

QUANTIFIABLE EDGES SUBSCRIBER LETTER

ASSESSING MARKET ACTION WITH INDICATORS AND HISTORY

July 22, 2009

Volume 2 Issue 139

Market Overview

Summary of Recent Active Studies (see <http://QuantifiableEdges.blogspot.com> or Letters from listed dates for details)

Study Date	Description	Time span	Bias	Avg Max Move	Avg MM + 1/2 Std Dev
Active					
July 22, 2009	NYSE Up Vol% < 45%. SPX up.	1-2 days	Bearish		
July 22, 2009	2 Days Up in Chop	1-4 days	Bearish		
July 21, 2009	Adv: Decline 2 to 1 on lower volume	1-2 days	Bearish		
July 20, 2009	SP low vol on op ex with low VIX	1-6 days	Bearish		
July 15, 2009	WR10 NR10	1-5 days	Bearish		
Active - Long Term					
July 17, 2009	Appel Daily Breadth	1-20 days	Bullish		
July 16, 2009	2 90% Up Days in 1 Week	1-25 days	Bullish		
July 14, 2009	VIX: VXV hits 100-day low	1-20 days	Bearish	-3.80%	-5.50%
July 13, 2009	Nasdaq/NYSE Volume High	1-20 days	Bearish		
July 14, 2009	VIX: VXV drops below 0.9	2-5 months	Bearish		
June 1, 2009	Nasdaq Relative Strength Leading		Bullish		
Dropped Tonight					

If the avg max move is achieved the study will appear in **bold and brown**. If the avg + 1/2 std deviation is achieved, it will appear in **bold italic blue** and no longer be active.

Short-term Outlook (1-5 days) – updated 7/22 – bearish

Still despite all the short-term bearish indications, the market continues to rise. The Dow, S&P and Nasdaq all gapped higher, traded lower for much of the day and then made a push in the last half hour to close positive yet again. This is the 10th up day in a row for the Nasdaq – which is something I’ll discuss in more detail below. While the indices were higher, breadth was not strong. The NYSE Up Issues % was barely positive at 52%, but the Up Volume % lagged badly and only closed at 42%. Total volume increased over yesterday’s level and finished above average.

The low Up Volume % on an up day is something that appeared in the Quantifinder tonight. I’ve updated the study below which was last shown in the 11/19/2008 nightly Letter.

NYSE Up Volume % < 45% and SPX close up on the day. Buy SPX on close. Sell X days later. \$100k/trade. 1999-present.

X Days	All: Net Profit	All: Total Trades	All: Winning Trades	All: Losing Trades	All: % Profitable	All: Avg Winning Trade	All: Avg Losing Trade	All: Win/Loss Ratio	All: ProfitFactor	All: Avg Trade
10	-54,233.10	38	14	24	36.84	2,662.09	-3,812.60	0.70	0.41	-1,427.19
9	-53,156.14	38	14	24	36.84	2,568.99	-3,713.42	0.69	0.40	-1,398.85
8	-37,376.21	40	17	23	42.50	2,296.03	-3,322.12	0.69	0.51	-934.41
7	-35,452.50	41	20	21	48.78	2,121.13	-3,708.34	0.57	0.54	-864.70
6	-34,782.11	42	17	25	40.48	2,127.30	-2,837.85	0.75	0.51	-828.15
5	-31,001.21	42	15	27	35.71	2,018.62	-2,269.65	0.89	0.49	-738.12
4	-33,336.51	42	17	25	40.48	1,499.13	-2,352.87	0.64	0.43	-793.73
3	-36,366.59	44	15	29	34.09	1,344.22	-1,949.31	0.69	0.36	-826.51
2	-39,778.35	45	20	25	44.44	853.96	-2,274.30	0.38	0.30	-883.96
1	-25,275.16	45	17	28	37.78	793.19	-1,384.26	0.57	0.35	-561.67

35 of 44 (80%) instances closed below the trigger day close within the next 3 days.

