AIQ

Opening Bell ®

Monthly

STOCK ANALYSIS

A REVIEW OF 3 YEARS OF STOCK SELECTION — WHAT WORKED, WHAT DIDN'T

By David Vomund

DAVID VOMUND

On several occasions, Dr. Smith has written about the importance of keeping a trading log. A trading log forces you to make decisions and take a stance. A log also allows you to go back in time and review your analysis. After evaluation, your trading process can be modified based on what you learned.

My weekly investment newsletter serves as my equity trading log. With over three years history, we'll now review the analysis and find what worked and what didn't.

In this review of the stocks that I selected for the newsletter, we will focus on the selling side of my investment strategy. Although the majority of articles in this newsletter focus on the buy side, selling may be the more important of the two decisions. This is especially true for a growth strategy. When the market is bullish and growth investing is in favor, you can do well by throwing darts at a list of high relative strength stocks. The key is when to sell.

In designing a sell strategy, you need to determine if you want a tight stop or a loose stop. With a tight stop, you'll sell often but the losses are small. With a loose stop, you won't get stopped out as often but when you do, the loss is large.

I tend to give stocks more room to move, and initially I tracked the performance of my stocks using a trailing 15% stop level. That is, I'm in a stock until it falls 15% from its high point after the purchase date. This is a longer term strategy than what is used by most AIQ users.

There are sayings on Wall Street such as "don't let a profit turn into a loss" and "let your profits run and cut your losses." These are nice but until you can test

> *"When the market is bullish and growth investing is in favor, you can do well by throwing darts...The key is when to sell."*

