

# AIQ

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IN THIS ISSUE

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## Feature

A Review of New Stock Screening Report ..... 1

## Sections

Data Maintenance ..... 4

AIQ Pyramid Update ..... 5

Mutual Fund Investing ..... 6

Market Review ..... 8

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## AIQ REPORTS

### PERSISTENCE OF MONEY FLOW IS BEST FOR 'LONG TERM'

By David Vomund

When you have developed and implemented a trading system, it is encouraging to find that others have developed and are successfully using a similar system. That's how I felt listening to Marc Chaikin, developer of the Money Flow and Volume Accumulation Percent indicators, who spoke at AIQ's last two seminars.

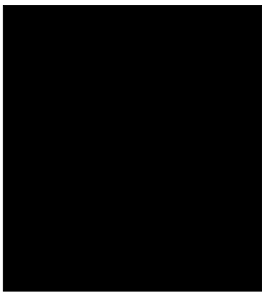
In my first *Opening Bell* article on stock selection, I wrote that finding stocks with Volume Accumulation Percent (VA Pct) positive for several months is one of the criteria I look

for (see *Opening Bell Monthly*, December 1992). It turns out Mr. Chaikin thoroughly tested and quantified strategies which use the VA Pct indicator and found that the large majority of stocks with tremendous price gains have this common characteristic — the VA Pct is above zero for almost every day over a six month time period in the early stage

of the stock's move. Mr.

Chaikin was so convincing that we decided to develop and add a new stock screening report, the Persistence of Money Flow, to the TradingExpert system.

For a stock to appear in the bullish section of the Persistence of Money Flow



DAVID VOMUND

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*"...the large majority of stocks with tremendous price gains have this common characteristic — the VA Pct is above zero for almost every day over a six month time period in the early stage of the stock's move."*

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report, its VA Pct indicator must have a positive value at least 90% of the time over a six month time period. Mr. Chaikin tested several time periods and found six months to be the

best. Using TradingExpert's report functions, you have the ability to change the time period examined, the percent of persistence, and whether you want the report to use the VA Pct indicator, the On Balance Volume indicator, or both.

Of all the stock screening reports available in TradingExpert, the Persistence of Money Flow is the one that is

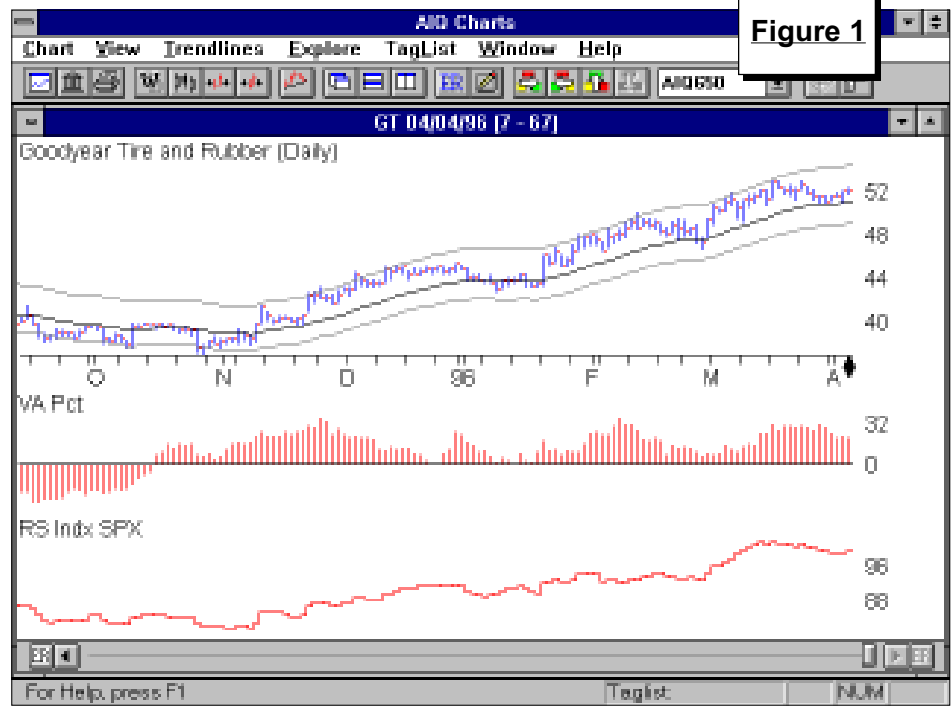
AIQ Reports continued on page 2

most oriented for the long term. The report is designed for people who have an investment time horizon of several months to over a year.