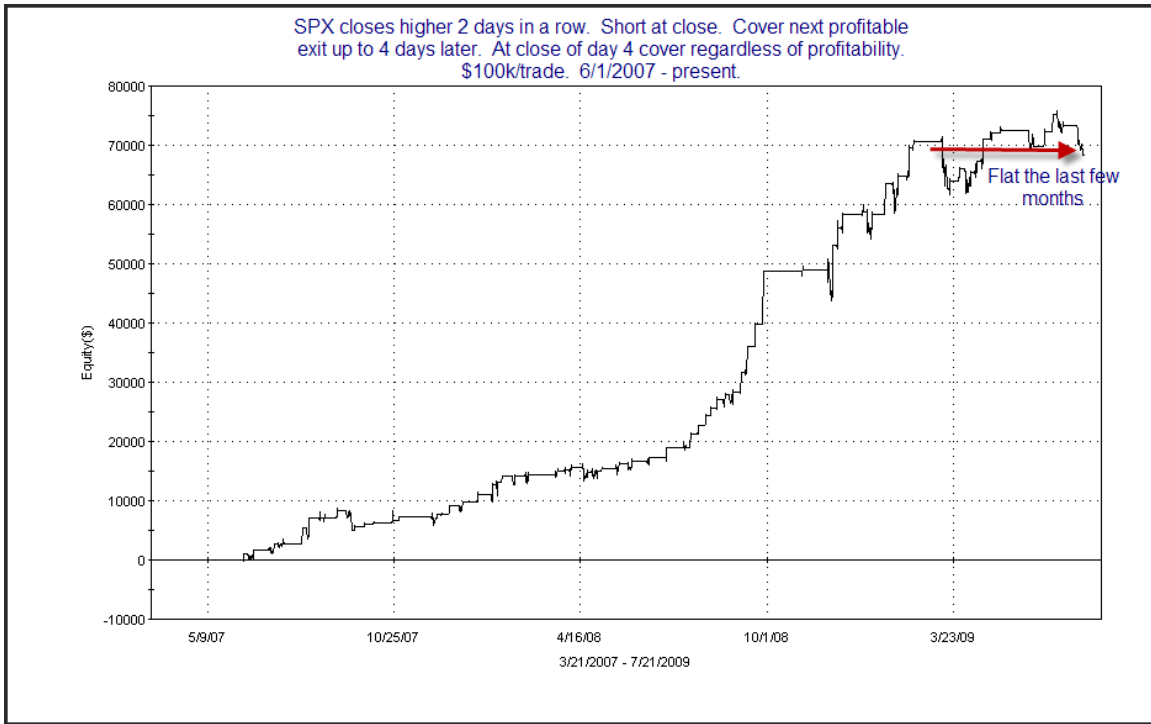
These results are quite bearish and suggest a pullback is likely.

The S&P also again has triggered the “2 Day Up In Chop” strategy. I have updated the performance report below:

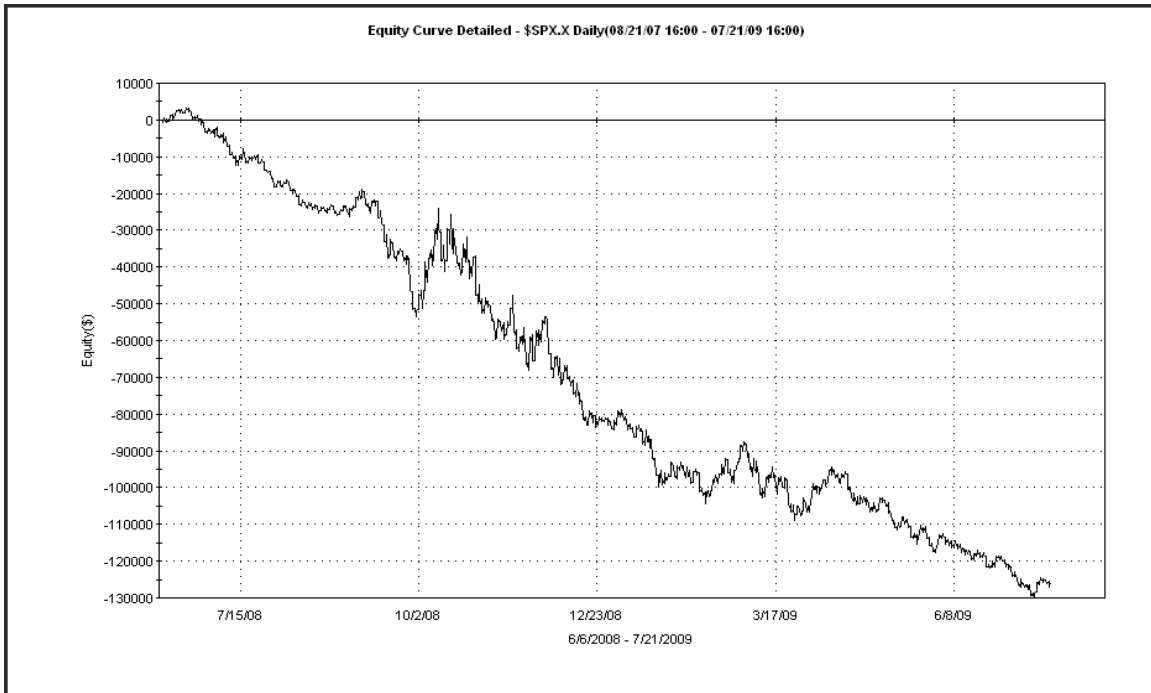
SPX closes higher 2 days in a row. Short at close. Cover next profitable exit up to 4 days later. At close of day 4 cover regardless of profitability. \$100k/trade. 6/1/2007 - present.

TradeStation Performance Summary				Collapse ^
All Trades				
Total Net Profit	\$68,297.53	Profit Factor	4.06	
Gross Profit	\$90,628.47	Gross Loss	(\$22,330.94)	
Total Number of Trades	70	Percent Profitable	88.57%	
Winning Trades	62	Losing Trades	8	
Even Trades	0			
Avg. Trade Net Profit	\$975.68	Ratio Avg. Win:Avg. Loss	0.52	
Avg. Winning Trade	\$1,461.75	Avg. Losing Trade	(\$2,791.37)	
Largest Winning Trade	\$8,783.02	Largest Losing Trade	(\$7,832.88)	

Also below is an equity curve to get a better idea of recent performance.



There have been some rough patches in the last few months as the strategy has failed to tack on gains. This bears watching to make sure performance does not turn negative. A look at the Trend vs. Chop chart from the website would suggest an edge still remains with this system. I've reproduced the chart below. As a quick refresher, a downward moving line suggests the market is dominated by chop while an upward trending line suggests daily follow through is more prevalent. I don't see any evidence that the tide has turned.