STOCK ANALYSIS *continued . . .*

Table 1a

Tickr	Company	Buy Date	Sell Date	High % Ch.	Sell % Ch.	Tickr	Company	Buy Date	Sell Date	High % Ch.	Sell % Ch.
MMD	Moore Medical	05/28/93	07/12/93	0	-15	ETCO	Earth Technology	05/02/94	06/01/94	8	-8
APA	Apache Corp.	05/28/93	09/14/93	24	5	SXI	Standex Int'l	05/02/94	06/01/94	0	-15
ICST	Integrated Circuit Sys.	05/28/93	06/18/93	5	-11	SEC	Sterling Electronics	05/02/94	06/09/94	0	-15
GCO	Genesco	05/28/93	06/18/93	0	-16	GEC	Geico Corp	05/09/94	09/16/94	0	-15
T	Amer. Telephone & Tel	05/28/93	11/04/93	6	-10	WFC	Wells Fargo	05/23/94	07/17/96	77	51
CSL	Carlisle Cos.	06/07/93	11/16/93	17	-1	MDP	Meredith Corp	05/31/94	10/26/95	89	60
NBL	Noble Affiliates	06/07/93	11/29/93	34	14	KR	Kroger Co	05/31/94	12/06/94	12	-5
WMB	Williams Cos.	06/07/93	10/20/93	29	20	KR	Kroger Co	06/06/94	12/06/94	11	-6
NBL	Noble Affiliates	06/21/93	11/29/93	28	9	OMC	Omnicom Group	07/05/94	07/23/96	89	61
CA	Computer Associates	06/28/93	01/21/94	55	32	CCU	Clear Channel Comm.	07/10/94	12/06/94	36	16
SXI	Standex International	06/28/93	08/24/93	11	-6	ASC	American Stores	07/18/94	02/01/95	9	-7
HIPC	High Plains Corp	07/06/93	09/01/93	0	-15	OH	Oakwood Homes	08/01/94	09/26/94	18	1
MER	Merrill Lynch	07/09/93	11/22/93	22	4	AMI	Amer. Medical Hold's	08/15/94	09/29/94	9	-7
EAVN	Eaton Vance Corp	07/12/93	10/20/93	18	-0	AMI	Amer. Medical Hold's	08/22/94	09/29/94	6	-10
RSC	Rex Stores Corp	07/12/93	11/04/93	57	34	GNT	Green Tree Financial	08/29/94	09/19/94	4	-12
MCRS	Micros System Inc	07/12/93	09/08/93	19	1	CFCN	Commercial Fed Corp	09/06/94	10/20/94	0	-15
BGG	Brigges Stratton	07/19/93	05/31/94	35	14	DHR	Danaher Corp	09/12/94	07/15/96	92	63
MRCY	Mercury General	07/26/93	11/01/93	9	-7	EMC	EMC Corp	09/19/94	12/08/94	21	3
PA	Primerica Corp	07/26/93	11/02/93	23	5	DHR	Danaher Corp	10/17/94	07/15/96	88	59
EAVN	Eaton Vance Corp	08/02/93	10/20/93	17	-1	SCTC	Systems & Comp. Tech	10/31/94	01/27/95	4	-11
JCP	Penney JC Inc.	08/02/93	06/02/94	29	10	DSCP	Datascope	10/31/94	12/12/94	7	-9
SMSC	Standard Microsystems	08/09/93	12/22/93	39	18	ACN	Acuson Corp	10/31/94	11/23/94	0	-13
CTX	Centex Corp	08/09/93	11/05/93	20	2	DSCP	Datascope	11/01/94	12/14/94	15	-2
SAI	SunAmerican Inc	08/16/93	11/03/93	32	12	BMY	Bristol-Myers Squibb	11/21/94	Open	75	75
EAVN	Eaton Vance Corp	08/16/93	10/20/93	10	-7	HFI	Hudson Foods	11/21/94	04/21/95	32	12
SMSC	Standard Microsystems	08/23/93	12/22/93	35	14	CSCO	Cisco Systems	11/28/94	07/19/95	79	63
BSC	Bear Stearns	08/30/93	10/22/93	12	-5	PHB	Pioneer Hi-Bred Int'l	11/28/94	Open	88	88
BQR	Quick & Reilly Group	08/30/93	11/04/93	15	-3	SERA	Sierra Semiconductor	11/29/94	03/30/95	100	70
NHP	Nationwide Health Prop	09/07/93	12/13/93	9	-7	WSGC	Williams Sonoma	11/29/94	01/11/95	6	-10
BMC	BMC Inds Minn	09/13/93	03/30/94	74	48	ACN	Acuson Corp	12/05/94	02/08/95	5	-12
BSC	Bear Stearns	09/13/93	10/22/93	5	-12	DBD	Diebold	12/05/94	01/18/95	0	-15
INTC	Intel Corp	09/27/93	10/19/93	6	-10	HFI	Hudson Foods 'A'	12/19/94	04/21/95	28	9
NHP	Nationwide Health Prop	09/27/93	12/13/93	6	-10	ACN	Acuson Corp	12/19/94	02/08/95	2	-14
PATK	Patrick Industries	09/27/93	02/18/94	73	46	BMY	Briston-Myers Squibb	12/27/94	Open	74	74
GAFA	Gates/FA Dist.	10/11/93	10/21/93	9	-9	SCTC	Systems & Comp. Tech	01/09/95	01/27/95	0	-15
TECD	Tech Data Corp	10/11/93	03/30/94	44	22	INTC	Intel Corp	01/16/95	07/19/95	125	91
MAT	Mattel Inc.	10/18/93	12/09/94	24	5	KO	Coca-Cola	01/23/95	Open	110	98
BV	Blockbuster Ent.	11/15/93	01/07/94	9	-8	BIGB	Big B Inc.	01/30/95	11/14/95	14	-3
CDO	Comdisco Inc.	11/29/93	03/29/94	29	9	ADI	Analog Devices	02/06/95	07/19/95	67	42
HRS	Harris Corp	12/06/93	04/08/94	13	-4	SFA	Scientific Atlanta	02/27/95	05/19/95	9	-8
CEN	Ceridian Corp	12/13/93	03/31/94	31	11	ALN	Allen Group	03/13/95	10/05/95	61	36
CLE	Claire's Stores	12/20/93	03/29/94	27	8	BP	British Petroleum	03/27/95	Open	62	1
GAFA	Gates/FA Dist.	12/20/93	03/31/94	18	1	BP	British Petroleum	04/07/95	Open	57	57
CLE	Claire's Stores	12/27/93	03/29/94	23	5	CSR	Central & South West	04/10/95	Open	17	3
CON	Cont. Homes Hldg	01/03/94	01/27/94	0	-15	NDC	National Data	04/17/95	11/10/95	46	24
CDO	Comdisco Inc.	01/10/94	03/29/94	20	2	KR	Kroger	04/24/95	05/01/96	70	56
TXN	Texas Instruments	01/10/94	03/28/94	30	11	CSC	Computer Sciences	05/01/95	07/15/96	63	38
CHB	Champion Enterprises	01/17/94	05/11/94	66	41	CB	Chubb Corp	05/08/95	04/11/96	27	8
GQ	Grumman	01/17/94	02/23/94	1	-14	RTN	Raytheon	05/22/95	07/16/96	41	20
HRS	Harris Corp	01/24/94	04/08/94	9	-7	ECH	Echlin	06/05/95	03/01/96	8	-8
VOD	Vodafone Group PLC	02/14/94	03/28/94	2	-13	BNI	Burlington Northern	06/26/95	Open	40	38
BRR	Barrett Resources	02/14/94	01/10/95	87	59	ADM	Archer Daniels Mid.	07/03/95	07/10/95	1	-15
ADPT	Adaptec Inc.	02/28/94	03/25/94	8	-8	ETN	Eaton Corp	07/10/95	08/28/95	4	3
CRS	Carpenter Technology	03/01/94	10/25/94	3	-14	XLGX	Xylogics Inc.	07/17/95	07/19/95	0	-15
INTC	Intel Corp	03/07/94	04/15/94	0	-16	G	Gillette	07/31/95	Open	70	69
CORD	Cordis Corp	03/07/94	03/30/94	0	-15	CSK	Chesapeake Co.	08/07/95	10/09/95	10	-7
MODI	Modine Manufacturing	03/21/94	06/30/94	6	-10	IGT	Int'l Game Technology	08/14/95	10/10/95	2	-13
DHR	Danaher Corp	03/21/94	07/15/96	125	91	REY	Reynolds & Reynolds	08/21/95	07/16/96	69	43
PCP	Precision Castparts	03/21/94	10/21/94	20	2	GNT	Green Tree Financial	08/28/95	10/25/95	18	0
BRR	Barrett Resources	04/18/94	01/10/95	66	41	W	Westvaco Corp	09/05/95	10/30/95	4	-11
OMC	Omnicom Group	04/18/94	07/23/96	94	65	APD	Air Products & Chem	09/11/95	07/12/96	39	18
BNE	Bowne & Co.	04/25/94	05/18/94	5	-11	MO	Philip Morris	09/18/95	03/20/96	36	16
MCK	McKesson Corp	04/25/94	06/24/94	30	11	AGC	American General	10/03/95	10/25/95	5	-10
MI	Marshall Industries	05/02/94	06/09/94	0	-14	CWM	CWM Mortgage Hldg	10/13/95	03/20/96	28	9