There are several additional factors that Mr. Chaikin looks for in the selection of stocks. One factor is relative strength. A stock with a high persistence of Money Flow but with weak relative strength (it's underperforming the market) should be ignored. You will find that the majority of stocks appearing on the Persistence of Money Flow report are, indeed, high relative strength stocks. But there are some stocks that have been falling over several months at the same time that their VA Pct indicators remained positive. These stocks are suspect.

**Figure 1** shows a typical stock that appears on the Persistence of Money Flow report. We see that Goodyear's VA Pct indicator was positive from mid-October through early April. We also plotted the relative strength indicator (RS Indx SPX), which was increasing for most of the time period covered. Goodyear was outperforming the market.

We performed several tests on this report. Our first test was similar to the test which appeared in the March 1995 OBM issue, except at that time we were testing the Weighted Action List.



When a market timing buy signal of 95 or greater was issued, the Persistence of Money Flow report was run and the top five stocks that appeared on the report were purchased and held until a market timing sell signal was registered. The Expert Ratings on the individual stocks were ignored. A database of the S&P 500 stocks was used.

Results of this test appear in **Table 1**. Listed are the trade dates (entry and exit), the percent change in the S&P 500, and the average percent change in the five "high persistence" stocks. The table shows that this method of stock selection badly underperformed a strategy of merely trading the S&P 500 index. On average, the S&P 500 rose 1.76% during the market timing buy signal. Stocks selected using the Persistence of Money Flow report only increased 0.5%.

These results demonstrate that this report is not designed for short term stock selections. The average holding period was 40 days. A better report for short term traders is the Weighted Action List, which outperformed the S&P 500 by over 3.5% per trade (see OBM, March 1995).

Another potential problem is that

the method tested is a growth stock selection technique. Generally, a growth stock investing strategy works better with small company stocks than with large company stocks. Nevertheless, the results of this first test were disappointing.

Our next test used a one year time horizon. At the end of every quarter, beginning 12/31/93, we ran the Persistence of Money Flow report on a database of 1500 stocks and purchased the top 10 stocks appearing on the report. The stocks were held for one year and their performance was then compared to the S&P 500. The results are phenomenal (see **Table 2**). The stocks that appeared on the report outperformed the S&P 500 in all but the latest one year period. Probably the most impressive element is the fact that the selected stocks rose in 1994, a year when the broader market fell.

These results are impressive but may be somewhat overstated. One problem with the test is that it is run on AIQ's current 1500 stock database. Some of the stocks in the current structure of AIQ's 1500 may not have been included in the structure when the test was constructed. Two examples are Coherent and America On

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AIQ REPORTS *continued . . .*

Line. America On Line may not have been a part of the AIQ 1500 on 12/31/93, but in our test it appears as third best on the list.

To partially offset this problem, we didn't purchase stocks with a split-adjusted price below \$10. Therefore, in our test we didn't purchase America On Line, which rose 91%, or Coherent, which first appeared in the top 10 of the report on 6/30/94 and rose 350% over the next year!

However, even if the results may be overstated, it appears this screening technique is highly effective when screening a database that represents the broad market. Of course, past performance does not guarantee future results.

Since we are always somewhat skeptical of backtested results, we printed a list of the stocks from the end of the first quarter of this year (see **Table 3** on page 4). We plan to revisit these stocks in a year.

