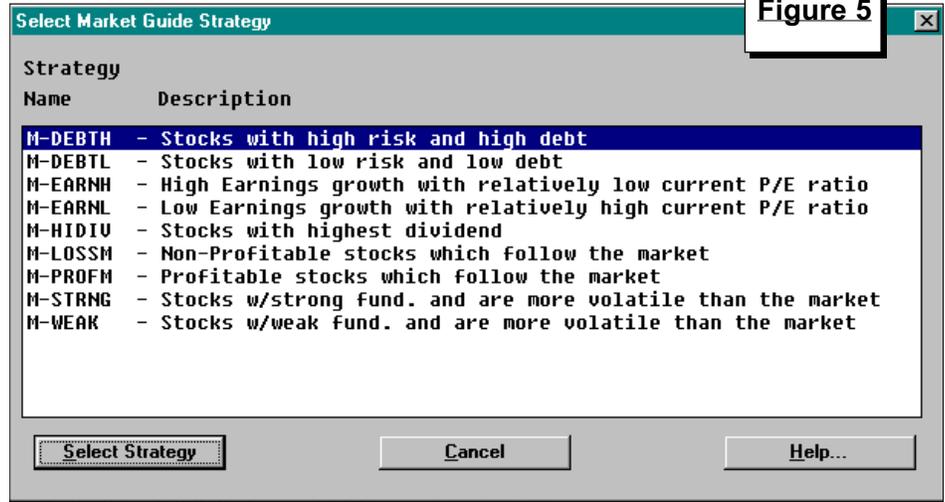
Figure 6

Criteria for Selected Fields

Selected Field	Sort Order	Rating Weight
EPS % change (year to date)	Descending	40
EPS % change (year ago)	Descending	40
Growth rate % (EPS)	Descending	10
Growth rate (EPS 8 years)		
Price/Earnings Ratio	Ascending	10

Source For Ranking
- Master Ticker List
- User List
- Sector
- Group

When ranking by User List, Sector, or Group use list:
401K

Set Rank or Range for Field...

Set User Report Codes...
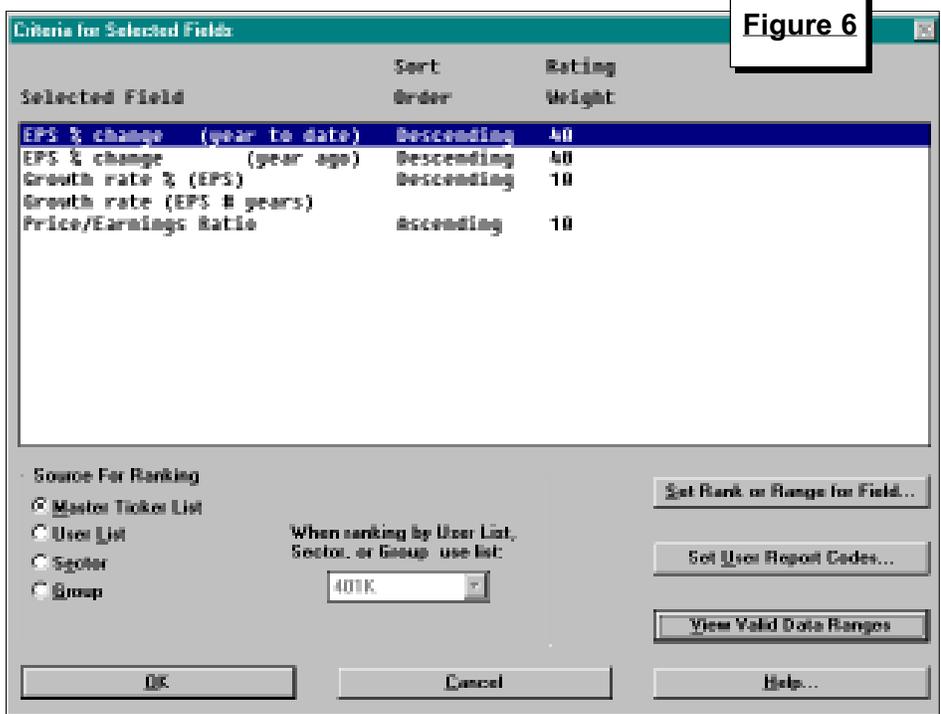
View Valid Data Ranges

OK   Cancel   Help...

FUNDAMENTAL ANALYSIS   *continued* . . .

