

The big guys don't know everything

Presented to

IEEE Oakland/East Bay Life Members Affinity Group

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by

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Swing Trading

- **Swing trading** is a speculative activity in financial markets where a tradable asset is held for between one to several days in an effort to profit from price changes or 'swings'. A swing trading position is typically held longer than a day trading position, but shorter than buy and hold investment strategies that can be held for months or years. Profits can be sought by either buying an asset or short selling.

Momentum Trading

- An investment strategy that aims to capitalize on the continuance of existing trends in the market. The momentum investor believes that large increases in the price of a security will be followed by additional gains and vice versa for declining values.
- Following the general direction of a market or of the price of an asset. Trends can vary in length from short, to intermediate, to long term. If you can identify a trend, it can be highly profitable, because you will be able to trade with the trend.

Buy and Hold

- **Stock Investors Should Expect 6%-7% Annual Return, Buffett Says**
- DJIA (1990 – 2014) 7.75%
- S&P500 (1990 – 2014) 7.35%
- NASDAQ (1990 – 2014) 9.87%
- IBM (10y) 9.28%, Google (10y) 14.78%, Intel (10y) 17.22%, Microsoft (10y) 8.28%, Boeing Airlines (10y) 10.79%, GE (10y) 0.94%, Caterpillar (10y) 7.04%, Home Depot (10y) 13.07%, Johnson & Johnson (10y) 7.77%

Steady Growth

Advanced Auto Parts (8/12/2010)



8 Periods of 10 days each

Symbol		Buy							Cash	Sell			
		Date	Open	Close	Price	Shares	Conf	Cost		Date	Days	Price	Profit
1	ABC	01/27/10	\$27.37	\$27.26	\$27.89	70	20	\$1952.16	\$18041	02/05/10	8	\$27.16	\$-51
2	ABBC	03/22/10	\$8.34	\$8.40	\$8.28	190	16	\$1573.20	\$18355	03/31/10	8	\$7.99	\$-56
3	BA	03/24/10	\$72.42	\$72.32	\$72.56	20	17	\$1451.16	\$16896	04/27/10	25	\$73.41	\$17
4	ABC	04/22/10	\$31.29	\$31.41	\$30.46	50	16	\$1523.10	\$16877	05/07/10	12	\$30.50	\$2
5	AAP	08/13/10	\$54.61	\$54.26	\$53.36	30	17	\$1600.68	\$18248	08/24/10	8	\$54.29	\$28
6	AAP	11/01/10	\$65.29	\$64.76	\$64.11	25	16	\$1602.85	\$18260	11/12/10	10	\$64.80	\$17
7	ABBC	11/10/10	\$12.20	\$12.10	\$11.51	365	42	\$4199.69	\$14053	11/22/10	9	\$11.75	\$91
8	ABAX	12/21/10	\$27.85	\$27.99	\$27.86	60	17	\$1671.84	\$18271	01/04/11	11	\$26.60	\$-76
9	AAON	12/23/10	\$28.79	\$28.94	\$28.94	75	23	\$2170.35	\$16093	01/07/11	12	\$27.56	\$-103
10	AA	01/05/11	\$16.34	\$16.56	\$16.48	120	21	\$1977.36	\$15698	02/22/11	35	\$17.10	\$74
11	ABG	02/23/11	\$19.36	\$18.42	\$19.62	210	42	\$4121.04	\$15674	02/23/11	1	\$18.64	\$-206
12	ABR	03/03/11	\$6.70	\$6.87	\$7.05	435	32	\$3067.62	\$16508	03/04/11	2	\$6.70	\$-153
13	ABMD	04/07/11	\$15.54	\$15.32	\$15.27	100	16	\$1527.20	\$17881	04/14/11	6	\$15.61	\$34

Annualized return 8 periods x 10 days


Totals, Ups:630 59% AvgAtRisk:\$60935 Profit:398%			
AnnRet	0.5488	54.88%	
AnnStdDev	0.2215	22.15%	
Sharpe Ratio	2.4782	2.48	
S&P AnnRet	0.0991	9.91%	
S&P Outperformance	0.4497	44.97%	
S&P Correlation	0.0954		
Upside Capture	195.7093	195.7093	
Downside Capture	-48.9490	-48.9490	
Max Drawdown	0.2923	29.23%	Peak:9/14 Trough:10/14 Return:11/14 Recovery1
S&P Max Drawdown	0.2082	20.82%	Peak:4/11 Trough:9/11 Return:2/12 Recovery5
Alpha	0.0375	3.75%	
Beta	0.1650	0.16	