We also ran the same test that produced **Table 2** on a database of just the S&P 500 stocks. Interestingly, the results were about in line with the S&P 500 index. Clearly, this screening report works

*AIQ Reports continued on page 4*

**Table 1**

### Persistence of Money Flow Report Short-Term Trading Results

Entry Date	Exit Date	S&P 500 % Change	Stocks % Change	Portfolio Holdings (Ticker Symbols)
04/10/92	05/15/92	1.44	0.45	BLY,CSCO,PG,KRB,GWF
05/29/92	06/05/92	-0.45	-0.98	CL,CPL,CMZ,COL,FTU
06/22/92	07/20/92	2.57	1.09	UEP,FTU,CPL,CL,IAD
07/27/92	08/06/92	2.20	2.85	UEP,SO,BOAT,UCL,CPL
08/14/92	09/08/92	-1.30	-1.79	UEP,BOAT,SO,PPL,UCL
09/10/92	09/22/92	-0.67	-2.55	UEP,DUK,NSP,UCL,D
09/28/92	12/14/92	3.89	-0.24	UEP,BEL,NSP,FPL,DUK
12/18/92	01/07/93	-2.39	-2.41	NSP,CAG,DUK,DTE,CSR
01/12/93	02/16/93	0.67	-0.46	CAG,NMK,GRA,DUK,DTE
07/06/93	10/22/93	4.95	2.86	UK,UEP,PPL,CHV,ASN
12/17/93	02/04/94	0.74	2.73	UK,LDG,ITT,MD,CPL
02/28/94	03/24/94	-0.61	2.44	CYR,CNF,TKR,UK,LDG
03/28/94	06/20/94	-0.99	-6.00	N,CYR,DD,LDG,KR
06/27/94	08/05/94	2.17	7.30	ANDW,CCB,MNR,FLR,CEN
08/23/94	09/19/94	1.36	1.29	CCB,CEN,ANDW,BAX,BNL
09/26/94	09/29/94	0.31	-0.90	IFF,BAX,CCB,CEN,CHA
10/10/94	10/20/94	1.67	-1.13	IFF,BAX,CCB,STJM,BNL
11/07/94	04/20/95	9.12	6.02	IFF,RAD,CCB,MDR,BNL
04/21/95	06/16/95	6.16	0.70	MMM,CEN,BDK,LLY,TYC
08/25/95	10/02/95	3.86	1.30	JR,NOB,WMB,FLT,TRW
10/12/95	10/19/95	1.29	-1.71	W,NOB,LIZ,MAT,LDW-B
11/16/95	12/18/95	2.81	0.28	WB,MTC,CSCO,RTN,NOB
		<b>1.76</b>	<b>0.51</b>	

**Table 2**

### Yearly Performance Study

Time Period	S&P 500 % Change	Stocks % Change	Portfolio Holdings (Ticker Symbols)
1994 Q1 - 1994 Q4	-1.54	7.90	FNM,MDT,BGEN,KFV,GEMS VO,EFU,ROPR,RPR,CA
1994 Q2 - 1995 Q1	12.33	36.54	SUNW,DE,KLM,LSI,ITT JNJ,HD,QCOM,KO,OCF
1994 Q3 - 1995 Q2	22.62	48.76	FTEN,FORE,BCN,BBV,ANDW ALRC,VRI,ESV,DEVN,ELF
1994 Q4 - 1995 Q3	26.30	42.75	LYX,CSCC,BCN,TESS,ACSA DRE,ADTN,BOBJY,IFF,AFL
1995 Q1 - 1995 Q4	34.11	45.03	ADTN,DIGI,LNTV,PHAM,PHYN PLT,IFF,HPH,RAH,JNJ
1995 Q2 - 1996 Q1	28.92	21.91	LUC,ASMLF,COHR,DLTR,ADTN LNTV,PHAM,RAH,SBH,LMT
Average =	20.46	33.82	

**Table 3****Persistence of Money Flow Report  
03/29/96**

<b>Ticker</b>	<b>Stock</b>
DJ	Dow Jones & Co.
LMT	Lockheed Marietta
MTC	Monsanto
DTE	Detroit Edison
RD	Royal Dutch Pete
NOB	Norwest Corp
SC	Shell Transport
HMC	Honda Motor Co. ADR
UN	Unilever N V NY Shares
FLE	Fleetwood Enterprises

better on the broader market stocks rather than the large company stocks that dominate the S&P 500.