All three AIQ-compatible data services provide the same 24 fundamental data items (or fields) which are obtained from Market Guide, a major supplier of fundamental data. Dial/Data users have the option of selecting from 47 additional data items. Telescan offers any of the Telescan ProSearch data items in addition to the 24 fundamental fields on the Market Guide list.

For the example analysis discussed in this article, only the 24 Market Guide fields will be used.

Preset fundamental strategies

You can use the functions of Fundamentals for TradingExpert to create a strategy and track any of the fundamental data items available from the data services. However, if you are
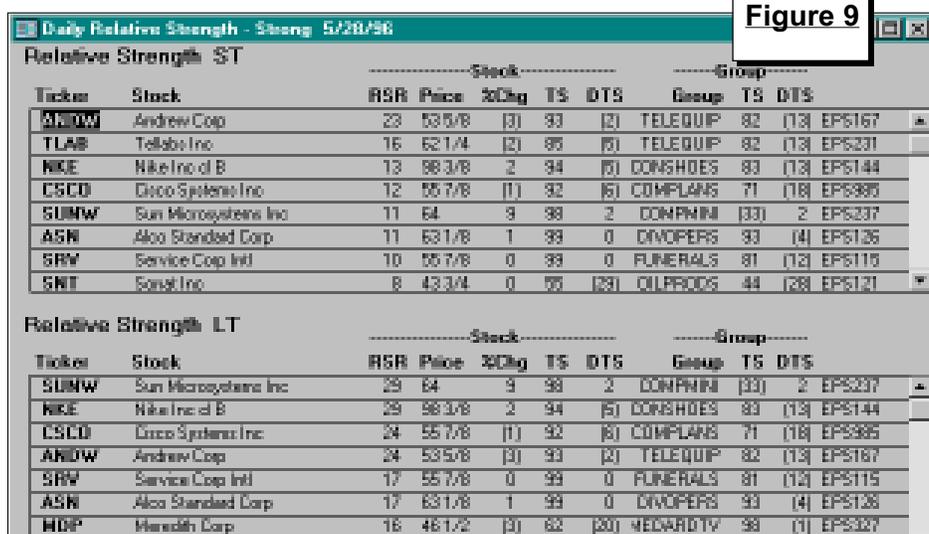

Figure 7

Figure 8

Figure 9
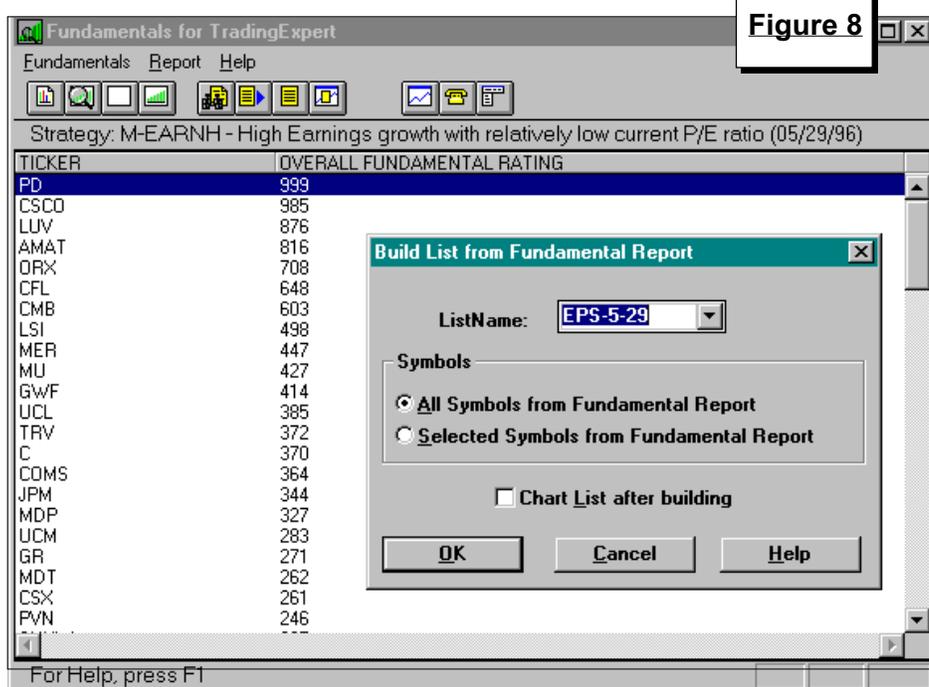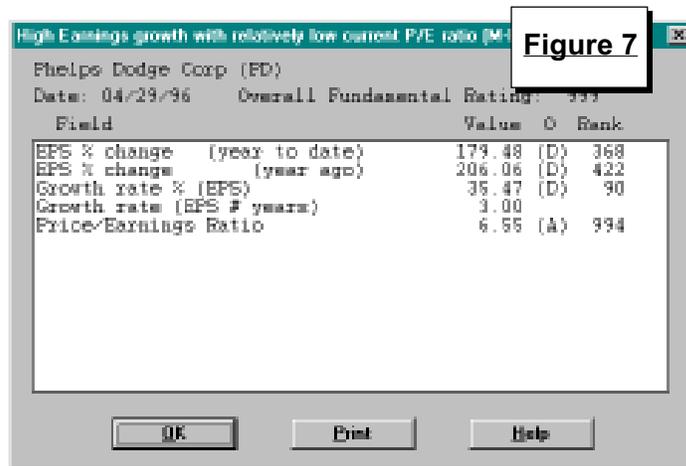
not sure which fields you want to track, you can use one of the preset fundamental strategies furnished with Fundamentals for TradingExpert.