STOCK ANALYSIS *continued* . . .

Table 1b

Tickr	Company	Buy Date	Sell Date	High % Ch.	Sell % Ch.	Tickr	Company	Buy Date	Sell Date	High % Ch.	Sell % Ch.
HWP	Hewlett Packard	10/13/95	12/06/95	14	-3	NOBE	Nordstrom Inc.	04/15/96	06/21/96	13	-5
ARBR	Arbor Drugs	11/06/95	04/17/96	22	3	AVT	Avnet Inc.	04/22/96	06/25/96	7	-9
K	Kellogg Corp	11/20/95	05/07/96	7	-9	ARW	Arrow Electronics	04/29/96	06/25/96	6	-12
OCF	Owens Corning Fibrgls	11/27/95	04/01/96	6	-10	QSII	Quality Systems Inc.	05/20/96	06/04/96	10	-6
OCF	Owens Corning Fibrgls	12/04/95	04/01/96	4	-12	NBR	Nabors Industries	05/28/96	07/30/96	10	-6
ABIG	Amer. Bankers Ins. Grp	12/18/95	01/31/96	9	-8	JEC	Jacobs Engr.	06/10/96	07/15/96	3	-15
MF	Malaysia Fund	12/26/95	07/30/96	16	-1	UNM	Unum Corp	07/01/96	Open	6	6
THC	Tenet Healthcare	01/15/96	05/06/96	8	-8	SNT	Sonat	07/10/96	Open	4	4
OCR	Omnicare Inc.	01/17/96	05/08/96	44	23	PEL	PanEnergy	07/15/96	Open	16	16
CPC	CPC International	01/22/96	Open	13	13	BMC	BMC Industries	08/05/96	Open	0	-2
OCR	Omnicare Inc.	01/29/96	05/06/96	41	20	CNC	Conseco Inc.	08/12/96	Open	14	18
GNT	Green Tree Financial	02/05/96	05/07/96	23	5	PCP	Precision Castparts	08/19/96	Open	10	3
DHR	Danaher Corp	02/20/96	07/15/96	28	8	OREM	Oregon Metallurgical	09/09/96	Open	15	-1
GPT	Greenpoint Financial	03/04/96	Open	62	62	JPM	Morgan JP	09/16/96	Open	1	-6
AVY	Avery Dennison	03/15/96	07/24/96	3	-13	GEN	Genrad	09/23/96	Open	16	14
RHI	Robert Half	03/25/96	06/19/96	26	7	PGL	Peoples Energy	10/07/96	Open	0	0
AB	Alex Brown	04/01/96	06/27/96	16	9				Average =		**9.82**

different strategies with actual trades, your sell strategy can only be a guess as to what is best. I have my stock selection on record almost every week for over three years. This covers the extremely difficult 1994 market, the strongly advancing 1995 market, and the volatile 1996 market. I am now able to test elements of the sell strategy on this list of stocks.