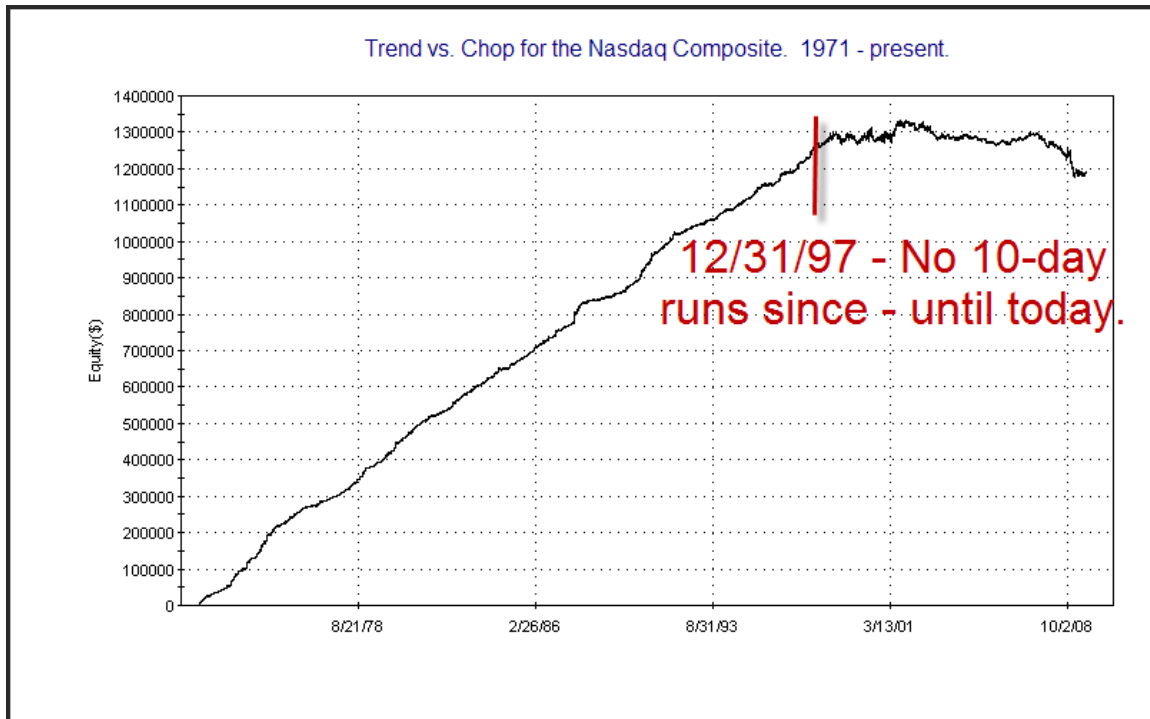
For those who would like to read more on the Trend vs. Chop concept you may use the link below:

<http://quantifiableedges.blogspot.com/search/label/Trend%20Vs.%20Chop>

I have seen much written about the Nasdaq's current winning streak. As on Tuesday the Nasdaq has now closed higher for 10 days in a row. I ran a study to examine performance following such runs since the inception of the Nasdaq.

Nasdaq closes higher 10 days in a row. Buy at close. Sell X days later. \$100k/trade. 1970 - present.										
QE Higher Closes: daysin	All: Net Profit	All: Total Trades	All: Winning Trades	All: Losing Trades	All: % Profitable	All: Avg Winning Trade	All: Avg Losing Trade	All: Win/Loss Ratio	All: ProfitFactor	All: Avg Trade
10	28,090.43	26	20	6	76.92	2,163.11	-2,528.64	0.86	2.85	1,080.40
9	28,499.17	26	19	7	73.08	2,233.02	-1,989.74	1.12	3.05	1,096.12
8	23,565.80	26	18	8	69.23	2,132.04	-1,851.36	1.15	2.59	906.38
7	21,769.16	26	18	8	69.23	1,900.73	-1,555.49	1.22	2.75	837.28
6	18,520.95	26	17	9	65.38	1,841.12	-1,419.80	1.30	2.45	712.34
5	12,887.77	26	19	7	73.08	1,247.89	-1,546.03	0.81	2.19	495.68
4	11,918.72	26	19	7	73.08	1,124.41	-1,349.30	0.83	2.26	458.41
3	5,477.66	26	17	9	65.38	866.35	-1,027.80	0.84	1.59	210.68
2	2,241.31	26	14	12	53.85	722.98	-656.71	1.10	1.28	86.20
1	3,303.57	26	17	9	65.38	477.09	-534.12	0.89	1.69	127.06

These results appear to be quite bullish. Rather than just taking them at face, though, let's give it some further thought and consideration. A closer examination of the results would show that the last occurrence was in 1997, which means it happened 26 times in 26 years and then not again for 12 years. Let's consider what might cause this to happen and what this suggests about the above results. I've shown the Trend vs. Chop chart many times for the S&P 500, but never for the Nasdaq Composite. I decided to produce that for examination below.