To use one of these preset strategies, you simply select a strategy from a list available for your data service. The description listed for each strategy gives you a good idea of the type of stock that the strategy is designed to search for (i.e., give the highest fundamental ratings to).

The Market Guide strategy *M-EARNH - High earnings growth with relatively low current P/E ratio -* is one of the Market Guide strategies furnished with the program and is also the default Market Guide strategy. The other Market Guide strategies are displayed in **Figure 5**.

This M-EARNH strategy combines the rankings of several of the Market Guide EPS growth fields and the Market Guide P/E ratio field. AIQ's Fundamental Rating, which is computed from the rankings of the strategy's fields and their assigned weights, gives a measure of fundamental attractiveness with respect to this particular fundamental strategy.

With this one strategy selected, we will illustrate two different ways of utilizing the fundamentals module as a compliment to the TradingExpert for Windows program.

Using fundamentals as an initial filter

The M-EARNH strategy is comprised of the fields listed in **Figure 6**. With this strategy, we are seeking to assign the highest AIQ Fundamental Rating to the stock with the best earnings per share performance — hence the sort by *descending* value in Figure 6 next to the EPS related fields. (*Descending* means that the highest numerical value is placed at the top.)

Some consideration is also given to the price\earnings ratio. This field is ranked in *ascending* order (i.e., the highest value is placed at the bottom). In this case, the lowest P.E. ratio receives the highest ranking for this field (a high EPS combined with a low current stock price would yield a high rank for this field).

Continuing with our example, we compared each stock against all others in the Master List. An overall User Report Code was also assigned to enable tracking of the AIQ Fundamental Rating within the Reports and Data Manager modules.

Figure 8 shows the automatically generated Fundamental Report (Ticker and Overall Fundamental Rating columns at left). Listed are the stocks with the highest overall Fundamental Ratings computed from this strategy.

Figure 7 shows the results for the top stock in the report, Phelps Dodge Corp (PD). Note the absolute Value for each of the fields and then, in the Rank column, where that value ranked compared to the values of all other stocks. The overall Fundamental Rating is calculated by combining the weighted ranks of all fields.