There are two elements to my sell strategy that I tested. First, am I giving up too much at the top. Using a trailing 15% stop, in order to ensure just a 5% profit a stock has to rise about 20%. A stock has to rise about 30% in order to ensure a 15% profit. Is this too much to give up?

The second element deals with the initial 15% stop loss. Do the big gainers move up immediately, in which case a tighter initial stop can be used, or would a tighter initial stop take us out of some of the most profitable trades.

Tables 1a and 1b list the 161 stocks that were highlighted for purchase in my *Stock Alert* newsletter since inception. For those who liked last month's article on my stock selection process, this is a good list to review. See if you can identify why I selected these stocks. You'll notice that I tend to buy into strength rather than attempt to call the low point of a stock, and I primarily buy mid-sized companies that are traded on the New York Stock Exchange.

In Table 1, we list the day the stock is purchased (the opening price is used) and the date that the stock was sold using a trailing 15% stop. The second to the last column lists the percent change to the stock's high point after the purchase date, and the final column shows the percent change to the stock's selling point using the simple trailing 15% stop. Using this strategy, the average stock gained 9.82% with a 166 day holding period. This is a 21.6% annualized rate of return. This compares to a 14.2% annualized return for the S&P 500.

Can we improve this return by changing our stop strategy? We first looked at whether we're giving up too much at the top. To test this, we looked at how much the average stock increased. Looking at the % Change to the Stock's High Price column, we see the average stock gained 26% before it had a 15% retracement.

Would the return be higher if we sold every time a stock rose to this level? We would take away the big gainers that made over 60% but we would sell at a good profit the stocks that rose to that level and then topped out. Since the average stock gains 26% to its high point but falls to 9.8% by the time it is sold, it might be better to simply sell every stock that moves to a level just below the average high point.

Table 2

Summary Statistics
(6/93 - 10/96)

Strategy	Average Trade	Average Trade Annualized (%)
15% Trailing Stop	9.82% in 166 days	21.6%
Sell at 20% profit	4.61% in 99 days	17.0%
Sell at 60% profit	9.62% in 148 days	23.7%

Table 3

Most Profitable Trades

Ticker	Company	Purchase Date	Maximum Profit (Percent)	Maximum Loss (Percent)
BMC	BMC Inds Minn	09/13/93	74	-3.33
PATK	Patrick Industries	09/27/93	73	-2.82
CHB	Champion Enterprises	01/17/94	66	-3.02
BRR	Barrett Resources	02/14/94	87	-6.12
DHR	Danaher Corp	03/21/94	125	-5.35
BRR	Barrett Resources	04/18/94	66	-0.92
OMC	Omnicom Group	04/18/94	94	-6.46
WFC	Wells Fargo	05/23/94	77	-5.61
MDP	Meredith Corp	05/31/94	89	-4.87
OMC	Omnicom Group	07/05/94	89	-2.29
DHR	Danaher Corp	09/12/94	92	-3.28
DHR	Danaher Corp	10/17/94	88	-2.49
BMY	Bristol-Myers Squibb	11/21/94	75	-4.63
CSCO	Cisco Systems	11/28/94	79	-8.16
PHB	Pioneer Hi-Bred Int'l	11/28/94	88	-7.80
SERA	Sierra Semiconductor	11/29/94	100	-8.62
BMY	Bristol-Myers Squibb	12/27/94	74	-3.75
INTC	Intel Corp	01/16/95	125	-1.74
KO	Coca-cola	01/23/95	110	-0.74
ADI	Analog Devices	02/06/95	67	-2.89
ALN	Allen Group	03/13/95	61	-10.36
BP	British Petroleum	03/27/95	62	0.00
KR	Kroger	04/24/95	70	-2.44
CSC	Computer Sciences	05/01/95	63	-4.33
G	Gillette	07/31/95	70	-8.22
REY	Reynolds & Reynolds	08/21/95	69	-1.98
GPT	Greenpoint Financial	03/04/96	62	-1.84
		Average =		**-4.22**

maximum profit of at least 50% but only 12 exceeded 80%. Does the overall return increase if we sell anytime we see a 60% profit? Referring again to Table 2, we see the answer is yes. The average return compared to using a simple trailing 15% stop falls a little but so does the average holding period. On an annualized basis, the overall return excluding commissions increases by 2%. Not much of an increase but it is higher nonetheless.