As you can see the Nasdaq saw a strong and steady tendency to follow through on a day to day basis during the 70's, 80's and much of the 90's. Strong follow through means that strength suggests more strength. Therefore, the fact that the results were bullish over the 1971-1997 period shouldn't come as a surprise. From a Trend vs. Chop perspective the nature of the market is so different today than it was during that period, that I don't think it would be reasonable to extrapolate the results of the above test to the current environment. This essentially means that there is no historical precedent for 10 consecutive up days in a choppy trading environment. While there's no precedent, it seems to me that expectations would certainly be worse than the test above, and most likely even bearish over the short-run.

I've updated the [Aggregator](#) chart below:



The bearish studies tonight have kept the green Aggregator line negative. Unless there are additional bearish signs again tomorrow the line will likely flip up above zero – suggesting positive expectations. The black differential line remains squarely below 0, illustrating the fact that the S&P has strongly outperformed expectations over the last few days. So the overall configuration remains bearish for now.

I'll be holding on to the current index short trade idea for now. Should the market head lower then it won't likely be more than a day or two before I cover.

Like any strategy, our quantitative swing trading, which in the current market environment tends to be mean-reverting, will struggle at times. While the winning percentage is quite high overall, it seems around 2-3 times per year a one-way move will need to be suffered through. The Subscriber Letter has posted positive results 10 of the last 11 months, and even with the current difficulty there still stands a decent chance of another up month in July. When trading mean reverting strategies in a choppy environment there are two things I try and keep in mind. 1) Panicking out of the trade when it starts to move strongly against you is rarely the right thing to do. 2) When the reversal eventually comes don't be greedy. Trying to break even or better on every trade is not the objective. When the bearish edge is no longer present, it's time to get out. The market doesn't know or care what your entry price is and it shouldn't factor into your exit decision.

Intermediate-term Outlook (2 weeks – 2 months)– updated 7/20 – neutral

There were a few notable moves in key intermediate-term indicators this week. First, the VIX:VXV ratio again dropped below 0.9 and even below 0.85. I discussed the

VIX:VXV ratio in great detail just a few weeks back. Basically the implication is bearish as short-term volatility appears to be strongly underestimating the longer-term. Therefore a pickup in volatility, and subsequent market decline, can often be expected. The discussion may be found in the intermediate-term section on the 6/29/09 Letter. I've provided a link below.

[2009-06-29 QE Subscriber Letter.pdf](#)

We also had two breadth studies trigger this week as advancers swamped decliners. The 1st to trigger was the Two 90% Up Volume % Days in a Week. Below is an excerpt from Wednesday night's Letter.

Wednesday was the 2nd 90% up day in the last 3 days. In March I showed a study that suggested tight clusters of 90% up days have almost always led to a further rally. I've updated that study below.