Having computed an overall AIQ Fundamental Rating for all stocks in the Master Ticker List, the Fundamental Report shown in **Figure 8** now lists in descending order the top 50 stocks in the database based on this strategy. Using the *Build List* function from the Fundamentals module, we can put these stocks into a list. It is then an easy matter to change the *Global Criteria* settings in Reports from *All Tickers* to
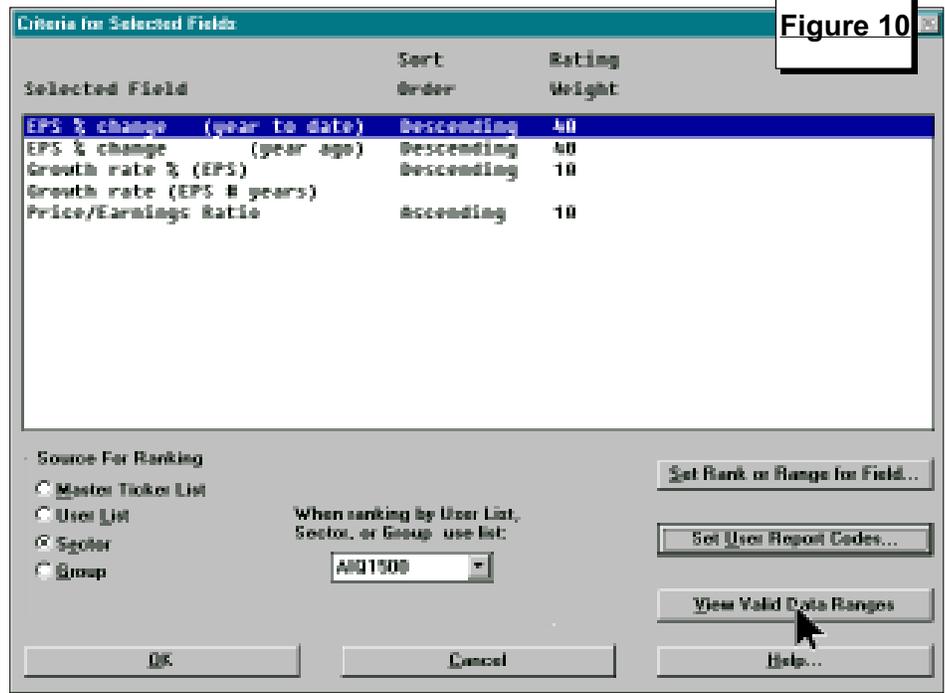
just tickers in this newly built fundamental list. Reports are then generated in order for us to have a complete technical breakdown of just the stocks that meet our fundamental criteria.

Figure 9 displays the AIQ Relative Strength - Strong report, generated on the fundamental list that we built. Note the Fundamental Ratings (User Report Codes) in the far right column. These ratings appear in all AIQ stock reports.

Figure 10

Figure 11

Figure 12

FUNDAMENTAL ANALYSIS *continued . . .*

Using fundamentals as part of top down analysis

Using the same strategy, M-EARNH, we will now illustrate a second method for using fundamentals in our stock selection strategy.
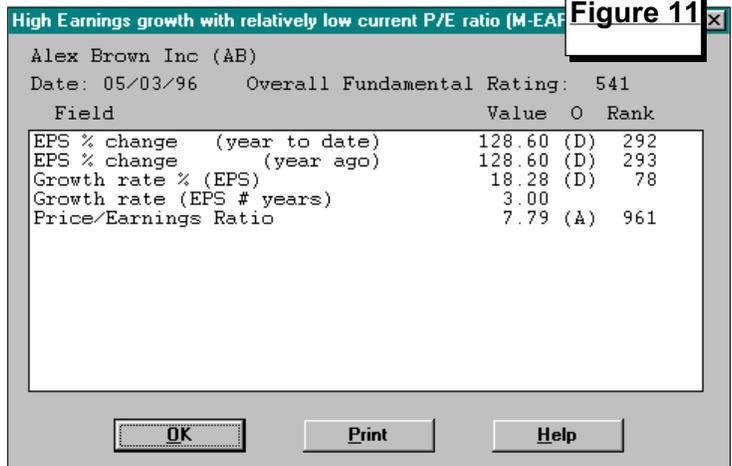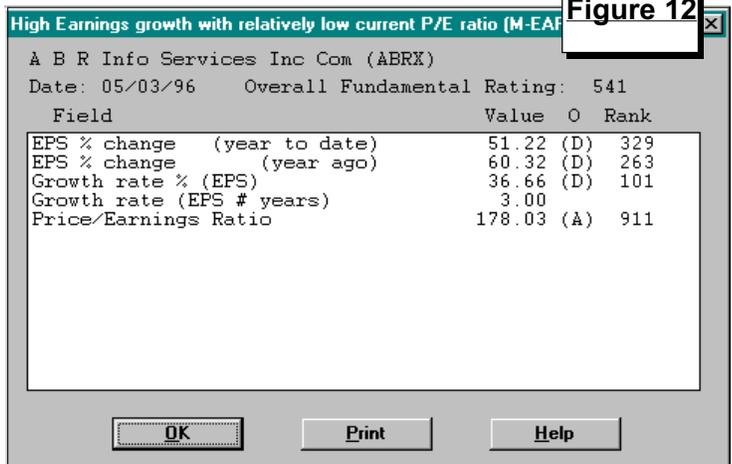
As shown in **Figure 10**, we have changed the Source for Ranking from the Master Ticker List to sectors within the AIQ 1500. This will perform the same ranking as before. However stocks are compared against other stocks within the same sector and ranked accordingly.