Turning to the second part of our study, let's look at the initial stop level. We saw earlier that the stocks that showed big gains are critical in the overall success of the strategy. Selling them too soon lowers the overall return. To check our initial stop level, we made a list of all the stocks that saw a gain of at least 60% and then looked at what was the largest loss on these stocks (see **Table 3**). We don't want an initial stop level that is so tight that we would end up selling some of these big gainers.

In Table 3, we see that we should expect a loss on our investment sometime after we purchase it. Out of the 27 stocks that gained at least 60%, only one never went into the red (on an inter-day basis). The average stock had a loss of 4.22% before the advance started. That means that if we had an initial stop loss level of 4%, about half of the big winning trades would be lost. Too tight a stop can be hazardous to your returns.

As I noted earlier, I initially chose to have an initial stop loss level of 15%, which allows stocks to have their normal fluctuation without being stopped out. Table 3 shows that this level is too high. Of the 27 big winning trades, only one had a loss of 10% or more and none had a loss of more than 11%. I'm better served by having an initial stop level of 10%. This saves 5% on the bad trades that get stopped out for a loss, but does not take me out of the big winning trades.

"Don't let a profit turn into a loss." Sounds good but I wouldn't trade on it. Looking at my best trades found in Table 3, over a third of the stocks had

To find the answer, we tested the 3 1/2 year list of stocks to see what would happen if we automatically sold every time the stock rose to 20%. If it never hits the 20% level, then the normal trailing 15% stop is used. The results are found in **Table 2**. With this strategy, the average return is cut in half but the average holding period also decreases. On an annualized basis, the overall return falls from 21.6% to 17.0%. Therefore, the increased profit that is seen from stocks that top out in the 25% range does not offset the returns that would be missed on the biggest winning stocks.

Of the 161 stocks that were recommended, just under 30 reached a

STOCK ANALYSIS *continued ...*

at least a 4% profit before moving to a loss. This includes the March 21, 1994 Danaher trade which saw a 125% advance. To lose a third of the winning trades because you didn't want a stock to move into the red would be a disaster.

The results of these tests are based on the type of stocks that I select. Different strategies will produce different results so I encourage you to perform similar tests on stocks that you have selected. Nevertheless, some of our results will apply to most people.

We found that it is better to let your profits run rather than to sell at the point of average maximum profit. It's also apparent that having an initial stop loss of 15% was too high for the type of stocks that I pick. If you pick smaller-cap or more volatile issues, 15% may be more appropriate.

Next month we'll examine the effect of reducing the initial stop loss from 15% to 10%. We'll also test a trailing 15% stop level. ∎

To receive a free copy of David Vomund's investment newsletter, phone 702-831-1544.

MARKET REVIEW

In October we saw the 9th anniversary of the market crash. Thankfully, October of 1996 was much quieter. No AIQ sell signals were generated this October, so the buy signal issued on September 9 is still in effect.

The S&P 500 rallied 2.6% in October. Energy and Financial sectors were the best performers. The Oil-Drilling group rose about 1.7% and many of the banking groups rose between 8% and 10%. Technology was also strong but gave back some ground near the end of the month.

Large- cap stocks continued to outperform small-cap stocks. While the S&P 500 made new highs and the Dow Industrials topped 6000, the Russell 2000 has failed to reach a new high. The Russell 2000 hit resistance at 350, which was its high point in early May also. Since the middle of the month, the Russell 2000 has been weak and has fallen 2.4%. ∎