Variation - Increasing Growth

- Higher growth per period



Increasing Growth

Symbol		Buy							Cash	Sell 			
		Date	Open	Close	Price	Shares	Conf	Cost		Date	Days	Price	Profit
1	ASYS	10/19/10	\$19.27	\$18.11	\$19.48	80	16	\$1558.72	\$18434	10/19/10	1	\$18.51	\$-78
2	BCEKF	11/10/10	\$8.57	\$8.64	\$9.44	240	23	\$2265.60	\$17635	11/10/10	1	\$8.97	\$-113
3	AREX	12/22/10	\$23.03	\$23.46	\$22.53	80	19	\$1802.40	\$17971	12/27/10	4	\$22.78	\$20
4	ACPW	01/04/11	\$2.55	\$2.52	\$2.54	890	23	\$2257.04	\$17523	01/10/11	5	\$2.46	\$-65
5	CDOUF	01/24/11	\$2.15	\$2.29	\$2.33	845	20	\$1968.85	\$17732	01/25/11	2	\$2.21	\$-98
6	ATML	02/10/11	\$15.90	\$16.09	\$16.05	105	18	\$1685.04	\$17904	02/22/11	9	\$15.51	\$-57
7	AREX	02/22/11	\$33.09	\$31.52	\$31.97	50	18	\$1598.50	\$16298	03/08/11	11	\$30.95	\$-51
8	ACHN	03/30/11	\$7.40	\$7.14	\$6.96	245	18	\$1705.69	\$17748	04/07/11	7	\$7.17	\$51
9	ADNC	02/06/13	\$14.72	\$14.83	\$14.47	335	50	\$4846.11	\$14644	02/11/13	4	\$14.11	\$-120
10	AFOP	06/13/13	\$22.13	\$22.25	\$23.76	70	18	\$1663.48	\$17693	06/13/13	1	\$22.58	\$-83

How much do I buy

- Diversify across at least 10 stocks
- Diversity across sectors
- Adaptive Allocation

When do I sell?

- Investors have a knack for piling into investments at the top and selling at the bottom. Many investors get caught up in media hype or fear and buy or sell investments at the peaks and valleys of the cycle.

You know you are an emotional investor if:

- You sell your stock if it falls a few cents. You are fixated on stock news. You celebrate unrealized profit.
- You fear stock updates.
- You panic about bad news.
- You make frequent calls to your broker.
- You mourn unrealized loss.

Stop Loss Order

An order placed with a broker to sell a security when it reaches a certain price. A stop-loss order is designed to limit an investor's loss on a position in a security.



Limit Order

- An order placed with a brokerage to buy or sell a set number of shares at a specified price or better. Because the limit order is not a market order, it may not be executed if the price set by the investor cannot be met during the period of time in which the order is left open.



Stop Loss / Stop Limit \$0 commission

	Up:2%	Up:4%	Up:6%	Up:8%	Up:10%	Up:12%	Up:14%	Up:16%	Up:18%
Dn:-2%	12.5	14.2	14.9	16.4	15.0	14.6	14.8	17.2	17.1
Dn:-4%	12.3	13.7	16.2	17.1	16.4	15.4	16.9	20.3	20.5
Dn:-6%	13.5	12.8	14.1	16.6	14.4	15.6	17.7	18.5	19.7
Dn:-8%	15.3	17.6	20.8	22.6	17.5	16.8	18.2	21.2	21.8
Dn:-10%	14.5	16.2	18.2	19.3	17.9	16.2	12.8	15.0	17.3
Dn:-12%	16.5	17.2	19.7	18.5	17.5	16.4	11.2	14.7	16.1
Dn:-14%	12.8	14.6	18.1	17.4	13.9	12.8	10.5	14.5	14.2
Dn:-16%	13.4	14.5	17.4	15.2	15.2	14.0	10.5	13.8	14.0
Dn:-18%	11.6	15.0	16.9	16.1	16.5	15.0	11.9	14.0	13.6