For the 2nd time in 5 days the NYSE Up Volume % exceeds 90%. Buy on close. Sell X days later. \$100k/trade. 1970-present.										
X Days	All: Net Profit	All: Total Trades	All: Winning Trades	All: Losing Trades	All: % Profitable	All: Avg Winning Trade	All: Avg Losing Trade	All: Win/Loss Ratio	All: ProfitFactor	All: Avg Trade
25	54,580.79	8	7	1	87.50	8,354.76	-3,902.52	2.14	14.99	6,822.60
24	58,100.12	8	7	1	87.50	8,512.27	-1,485.80	5.73	40.10	7,262.52
23	52,607.79	8	7	1	87.50	7,727.56	-1,485.12	5.20	36.42	6,575.97
22	50,622.94	8	7	1	87.50	7,238.84	-48.96	147.85	1,034.97	6,327.87
21	52,635.91	8	7	1	87.50	7,811.58	-2,045.12	3.82	26.74	6,579.49
20	50,358.17	8	7	1	87.50	7,432.10	-1,666.56	4.46	31.22	6,294.77
19	44,111.90	8	7	1	87.50	6,614.18	-2,187.36	3.02	21.17	5,513.99
18	43,599.28	8	7	1	87.50	6,620.79	-2,746.24	2.41	16.88	5,449.91
17	46,767.29	8	7	1	87.50	6,937.84	-1,797.60	3.86	27.02	5,845.91
16	46,953.80	8	7	1	87.50	6,794.05	-604.52	11.24	78.67	5,869.23
15	42,218.98	8	6	2	75.00	7,262.86	-679.08	10.70	32.09	5,277.37
14	39,588.88	8	7	1	87.50	5,791.94	-954.72	6.07	42.47	4,948.61
13	40,053.35	8	7	1	87.50	5,946.31	-1,570.80	3.79	26.50	5,006.67
12	30,553.53	8	6	2	75.00	5,460.99	-1,106.20	4.94	14.81	3,819.19
11	34,652.85	8	7	1	87.50	5,077.61	-890.40	5.70	39.92	4,331.61
10	34,572.38	8	7	1	87.50	5,164.35	-1,578.08	3.27	22.91	4,321.55
9	30,573.40	8	8	0	100.00	3,821.68	0.00	100.00	100.00	3,821.68
8	29,107.70	8	8	0	100.00	3,638.46	0.00	100.00	100.00	3,638.46
7	31,208.27	9	7	2	77.78	4,686.25	-797.73	5.87	20.56	3,467.59
6	16,037.37	9	6	3	66.67	3,422.71	-1,499.62	2.28	4.56	1,781.93
5	8,831.44	10	6	4	60.00	3,404.27	-2,898.55	1.17	1.76	883.14
4	15,716.46	10	6	4	60.00	3,509.18	-1,334.66	2.63	3.94	1,571.65
3	10,754.66	11	8	3	72.73	2,126.35	-2,085.39	1.02	2.72	977.70
2	1,198.79	11	7	4	63.64	1,496.80	-2,319.71	0.65	1.13	108.98
1	8,014.68	13	10	3	76.92	1,138.21	-1,122.47	1.01	3.38	616.51

Again instances are small, so it's dangerous to rely too much on the results, but you've typically seen very strong moves after these tandems of 90% Up Volume days. Below I've listed all the occurrences along with the 20-day return of the market after such occurrences.

For the 2nd time in 5 days the NYSE Up Volume % exceeds 90%.
Buy on close. Sell 20 days later. \$100k/trade. 1970-present.

Date/Time	Signal	Price	% Profit	Run-up DrawDown
11/29/71	Buy	\$93.41	9.14%	\$9,137.80
12/28/71	Sell	\$101.95		\$0.00
08/20/82	Buy	\$113.02	8.39%	\$11,103.04
09/20/82	Sell	\$122.50		(\$928.20)
08/02/84	Buy	\$157.99	5.45%	\$6,831.92
08/30/84	Sell	\$166.60		\$0.00
01/05/87	Buy	\$252.19	9.62%	\$11,388.96
02/02/87	Sell	\$276.44		(\$23.76)
08/31/07	Buy	\$1,473.99	4.96%	\$5,027.01
10/01/07	Sell	\$1,547.04		(\$2,324.90)
11/28/07	Buy	\$1,469.01	0.49%	\$3,710.08
12/27/07	Sell	\$1,476.27		(\$2,268.48)
11/26/08	Buy	\$887.68	(1.68%)	\$3,491.04
12/26/08	Sell	\$872.80		(\$8,062.88)
03/12/09	Buy	\$750.74	14.10%	\$14,120.61
04/09/09	Sell	\$856.56		(\$1,101.24)

This study would seem to suggest a bullish edge.

On Thursday Gerald Appel's Daily Breadth Thrust Signal triggered. I discussed this system in some detail in the 4/6/09 and 4/13/09 Letters. Below are excerpts:

I've mentioned before Gerald Appel's Daily Breadth Impulse Signal. It was published in his book "Technical Analysis - Power Tools for Active Investors". Essentially it looks to enter the market when the 10-day exponential average of advancers/decliners hits an extreme. The trade closes when the same measure eventually declines to a certain number. (Since it's not my system I'm not comfortable revealing it in whole but for those interested it can be found in chapter 6 on page 142.) A chart of the indicator can be found on the Quantifiable Edges charts page. The system triggered again at the close on Thursday.