After running these tests on the Persistence of Money Flow report, we conclude:

- The report is better at selecting stocks that will outperform over the intermediate and long term rather than the short term.
- It works best with a database that includes small and mid-cap stocks.

In addition, results can be further improved by performing individual analysis on the stocks that appear on the report. A stock is more attractive when it first appears on the report rather than when it has appeared on the report for several months and has substantially appreciated. Also, the short term performance of these stocks should improve by limiting selections to those that are on recent confirmed buy signals. ■

*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.*

**STOCK DATA MAINTENANCE**

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

<b>Stock</b>	<b>Ticker</b>	<b>Split/Div.</b>	<b>Approx. Date</b>	<b>Stock</b>	<b>Ticker</b>	<b>Split/Div.</b>	<b>Approx. Date</b>
Chubb Corp	CB	2:1	05/06/96	VSE Corp	VSEC	2:1	05/17/96
American Home Prod.	AHP	2:1	05/07/96	Valley Nat'l Bancorp	VLV	5%	05/20/96
St. John Knits	SJK	2:1	05/07/96	Westco Bancorp	WCBI	3:2	05/20/96
HPR Inc.	HPRI	2:1	05/07/96	Aames Financial	AAM	3:2	05/20/96
Ohio Art	OAR	2:1	05/08/96	Boise Cascade Off. Prod.	BOP	2:1	05/21/96
Octel Communications	OCTL	2:1	05/13/96	Iomega Corp	IOMG	2:1	05/21/96
Altron Inc.	ALRN	3:2	05/13/96	CBT Group PLC	CBTSY	2:1	05/21/96
Coca Cola	KO	2:1	05/13/96	Peoples Holding	PHCO	3:2	05/21/96
US Robotics	USRX	2:1	05/13/96	SunTrust Banks	STI	2:1	05/21/96
Eckerd Corp	ECK	2:1	05/14/96	Paychex Inc.	PAYX	3:2	05/24/96
Sitel Corp	SITL	2:1	05/14/96	Penn National Gaming	PENN	3:2	05/24/96
First Fed Bancshares	FFEC	3:2	05/16/96	Chittenden Corp	CNDN	5:4	05/24/96
McAfee Assoc.	MCAF	3:2	05/17/96	Multicare Cos.	MUL	3:2	05/29/96

**Ticker/Name Change:**

Noble Drilling (NDCO)	to Noble Drilling (NE)
Olympic Fin'l (OLYM)	to Olympic Fin'l (OLM)
Manville Corp (MVL)	to Schuller Corp (GLS)
Union Bank (UBNK)	to UnionBanCal Corp (UNBC)
Greenpoint Finc'l (GNPT)	to Greenpoint Finc'l (GPT)
Micropolis (MLIS)	to SteamLogic Corp (STLC)

**Corrections:**

Ruby Tuesday is symbol (RI)  
Morrison Knudsen is symbol (MRN)

**Trading Suspended:**

Duracraft Corp (DUCR)  
Chemical Banking (CHL)  
First Interstate (I)  
Premier Industrial (PRE)  
Healthwise of America (HOAM)

## AIQ PYRAMID

## NOW READY - NEW VERSION OF AIQ'S INDUSTRY GROUP PYRAMID

We've completed a new version of the AIQ Pyramid, our industry group structure.

In review, the AIQ Pyramid is an industry group structure that is classified on both a fundamental and a technical basis. Most industry group structures are classified only on a fundamental basis — stocks with comparable products are placed into an industry group. We've taken it a step further by performing a technical test to ensure that all the stocks in each group are behaving similarly with respect to price action. The AIQ MatchMaker program is used to test the correlations of the stocks within an industry group to the industry group index. Only stocks with high correlations are kept in their group.

In creating the Pyramid structure, we began with the Dow Jones industry group structure and then ran the MatchMaker program to test for correlations. Only those stocks that demonstrate a high correlation to their industry group index are kept. We then compared the industry group to a database of 3000 stocks, looking for

new stocks to add to the structure. Only those that fit on a technical and fundamental basis are kept. The industry group index then becomes a better representation of the underlying stocks.