With \$14 round trip

	Up:2%	Up:4%	Up:6%	Up:8%	Up:10%	Up:12%	Up:14%	Up:16%	Up:18%
Dn:-2%	5.7	8.0	8.8	9.6	9.6	8.6	8.1	11.7	11.3
Dn:-4%	5.0	7.6	10.2	10.2	9.6	8.9	11.0	14.4	14.8
Dn:-6%	6.5	6.4	7.5	9.2	7.5	10.5	12.9	13.1	14.5
Dn:-8%	8.9	11.5	15.7	16.1	12.0	10.9	14.1	16.1	16.8
Dn:-10%	8.0	11.1	12.1	12.9	12.4	11.2	7.2	10.3	12.3
Dn:-12%	10.4	10.7	14.6	13.0	11.8	12.5	6.4	10.1	10.9
Dn:-14%	6.4	7.1	12.3	12.5	7.5	8.4	5.3	10.6	9.2
Dn:-16%	6.8	8.0	11.1	8.8	8.7	8.9	6.0	9.5	10.0
Dn:-18%	5.5	8.0	12.5	10.8	9.4	10.2	7.3	11.1	10.2

Trailing Stop loss

A stop order that can be set at a defined percentage away from a security's current market price. A trailing stop for a long position would be set below the security's current market price; for a short position, it would be set above the current price. A trailing stop is designed to protect gains by enabling a trade to remain open and continue to profit as long as the price is moving in the right direction, but closing the trade if the price changes direction by a specified percentage.

Trailing Stop Loss

	Up:2%	Up:4%	Up:6%	Up:8%	Up:10%	Up:12%	Up:14%	Up:16%	Up:18%
Dn:-2%	16.2	15.2	11.1	13.6	14.6	17.1	19.4	18.8	18.5
Dn:-4%	16.6	13.3	12.7	17.4	17.7	17.9	18.6	17.6	18.3
Dn:-6%	14.8	12.0	10.7	15.6	14.2	17.6	16.2	15.8	15.8
Dn:-8%	15.7	14.4	13.6	18.2	11.5	13.6	16.6	19.4	18.9
Dn:-10%	14.9	11.7	10.2	13.5	10.4	11.7	12.8	14.4	14.7
Dn:-12%	17.6	13.0	11.8	11.6	10.1	13.8	18.5	18.4	20.0
Dn:-14%	14.2	12.1	10.7	11.0	10.2	12.0	17.9	19.0	20.4
Dn:-16%	13.6	12.5	12.1	11.3	9.3	10.5	18.8	19.1	20.0
Dn:-18%	13.2	11.2	11.3	11.5	10.6	11.0	17.7	16.8	17.7

Algorithms

- Momentum
- Steady Growth
- Increasing Growth
- Aroon Indicator
- Moving Up
- Etc.

Momentum - Example



Momentum - parameters

- Volume greater than 100,000 shares
- Volume increasing 1.6x in the last 3 days vs. the pervious 20 days
- Close greater than \$2.00
- Close increasing 1% the last day vs. the previous 5 days
- Change in close no more than 25% in the last 25 days
- Volatility less than 1% over the last 20 days
- Last two days were up days;
- Last 3 out of 5 days were up days
- Last 12 out of 20 days were up days