Below is the long-term performance (from 4/6/09):

TradeStation Performance Summary

Collapse 

All Trades

Total Net Profit	\$86,964.45	Profit Factor	4.38
Gross Profit	\$112,698.81	Gross Loss	(\$25,734.36)
Roll Over Credit	\$0.00		
Open Position Profit/Loss	\$966.28		
Select Total Net Profit	\$86,964.45	Select Profit Factor	4.38
Select Gross Profit	\$112,698.81	Select Gross Loss	(\$25,734.36)
Adjusted Total Net Profit	\$55,846.57	Adjusted Profit Factor	2.63
Adjusted Gross Profit	\$90,159.05	Adjusted Gross Loss	(\$34,312.48)
Total Number of Trades	34	Percent Profitable	73.53%
Winning Trades	25	Losing Trades	9
Even Trades	0		
Avg. Trade Net Profit	\$2,557.78	Ratio Avg. Win:Avg. Loss	1.58
Avg. Winning Trade	\$4,507.95	Avg. Losing Trade	(\$2,859.37)
Largest Winning Trade	\$12,471.48	Largest Losing Trade	(\$7,424.82)
Largest Winner as % of Gross Profit	11.07%	Largest Loser as % of Gross Loss	28.85%

The problem as I noted then was that since publication in 2004 the system has performed poorly. Below are the results since the 2004 publication.

Appel Daily Breadth Impulse Signals since publication. \$100k/trade.				
11/04/04	Daily Breadth	\$1,161.67	1.33%	\$3,077.94
12/07/04	Sell	\$1,177.07		(\$112.66)
03/21/07	Daily Breadth	\$1,435.04	(1.24%)	\$265.65
03/28/07	Sell	\$1,417.23		(\$1,446.93)
01/02/09	Daily Breadth	\$931.80	(6.60%)	\$1,289.35
01/12/09	Sell	\$870.26		(\$7,220.36)
03/18/09	Daily Breadth	\$794.35	(0.86%)	\$4,825.00
03/30/09	Sell	\$787.53		(\$3,518.75)
04/02/09	Daily Breadth	\$834.38	5.94%	\$11,399.01
05/13/09	Sell	\$883.92		(\$2,362.15)
06/01/09	Daily Breadth	\$942.87	(2.03%)	\$1,416.16
06/15/09	Sell	\$923.72		(\$2,461.32)
07/16/09	Daily Breadth	\$940.74	n/a	\$121.90
open	n/a	\$940.38		(\$645.54)

As you can see the system has gone through a tough time. In the 4/13/09 Letter I did some robustness testing on the system and considered whether the positive results may have been due to over optimization.

One possible reason that a system could struggle like this after publication is that the system was over-optimized. One way to test this would be to run optimization reports

around the entry and exit criteria to see if the edge remains for similar setups. If so, this would suggest the design of the system is sound.

First I tested the entry criteria. I ran this test from 1970 – 7/2004. This excludes any instances post-publication. Those results are below:

Buy on close of day when 10-day EMA of Up Issues % closes above X.										
Sell when Appel daily breadth impulse exit signal triggers. \$100k/trade. 1970-7/2004.										
X%	Net Profit	Trades	Wins	Losses	% Wins	Avg Win	Avg Loss	W/L Ratio	Profit Fact	Avg Trade
0.600	\$110,151.40	56	34	22	60.71	\$4,791.35	(\$2,397.94)	2.00	3.09	\$1,966.99
0.605	\$118,469.87	41	29	12	70.73	\$5,264.02	(\$2,848.90)	1.85	4.47	\$2,889.51
0.610	\$97,061.03	36	26	10	72.22	\$4,785.85	(\$2,737.10)	1.75	4.55	\$2,696.14
0.615	\$94,306.22	30	24	6	80.00	\$4,640.60	(\$2,844.70)	1.63	6.53	\$3,143.54
0.620	\$82,156.77	25	20	5	80.00	\$4,827.89	(\$2,880.22)	1.68	6.70	\$3,286.27
0.625	\$71,995.91	23	17	6	73.91	\$5,109.51	(\$2,477.62)	2.06	5.84	\$3,130.26
0.630	\$64,948.07	20	14	6	70.00	\$5,717.52	(\$2,516.19)	2.27	5.30	\$3,247.40
0.635	\$47,797.85	16	11	5	68.75	\$5,539.98	(\$2,628.39)	2.11	4.64	\$2,987.37