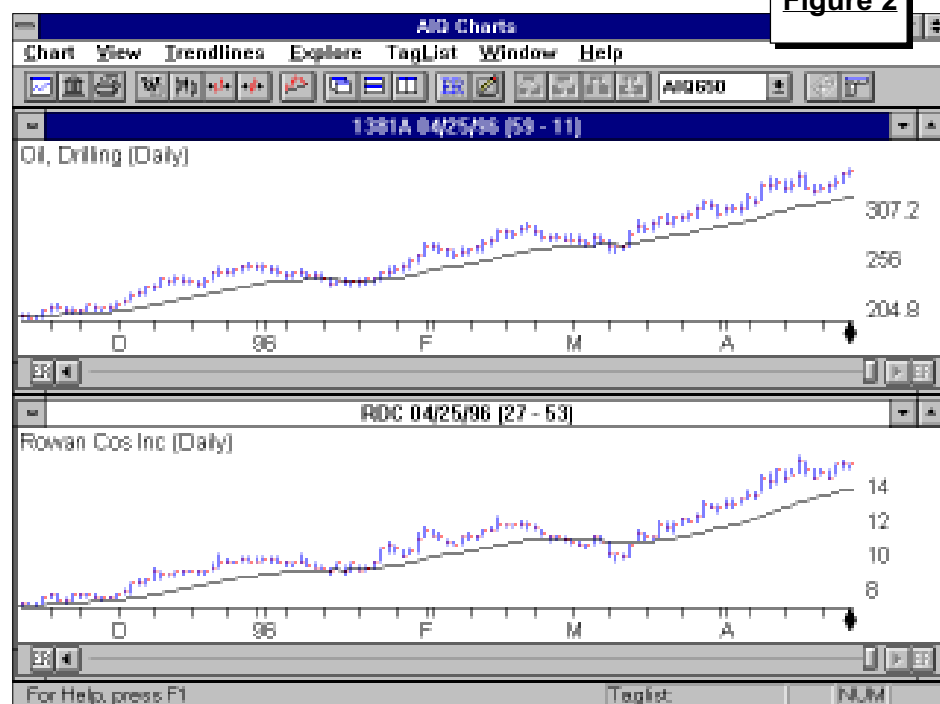
An example of one of today's strongest groups is Oil-Drilling, which

consists of 10 highly correlated stocks. **Table 4** is a list of the stocks along with their correlations. A coefficient of 1000 represents a perfect correlation, and 500 or greater is considered highly correlated.

**Figure 2** is a chart of the Oil-Drilling group along with Rowan Companies, the stock that shows the highest correlation to its group index.

The AIQ Pyramid structure is primarily designed for investors who use a top-down approach and prefer large company stocks. The structure has approximately 375 stocks classified into 78 industry groups. A similar correlation test is run on sectors. The 78 industry groups are classified into 15 sectors.

The AIQ Pyramid sells for \$188. If you are a registered owner of a previous version of the AIQ Pyramid, you can purchase the newly updated version for \$44. If interested, call AIQ at 800-332-2999. ■



**Figure 2**

**Table 4**

**AIQ MatchMaker**  
**04/01/95 - 04/01/96**  
**Oil-Drilling Group**

Coef.	Ticker	Stock
773	RDC	Rowan Cos
770	NBR	Nabors Industries
743	ESV	Energy Service Co.
738	PKD	Parker Drilling Co.
733	GLM	Global Marine
698	TDW	Tidewater Inc.
682	PPP	Pogo Producing Co.
656	HP	Helmerich & Payne Inc.
641	RB	Reading & Bates
636	PDP	Parker & Parsley Pete.

## MUTUAL FUND INVESTING

# A LESSON IN ASSET ALLOCATION USING MUTUAL FUNDS

By David Vomund

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

In the world of investing, there are domestic stocks, international stocks, bonds, real estate, etc. Each investment category has its own bull and bear markets. An asset allocator is one who monitors the different types of investments and allocates assets to the most attractive areas. Shifting assets to the attractive investment categories is easily accomplished through the use of mutual funds.