In this case, we are primarily interested in obtaining the Fundamental Rating for as many stocks as possible within the group\sector structure. The User Report Code is again used to track the rating.

From the middle of the Fundamental Report that was produced, I selected two stocks, ABRX and AB. Both of these stocks have the same Fundamental Rating (**Figure 11** and **Figure 12**), even though AB outperformed ABRX by more than 2 to 1 in two of the EPS fields.

The reason for this is that AB is measured relative to all other stocks within its sector (Financial) and ABRX is measured against all other stocks within its sector (Miscellaneous).

Using this second approach as part of a top down analysis, the stock that you eventually select using technical analysis can be confirmed (or not confirmed) by how its fundamentals stack up against the other stocks in its sector. ∎

MARKET REVIEW

There were two signals in the month of May. On May 2 there was a 100 down signal. This was a continuation of the April 17 sell signal. The market continued its small correction until May 8 when a 99 buy was registered. This came one day after the market low!

At the time of the buy signal, the Dow and the S&P 500 were at the bottom of a three month trading range. Within the next four days, the S&P 500 rose 20 points and broke above its trading range. By the end of the month, the market was testing its breakout level but no sell signal was registered. ∎

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
Oakwood Homes	OH	2:1	06/03/96	HBO & Co	HBOC	2:1	06/11/96
Champion Ent.	CHB	2:1	06/03/96	Johnson & Johnson	JNJ	2:1	06/12/96
Zytec Corp	ZTEC	2:1	06/04/96	SDL Inc.	SDLI	3:2	06/13/96
Avon Prod.	AVP	2:1	06/04/96	Hanna (MA)	MAH	3:2	06/17/96
Stanley Works	SWK	2:1	06/04/96	PhyCor	PHYC	3:2	06/17/96
Astoria Fin'l	ASFC	2:1	06/04/96	Ciber Inc.	CIBR	2:1	06/17/96
Wackenhut	WAK	2:1	06/04/96	Barry (RG)	RGB	5:4	06/18/96
Regis Corp	RGIS	3:2	06/05/96	Zoltek Cos	ZOLT	2:1	06/18/96
Res-Care	RSCR	3:2	06/05/96	Fulcrum Tech	FULCF	2:1	06/20/96
Thermo Electron	TMO	3:2	06/06/96	Cullen Frost Bankshares	CFBI	2:1	06/24/96
Monsanto Corp.	MTC	5:1	06/06/96	Gentex Corp	GNTX	2:1	06/24/96
Logans Roadhouse	RDHS	3:2	06/06/96	Stewart Enterprise	STEI	3:2	06/24/96
Xerox Corp	XRX	3:1	06/07/96	United Asset Mgmt.	UAM	2:1	06/24/96
Robert Half	RHI	2:1	06/10/96	Tetra Tech	WATR	5:4	06/24/96
Westell Tech	WSTL	2:1	06/10/96	ServiceMaster LP	SVM	3:2	06/25/96
Vishay Intertech	VSH	5%	06/10/96	Wireless Telecom	WTI	2:1	07/01/96
Printronix Inc.	PNTX	3:2	06/11/96				

Trading Suspended:

Andros (ANDY)   Integra Financial (ITG)

Dimark Inc. (DMK)   Loral Corp (LOR)

Gerity Oil & Gas (GOG)   Western Waste Inds (WW)

Ticker/Name Change:

Panhandle Eastern (PEL)   to   PanEnergy (PEL)

Philip Env. (PENVF)   to   Philip Environmental (PEV)

Lear Seating Corp (LEA)   to   Lear Corp (LEA)

MARKET TIMING

ACTUAL VERSUS THEORETICAL DATA

By David Vomund

I n the Market Review section of the *Opening Bell*, we list the latest market timing Expert Ratings. If your data vendor is Telescan, you'll notice that the buy and sell signals that we report are different from those on your system. The difference is that Telescan reports actual high and low prices for the Dow (DJIA) whereas our other vendors (Dial/Data and Interactive Data Corporation) use theoretical high and low values.

Our Expert Rating timing system uses daily high, low, and closing prices in its analysis. Theoretical high and low prices differ from actual price data. Dial/Data and Interactive Data, as well as *The Wall Street Journal*, report theoretical data. The theoretical high for the DJIA is the price that would be reached if all 30 Dow stocks traded at their high prices at the same time. The

theoretical low price for the DJIA is the price if all 30 stocks were to reach their daily low prices at the same time.