Momentum – zoomed in




Momentum – Daily Picks



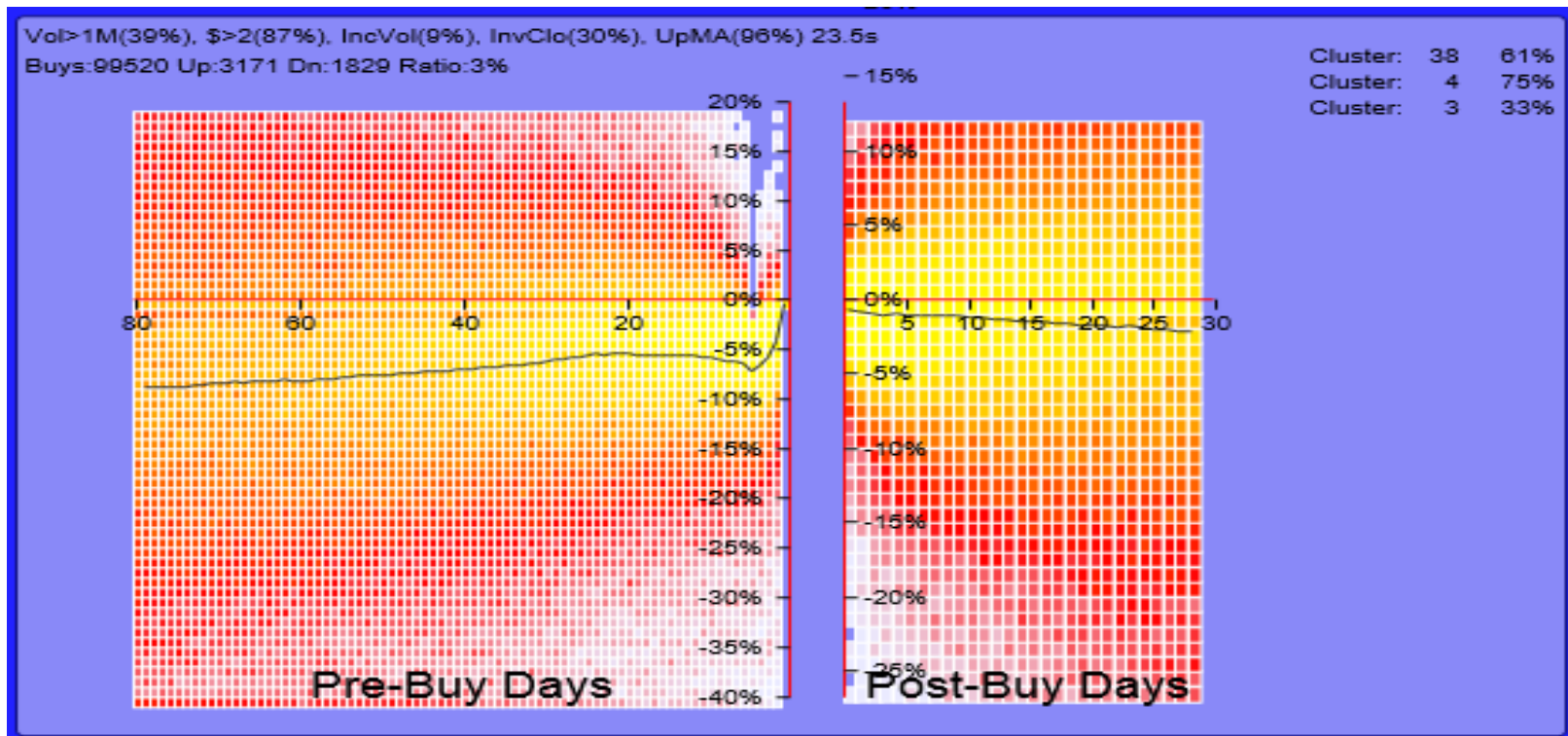
Momentum - Trades

Up Trades

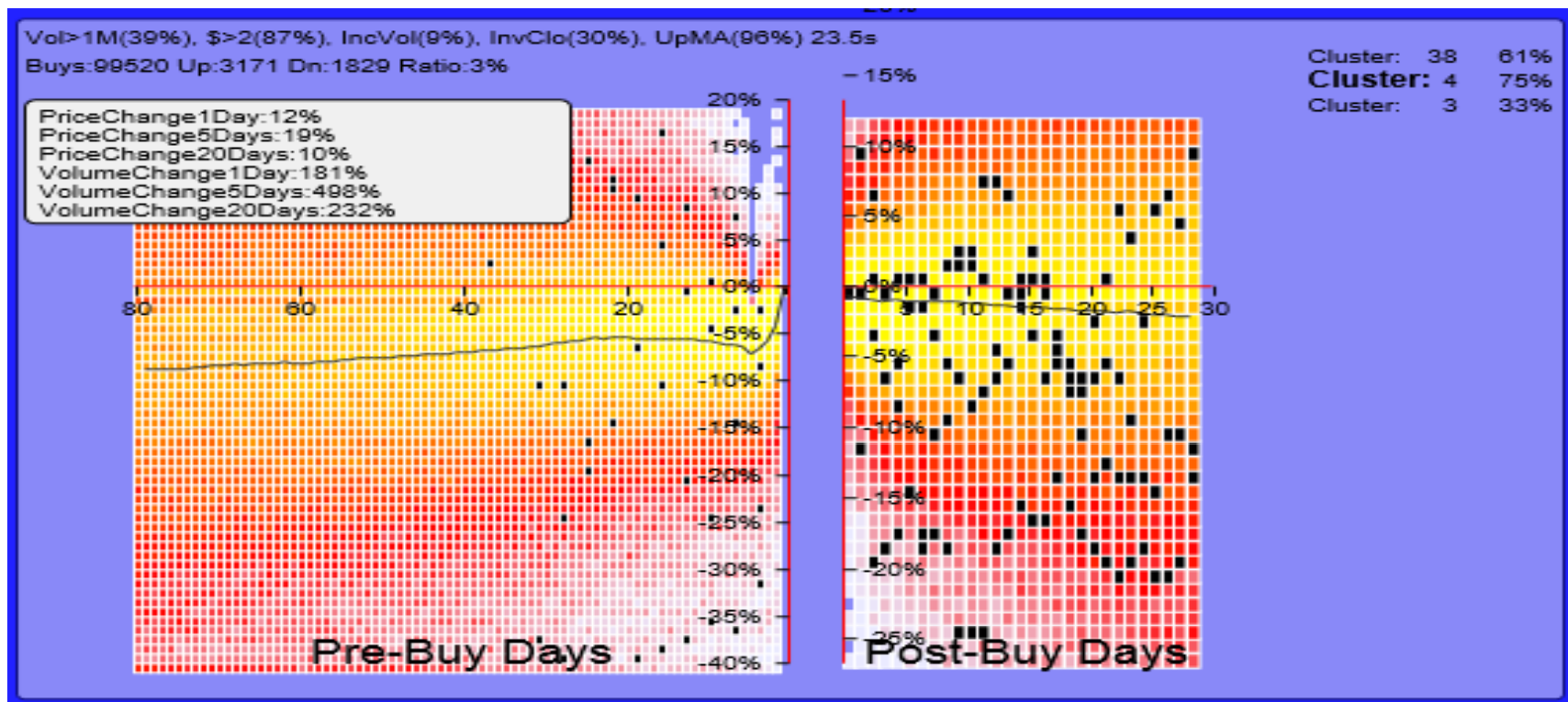


Symbol		Buy							Cash	Sell				
		Date	Open	Close	Price	Shares	Conf	Cost		Date	Days	Price	Profit	%
1	ABBC	03/05/10	\$8.16	\$8.14	\$8.15	230	19	\$1874	\$18119	04/22/10	949	\$8.64	\$112	7.7
2	AAXJ	03/18/10	\$56.57	\$56.19	\$56.48	35	21	\$1977	\$16135	05/06/10	36	\$53.09	\$-119	-7.2
3	AAPL	04/26/10	\$271.98	\$269.50	\$271.22	5	16	\$1356	\$16784	05/06/10	9	\$254.95	\$-81	-9.2
4	AAXJ	08/04/10	\$57.22	\$57.18	\$57.17	40	23	\$2287	\$17543	10/01/10	43	\$60.60	\$137	7.7
5	AAXJ	09/15/10	\$58.27	\$58.42	\$58.32	35	22	\$2041	\$15495	10/05/10	15	\$61.81	\$122	7.1
6	A	10/04/10	\$33.56	\$32.59	\$33.32	45	16	\$1500	\$16443	11/04/10	24	\$35.32	\$90	8.0
7	AAP	11/01/10	\$65.29	\$64.76	\$65.12	25	16	\$1628	\$16907	01/06/11	1223	\$61.22	\$-98	-7.5
8	AAXJ	11/23/10	\$61.00	\$61.07	\$61.05	30	20	\$1831	\$16681	01/04/11	31	\$64.71	\$110	6.4
9	AA	01/06/11	\$16.72	\$16.36	\$16.62	165	28	\$2743	\$15872	03/30/11	60	\$17.62	\$165	6.1
10	AATI	01/11/11	\$4.29	\$4.68	\$4.38	625	27	\$2737	\$14628	01/11/11	1	\$4.64	\$164	6.8