Many mutual fund families have both domestic and international equity and bond funds. The largest mutual fund families will also have funds that invest in securities of specific countries,

as well as sector funds for specific industries such as metals or real estate. The group/sector capabilities of TradingExpert make it easy to monitor these different types of mutual funds.

In preparation for this article, we created a list in TradingExpert that we called *Funds*. We then created four groups of mutual funds:

Large Company Stock Funds, Small Company Stock Funds, World Stock Funds, and Emerging Market Funds. These groups were then placed in the *Funds* list, and indices were computed. The

result is an index of mutual funds for each category (see **Figure 3**).

To create these groups, go to TradingExpert's *Data Manager* application. The first step is to create a list. On the menu bar click on *List* and then

*New*. We named our list *Funds*. Click OK. This new *Funds* list will automatically become the active list.

The next step is to create

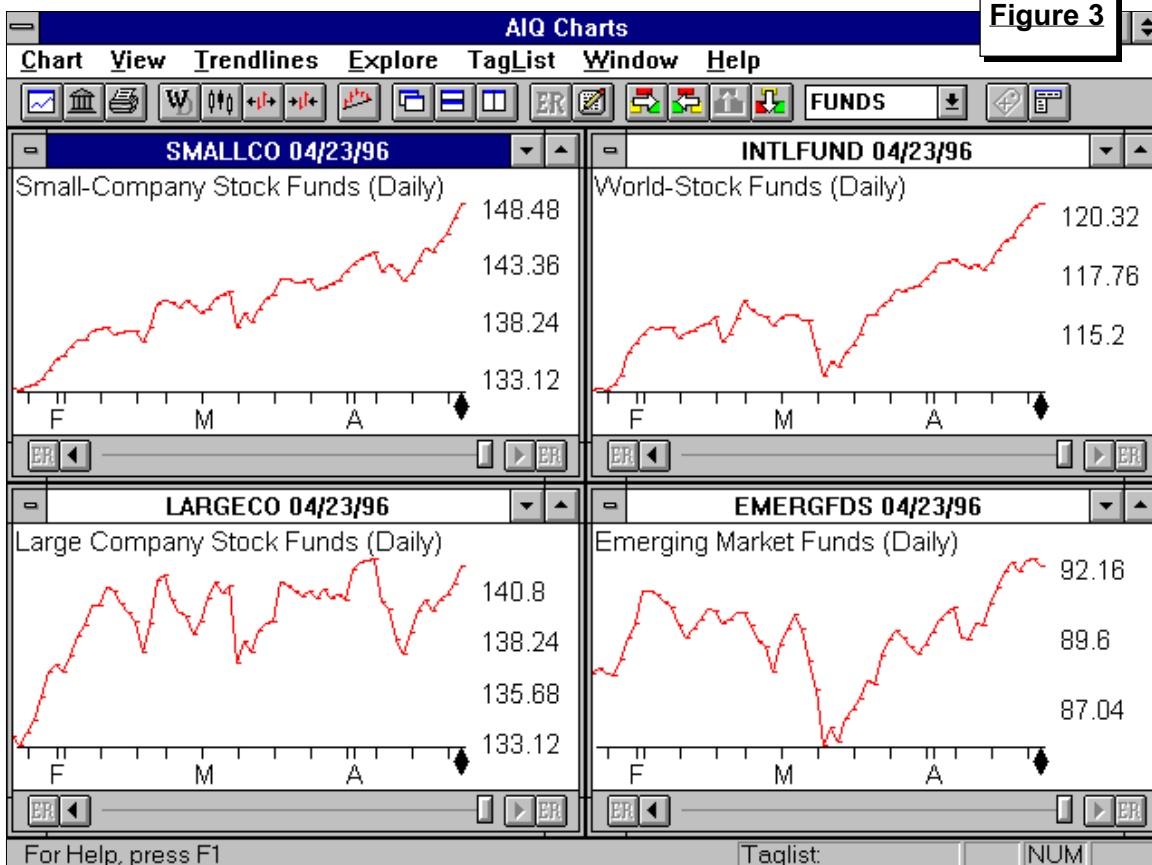
the groups of mutual funds. To create the group that represents large company stock funds, click on the menu bar command *Ticker*, then *New*. In the dialog box, we entered a ticker called *Largeco*. For the *Type*, choose *Mutual*

*Fund Group*. Click OK.