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
Belmont Homes Inc.	BHIX	3:2	11/04/96	Biogen Inc.	BGEN	2:1	11/18/96
Pulitzer Publishing	PTZ	4:3	11/04/96	Security Dynamics	SDTI	2:1	11/18/96
Federal Express	FDX	2:1	11/05/96	Tellabs Inc.	TLAB	2:1	11/18/96
ITT Educational Svs.	ESI	3:2	11/05/96	BMC Software	BMCS	2:1	11/19/96
Nichols Research	NRES	3:2	11/05/96	Computer Mgmt Sci.	CMSX	3:2	11/21/96
Sylvan Learning Sys.	SLVN	3:2	11/08/96	Travelers Group	TRV	4:3	11/25/96
First Data Corp	FDC	2:1	11/12/96	Inbrand Corp	INBR	3:2	11/25/96
First USA Inc.	FUS	2:1	11/13/96	Natural Microsys.	NMSS	2:1	11/25/96
Guilford Pharm	GLFD	3:2	11/13/96	Clin Trials Res.	CCRO	3:2	11/25/96
Southwest Bancshares	SWBI	3:2	11/14/96	Seagate Tech	SEG	2:1	11/27/96
Cavalier Homes	CAV	5:4	11/15/96	CitFed Bancorp	CTZN	3:2	12/02/96
Finish Line Inc.	FINL	2:1	11/18/96	Allied Group	ALGR	3:2	12/02/96
Adaptec	ADPT	2:1	11/18/96	PeopleSoft Inc.	PSFT	2:1	12/02/96
MacDermid Inc.	MACD	3:1	11/18/96	Keane Inc.	KEA	2:1	12/02/96

Name/Ticker Changes:

Mesa Airlines (MESA) to Mesa Air Group (MESA)

Trading Suspended:

AES Corp (AESC), AT&T Capital (TCC), Bailey Corp (BAIB), Brooktree Corp (BTRE), Fay's Inc. (FAY), Landmark Graphics (LMRK), Orchard Supply Hardware (ORH), Shaw Group (SHAW), Turner Broadcasting 'A' (TBS-A), Turner Broadcasting 'B' (TBS-B)

COMBINING AIQ WITH MIRAT

By David Vomund

AIQ's market timing is one of the most powerful features of TradingExpert. It has consistently performed well and has stood the test of time. For some, however, it gives too many signals or is too short term. This is especially true for mutual fund traders who are limited in the number of trades they can perform each year. For some time, we have been hearing from users who combine AIQ's market timing analysis with the MIRAT market timing model. MIRAT is a market timing software product that was first introduced in 1990.

After years of hearing about it, we decided to give it a try. In this article, we'll test the MIRAT system and then perform a study which combines the AIQ timing model with the MIRAT model.

While the MIRAT system includes charting, we expect most people rely on the daily commentary that is transferred with each data download to see if the system is long or short. The MIRAT system is designed to catch intermediate term market moves. The Mirat Model was applied to the time period 1985 to 1996, and **Table 4** lists the buy-and-sell signals issued. We immediately notice that there are fewer trades compared to TradingExpert. In fact, users of MIRAT saw no signals in the 1986 or 1991 years.

The overall return is slightly less than that achieved by TradingExpert's Expert Ratings but is still very impressive, especially given the lower trading activity. The MIRAT system produced a 671% return over the 11.8 years, well ahead of a buy-and-hold strategy. This assumes that you buy the S&P 500 the day of a buy signal and sell it the day of a sell signal. Money market interest and commissions are not factored in. Compounding helps the overall return as we assume you invest the entire account in each trade. Note: to save space, we didn't list AIQ's timing signals. If you want to receive a list of Expert Ratings along with performance statistics, call AIQ at (800) 332-2999.

Because there have been new software releases during this time period, the return may be somewhat overstated. However, MIRAT changes their model infrequently so they are not plagued by the over-optimizing that is found in many other market timing systems. New releases are not necessary. They also manage accounts based on the system which indicates that they believe in the system.

What happens when you combine the MIRAT timing signals with AIQ's timing signals? We performed a test in which we bought the S&P 500 the day that both systems were bullish and then sold the S&P 500 when one system turned bearish. On the AIQ end, we used signals greater than 95 without confirmation. Money market interest and commission costs were not factored in. The trade details are found in **Table 5** and the summary results are shown in **Table 6**.

Looking at Table 6, we see that trading the S&P 500 based on AIQ's timing model produced a 731% return with five round trip trades per year. The MIRAT system on the other hand produced a 671% return with less than two trades per year. Combining the systems resulted in a return of 688%, only marginally lower than the AIQ return, and the average number of round trip trades per year was reduced from 5.0 to 4.2.

Of the nine round trip trades eliminated by combining the MIRAT system with AIQ's system, seven were unprofitable. Combining the two systems also reduced overall risk as the percentage of the time that funds were invested dropped to only 55% compared to about 70% with each of the individual systems.