Telescan, on the other hand, uses actual data for the Dow. That is, the high is the highest price that the Dow actually traded on a given day. *The Wall Street Journal* has also begun to report the actual high and low values. Since stocks rarely reach their daily high price at the same time, the actual high price for the DJIA will be lower than the theoretical high price.

Using the actual high and low prices makes more intuitive sense but all of the research that took place developing the AIQ Expert System was performed with theoretical high and low price data. We know theoretical data works well with our timing system. How is actual data working?

Table 1 lists Expert Rating buy and sell signals for people who use Dial/

Data (theoretical data) and people who use Telescan (actual data). Telescan switched from theoretical to actual high and low values in mid-1991, so our test begins on 12/31/91. Listed in each table are Expert Rating signals of 95 or greater. Only the first buy signal in a string of buy signals is used. For each trade, we held the S&P 500 until the first sell signal of 95 or greater was registered. Since we are strictly testing Expert Ratings, no confirmation technique is used.

Examining the data, we see that results with actual and theoretical data are generally in agreement. The dates of the signals can be different, however. As an example, both models were bullish for most of the first quarter of 1996. A buy signal was seen on January 16 using both theoretical and actual data. Telescan users, however, were whipsawed in mid-March as a sell was seen on March 8 and then a buy came on March 11.

Over the entire testing time period, the number of trades was the same for both theoretical and actual data. The average gain per trade was very close under both data sources but performance was slightly better with theoretical data.

Table 2 shows a breakdown of this study by year. For 1992, 1995, and the first quarter of 1996, the results are very close. Using actual data in 1994 was the better choice but theoretical data worked much better in 1993.

Overall, we see the effectiveness of our timing model for Telescan users is close to that of Dial/Data or Interactive Data users. Performance is slightly lower when actual high and low data is used but the analysis remains valid. ■

Table 1

Theoretical High/Low			Actual High/Low		
Entry Date	Exit Date	S&P 500 % Change	Entry Date	Exit Date	S&P 500 % Change
12/31/91	05/15/92	-1.68	12/31/91	02/28/92	-1.05
05/29/92	06/05/92	-0.45	03/13/92	03/23/92	1.00
06/22/92	07/20/92	2.57	04/10/92	08/06/92	4.03
07/27/92	08/06/92	2.20	09/02/92	09/08/92	-0.85
08/14/92	09/08/92	-1.30	09/10/92	09/17/92	-0.00
09/10/92	09/22/92	-0.67	09/18/92	11/04/92	-1.38
09/28/92	12/14/92	3.89	11/18/92	01/07/93	1.86
12/18/92	01/07/93	-2.39	04/08/93	04/20/93	0.74
01/12/93	02/16/93	0.67	06/24/93	07/02/93	-0.17
07/06/93	10/22/93	4.95	07/06/93	07/21/93	1.30
12/17/93	02/04/94	0.74	10/01/93	10/07/93	-0.46
02/28/94	03/24/94	-0.60	12/07/93	02/04/94	0.65
03/28/94	06/20/94	-0.98	02/25/94	03/24/94	-0.37
06/27/94	08/05/94	2.19	03/25/94	06/20/94	-1.11
08/23/94	09/19/94	1.36	06/27/94	08/05/94	2.19
09/26/94	09/29/94	0.31	08/12/94	09/16/94	2.00
10/10/94	10/20/94	1.70	10/10/94	10/20/94	1.70
11/07/94	04/20/95	9.12	11/25/94	03/07/95	6.60
04/21/95	06/16/95	6.16	04/21/95	07/19/95	8.36
08/25/95	10/02/95	3.86	08/24/95	10/19/95	5.95
10/12/95	10/19/95	1.29	11/16/95	12/18/95	1.59
11/16/95	12/18/95	1.59	01/16/96	03/08/96	4.12
01/16/96	03/29/96	6.09	03/11/96	03/29/96	0.86
Average gain per trade		**1.77**	Average gain per trade		**1.63**
Number of trades		23	Number of trades		23

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

Table 2

	Yearly Returns (Percent)	
Yr.	Theoretical High/Low	Actual High/Low
92	5.22	4.77
93	4.46	0.18
94	3.89	6.82
95	23.80	22.43
96 Q1	6.09	5.01