These results appear fairly robust, suggesting a true edge when there is a breadth thrust in the market.

Next I tested the exit criteria. Those results are below:

Appel daily breadth impulse signal triggers a buy of the S&P 500 on close.										
Sell when the 10-day EMA of the Up Issues % closes below X. \$100k/trade. 1970-7/2004										
X%	Net Profit	Trades	Wins	Losses	% Wins	Avg Win	Avg Loss	W/L Ratio	Profit Fact	Avg Trade
0.47	\$95,973.25	30	23	7	76.67	\$5,007.44	(\$2,742.56)	1.83	6.00	\$3,199.11
0.48	\$88,698.04	30	23	7	76.67	\$4,732.17	(\$2,877.41)	1.64	5.40	\$2,956.60
0.48	\$89,811.61	30	23	7	76.67	\$4,780.59	(\$2,877.41)	1.66	5.46	\$2,993.72
0.49	\$94,306.22	30	24	6	80.00	\$4,640.60	(\$2,844.70)	1.63	6.53	\$3,143.54
0.5	\$95,383.27	30	24	6	80.00	\$4,685.48	(\$2,844.70)	1.65	6.59	\$3,179.44
0.5	\$98,830.05	30	24	6	80.00	\$4,761.40	(\$2,573.91)	1.85	7.40	\$3,294.34
0.51	\$92,401.68	31	24	7	77.42	\$4,663.64	(\$2,789.37)	1.67	5.73	\$2,980.70

Here again we see strong results across the board. While there's a chance that the "best" results were chosen for publication, there's really no foul in doing that. The concept appears sound, which means the recent failures are likely either due to 1) bad luck or 2) a change in market dynamics. It could be a combination of the two. There hasn't been a market as weak as the current bear since well before the test period. It wouldn't be the first system to struggle in the recent environment. Bottom line is it appears it would be a mistake at this point to write off the system.

Overall, I'm seeing sentiment indicators such as VIX:VXV and the Nasdaq/NYSE volume suggesting caution. On the bullish side we have breadth, price momentum, and leadership all suggesting upside. Perhaps a slight edge to the bulls at this point. A move above the June highs in the other major indices would confirm the Nasdaq breakout and suggest another leg up. While last week the market was on the precipice of a breakdown, it is now very close to a breakout. The short-term analysis suggests it is not likely to happen right away. It will certainly be interesting to monitor, though.

Catapult and Capitulative Breadth Statistics

(Catapult Presentation Part 1) (Catapult Presentation Part 2)

Open Catapult Triggers

none

Catapult for ETF's Trades

None

Broad Market Large Cap CBI – 0

Additional New Trade Ideas

A full listing of system triggers can be found at the [system triggers page](#) each night. I will cherry pick some of my favorite setups from the S&P 100 and ETF lists along with occasional other trade ideas to track below.

BBH – short @ \$99.30 limit – based on system -81217 from the systems trigger page.

Active Trades Table

Symbol	Entry Date	Entry Price	Current Pr	% Gain/L	Stop	Notes
SPY(s)(1/4)	7/14/2009	\$90.61	\$95.57	-5.47%		
SPY(s)(1/4)	7/15/2009	\$91.81	\$95.57	-4.10%		
SPY(s)(1/4)	7/16/2009	\$93.15	\$95.57	-2.60%		
SPY(s)(1/4)	7/17/2009	\$94.25	\$95.57	-1.40%		

Average SPY price is \$92.46

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