Our market timing test is a simple test which combines the two systems. Risk can further be reduced by allocating a portion of the funds to each

Table 4

MIRAT Timing System

Entry Date	Exit Date	S&P500 % Change
12/31/84	03/01/85	9.56
04/10/85	08/26/85	4.4
10/16/85	03/17/87	55.59
05/13/87	09/03/87	8.92
12/03/87	04/06/88	17.89
06/06/88	07/20/88	1.10
09/09/88	11/02/88	4.58
12/09/88	02/23/89	5.42
04/14/89	07/12/90	21.26
10/30/90	02/20/92	36.12
04/24/92	06/01/92	2.02
07/13/92	08/26/92	-0.33
10/23/92	04/16/93	8.41
05/10/93	06/15/93	0.79
07/14/93	11/03/93	2.88
12/08/93	02/15/94	1.34
05/09/94	09/19/94	6.45
12/20/94	03/10/95	7.10
03/28/95	10/19/95	17.22
11/13/95	03/11/96	8.06
04/22/96	06/07/96	3.92
08/07/96	10/30/96	5.53

Average Trade = **10.37%** in 145 days

TRADING COMMENTARY

SHORT TERM ANALYSIS

By David Vomund

During AIQ's fall seminar, I was surprised how many people asked me for some short term trading techniques. I'm not a short term trader but I use the system enough to know what works. Short term analysis is important even for long term traders since it is never fun to have a security fall right after it's purchased. In this article I'll focus on two techniques, one that trades on the 28 day moving average (middle band on AIQ's charts) and one that trades on the lower band.

Technique #1

The 28 day moving average acts as support on stocks that are moving higher. With this knowledge, we can form a short term trading technique. Modifying a technique developed by Linda Bradford Raschke, a buy signal is seen when a stock falls from the top trading band toward the middle band at the same time that the ADX line is rising. At the time of the buy signal, the ADX may have just begun to move sideways but its trend must be up.
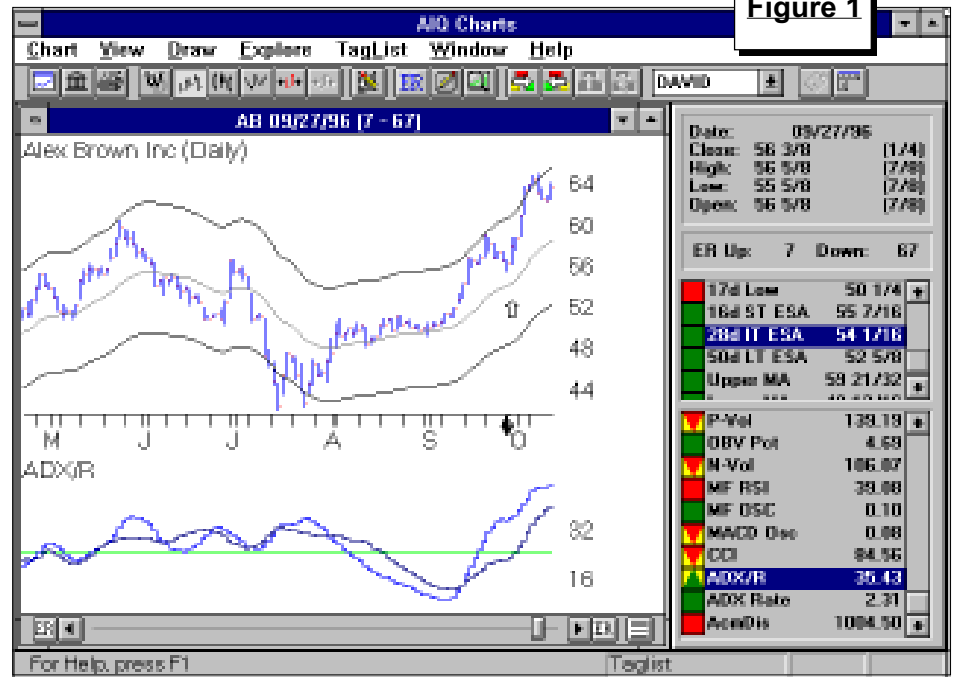
Figure 1

An example is seen in Alex Brown Inc. (AB) in **Figure 1**. AB begins a strong rally in early September and the ADX/R indicator begins its advance. By the end of September, AB rose to the top trading band and began to retreat. As it neared the 28 day moving average

Figure 2

on September 27, the ADX line was still rising, implying that the current upward trend will continue. The stock once again rallied to the top trading band.