On the next dialog box that appears, type a *Description* of the group (we called our group *Large Company Stock Funds*). Make sure the starting date of data is appropriate. Then click OK to add the group to your Master Ticker List.

We now want to move this group under our newly created *Funds* list. You can drag and drop the *Largeco* ticker under the *Funds* list. Or, move to the left portion of your screen and single click on the

*"The group/sector capabilities of TradingExpert make it easy to monitor these different types of mutual funds."*



MUTUAL FUND INVESTING *continued* . . .

Funds list, choose *List* on the menu bar and then *Insert Ticker(s)*. Type in *Largeco* to insert the group into the *Funds* list.

With this completed, the final step is to classify which funds belong to the *Largeco* group. Again, on the left portion of the screen, highlight (by clicking) the *Largeco* group and at the menu bar click on *List*, then *Insert Ticker(s)*. Type in the names of the funds, each separated by a semi-colon. (You can also drag and drop or use the *Insert to List* toolbar icon).

Repeat this process for the other mutual fund groups. A more detailed explanation of the process of building a list of mutual fund groups is found in the *AIQ TradingExpert User Manual* (page 80).

To compute indices for the new group structure, choose *Utilities* on the *Data Manager* menu bar, then *Compute Group/Sector Indices*. Highlight *Funds* in the *Compute List(s)* text box and click *OK*.

To decide which funds to classify under the different categories, we used the April 16 issue of *The Wall Street Journal*. Printed in this issue are those funds that are considered to be the best large company stock funds, the best

small company stock funds, and the best global stock funds. To create an index of emerging market funds, we used Fidelity's and Vanguard's Emerging Market stock funds.

Looking at our four groups of mutual funds in Figure 3, we see that

the group of small company funds has been the best performer. It has a pattern of higher highs and higher lows. The funds that invest in large companies are the laggards, as they have not yet reached a new high and have moved sideways for two months.

**Here's a Tip:**

When plotting a daily chart of a group of mutual funds, *TradingExpert* plots the graph with a series of dots. That's because the high, low, and closing prices are the same. To obtain a clearer picture, run a one day moving average. This in effect connects the dots.

It is easy to see leadership in Figure 3, but how do you know the turning points? Our favorite method is through the use of relative strength analysis, which we began to explore in last month's *Opening Bell*. In the *Data Manager*, we set the relative strength of our small company fund index to the large company fund index. By plotting the index of Small Company Stock Funds, we can then see its relative strength versus our index of Large Company Stock Funds.

*Mutual Fund Investing continued on page 8*



Figure 4



Figure 5

MUTUAL FUND INVESTING *continued* . . .

**Figure 4** is a chart of the index of our Small Company Stock Funds along with relative strength versus the Large Company Stock Funds index. When this relative strength indicator is decreasing, the large company funds are outperforming. The opposite is true when the indicator is rising. We see that funds that invest in large company stocks outperformed from September 1995 until late February 1996. Funds that invest in small company stocks now have the leadership.

Daily charts give a short term picture. Weekly charts give a longer term perspective. **Figure 5** is a weekly

chart along with the RSMD indicator. This indicator is relative strength plugged into a MACD formula. Similar to the last chart, we see the indicator turned positive in late February, implying leadership in the small companies. We can feel most confident when the readings of both the daily and weekly charts are in agreement.

This type of relative strength analysis can be performed on any number of created groups. An asset allocator can then monitor the strength of these groups, shifting assets to the funds in groups that are outperforming.