This technique is very short term and does not mean that the stock will continue its advance after it hits the top trading band. Short term traders may consider taking profits anytime the stock nears the top band. Other examples of this short term buy signal are Abbott Labs (ABT) on 10/10/96 and Advanced Micro Devices (AMD) on 10/01/96.

AIQ 1997 Educational Seminar

Doubletree Inn Dallas, Texas
Thursday through Saturday
March 13, 14, & 15, 1997

Guest Speakers:
    John Bollinger
    Tom Dorsey

For information, call:
    (800) 332-2999

Combining the Systems

Table 5

Entry Date	Exit Date	S&P500 % Change	Entry Date	Exit Date	S&P500 % Change	Entry Date	Exit Date	S&P500 % Change
12/31/84	02/12/85	7.96	01/31/90	02/20/90	-0.33	12/18/92	01/07/93	-2.39
05/09/85	08/26/85	2.96	02/27/90	03/22/90	1.64	01/12/93	02/16/93	0.67
10/16/85	04/29/86	27.94	05/01/90	07/05/90	7.05	07/14/93	10/22/93	2.93
05/20/86	06/06/86	4.05	10/30/90	12/21/90	9.11	12/17/93	02/04/94	0.74
07/14/86	09/08/86	4.21	01/16/91	04/22/91	20.49	05/09/94	06/20/94	2.98
09/22/86	03/17/87	24.49	05/01/91	06/17/91	-0.04	06/27/94	08/05/94	2.19
05/26/87	07/01/87	4.78	06/28/91	07/24/91	2.02	08/23/94	09/19/94	1.36
07/29/87	08/27/87	4.98	08/21/91	09/04/91	-0.16	12/20/94	03/10/95	7.10
12/07/87	12/28/87	7.35	09/11/91	10/24/91	-0.01	03/28/95	04/20/95	0.28
01/20/88	04/06/88	9.42	11/07/91	11/15/91	-2.82	04/21/95	06/16/95	6.16
06/06/88	07/18/88	1.30	11/29/91	02/20/92	10.31	08/25/95	10/02/95	3.86
09/09/88	10/27/88	3.91	04/24/92	05/15/92	0.26	10/12/95	10/19/95	1.29
12/09/88	01/03/89	-0.62	05/29/92	06/01/92	0.47	11/16/95	12/18/95	1.59
04/14/89	06/29/89	6.08	07/13/92	07/20/92	-0.27	01/16/96	03/11/96	5.19
06/30/89	10/11/89	12.27	07/27/92	08/06/92	2.20	05/08/96	06/07/96	4.42
11/15/89	01/10/90	1.99	08/14/92	08/26/92	-1.52	08/07/96	08/29/96	-1.02
			10/23/92	12/14/92	4.53	09/09/96	10/30/96	5.60

Average Signal = **4.38%** in 47 days

system. When AIQ gives a buy signal, part of the portfolio is invested. When both systems are on a buy signal, then you move to 100% invested. As one system registers a sell signal, you move partially to cash. Incorporating two market timing systems that are independent of each other is a good means of reducing portfolio risk. ■

For more information on MIRAT, contact Tools for Timing at (800) 325-1344. AIQ and the *Opening Bell* have no affiliation with MIRAT and receive no compensation from referrals.

Table 6

Summary Statistics
(1985 to 10/31/1996)

	Total Return	Round Trip Trades Per Year	Percent of Time Invested
AIQ	731%	5.0	70%
Mirat	671%	1.8	74%
Combined	688%	4.2	55%

This analysis is believed to be reliable but accuracy is not guaranteed. Past performance does not guarantee future results.

Technique #2

Our second trading technique takes advantage of the lower trading band. Stocks tend to find support when they are near the lower trading band because they are oversold. A trading buy signal is seen if the stock is near the lower band and then has an outside reversal day.

An outside reversal day is when the stock moves lower than the prior day's low but closes higher than the

prior day's high. An example is found in **Figure 2**. We see MGM Grand (MGG) moved to the lower trading band in mid-August. On August 22, we had a reversal day as MGG moved lower than the prior day's low and closed higher than the prior day's high (see arrow). Another example can be seen in Legg Mason (LM) on July 31.

These signals are more powerful when the reversal day occurs with above average volume and when the MF RSI indicator gives a buy signal

(the indicator moves from below 20 to above 20). Both of these events occurred with the MGM Grand example.

Talking to users at our seminars, I find there are as many different short term techniques as there are people attending. The techniques highlighted above are two that work well and I encourage short term traders to not only test these techniques but to develop techniques of their own. ■