Owners of AIQ's MatchMaker can run a correlation test of the group index to the actual mutual fund groups. Since the analysis is on an index of funds, we want to purchase funds that move closely with that index. In the example we have been discussing, we found that Vanguard Explorer, Vanguard Index Small Cap, and Managers Special Equity have the highest correlation to our index of small company funds.

Next month, we'll cover TradingExpert's most powerful tool for mutual fund analysis – the ability to analyze surrogate groups. ■

MARKET REVIEW

The month of March began with a shaky start as the Dow fell 170 points on March 8. April was an active month for the market and for our AIQ timing model. On April 3, a 99 down signal was registered for the market. The market fell from that point, and that day still stands as Dow's all-time high. On April 8, another sell signal was registered. This signal came on a day that the Dow fell 90 points. The Dow and the S&P 500 proceeded to correct just over 3.5%.

During the correction, the S&P 500 fell to the support trendline that we discussed in the January 1996 Market Review. This index has since drifted sideways. Activity in the broader markets, however, was much stronger. When a 99 up signal came on April 15, relative strength pointed toward an outperforming broader market. Another buy signal was registered on the following day. At the time of these buy signals, there was also a high percentage of stocks with both confirmed and unconfirmed buy signals.

Just when things looked very bullish, the market timing model registered a 100 down signal on April 17. It is very rare that the system gives opposing signals one day apart. Coincidentally, the last time that happened was in April of last year. The April 17 sell was the last signal of

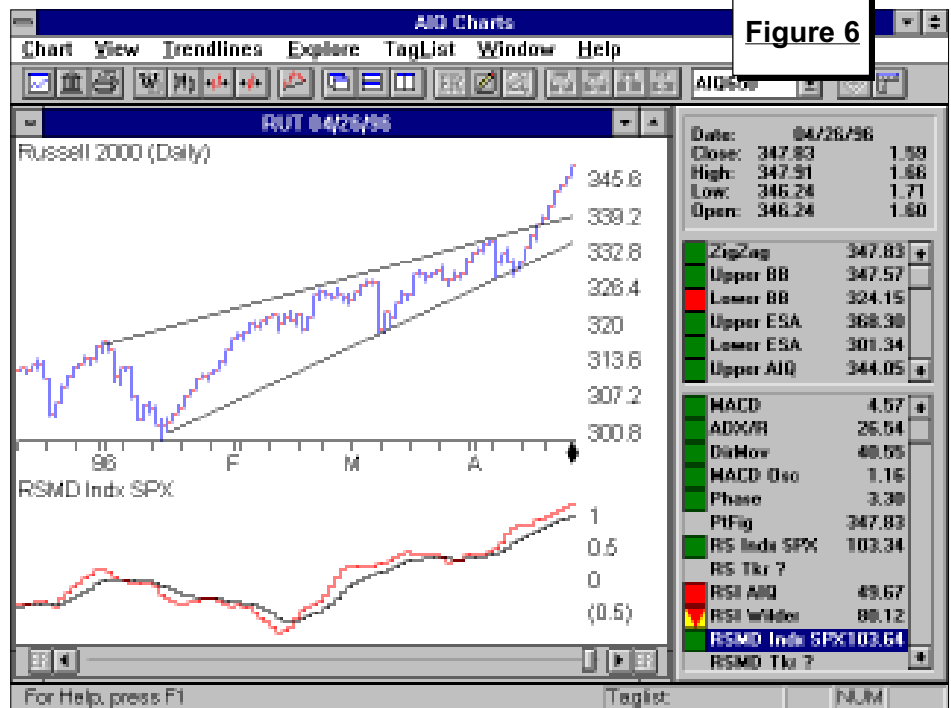


Figure 6

the month.

We've emphasized in the past the importance of looking at a broad market index such as the Russell 2000 along with the Dow or S&P 500. This month shows why. While the Dow saw a small loss in the month of April, the Russell 2000, an index of small company stocks, rose over 5%. In **Figure 6**, we see the incredible strength in the small company stocks. Normally this upward sloping wedge pattern is resolved to the downside. In April, the

month was so strong that the Russell 2000 managed to break above the pattern. ■ D.V.

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.