Testing and Tuning – Time Series Heat Map



Tuning – Best Parameters via Clustering

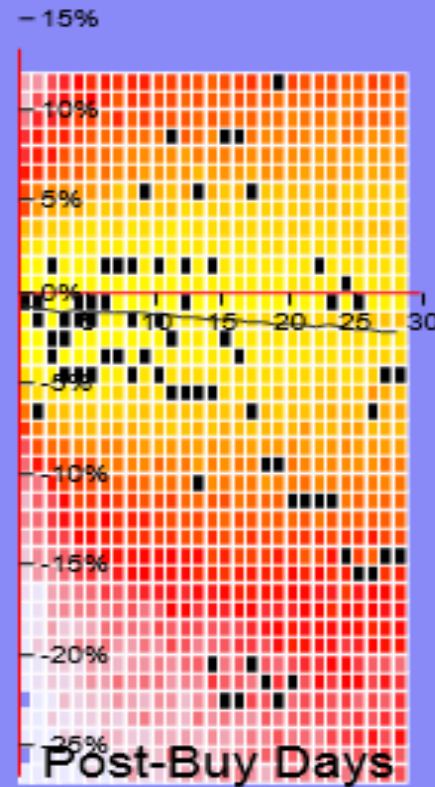
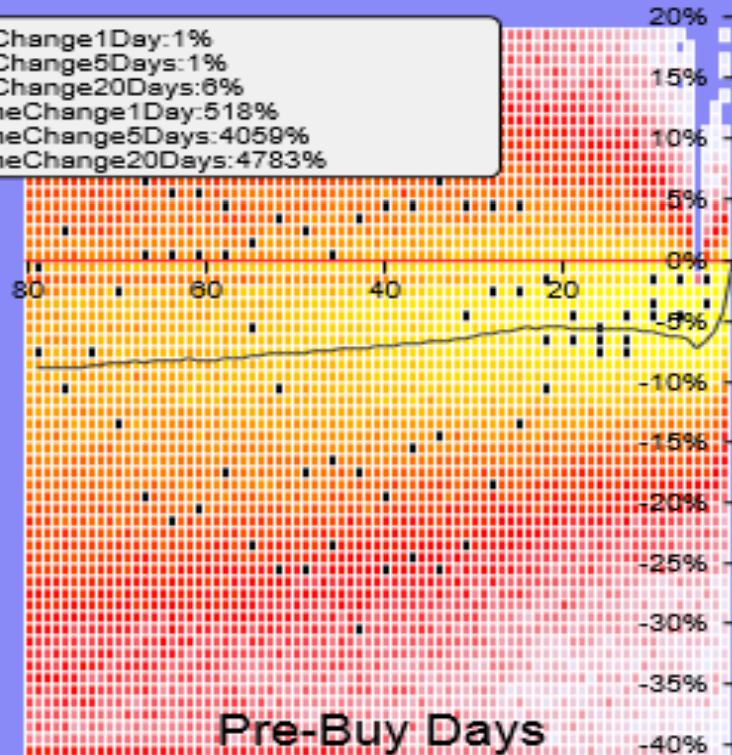


Tuning

Vol>1M(39%), \$>2(87%), IncVol(9%), InvClo(30%), UpMA(96%) 23.5s

Buys:99520 Up:3171 Dn:1829 Ratio:3%

PriceChange1Day:1%
PriceChange5Days:1%
PriceChange20Days:6%
VolumeChange1Day:518%
VolumeChange5Days:4059%
VolumeChange20Days:4783%



Cluster: 38 61%

Cluster: 4 75%

Cluster: 3 33%

Momentum - Performance

10 Years

<u>AnnRet</u>	19.56%
<u>AnnStdDev</u>	11.85%
Sharpe Ratio	1.65
<u>S&P AnnRet</u>	5.51%
S&P Outperformance	14.04%
S&P Correlation	0.6226
Upside Capture	129
Downside Capture	21
Max Drawdown	40.24%
S&P Max Drawdown	65.73%
Alpha	1.28%
Beta	0.52



Aroon Indicator

Do You Want To Only Buy Stocks That Are Going Up?

By **MONEY MORNING STAFF REPORTS** - 8/9/2015

What you are about to see is a powerful discovery that had been intentionally kept under wraps while we investigated it for the last six months.

We had to be certain that what we've detected could be validated with 100% certainty before we went public with our findings.

After examining 15 years of winning trades, we have uncovered an identical X pattern that appeared alongside ALL of them.

The short video clip below reveals everything.



Investopedia: Aroon Indicator

A technical indicator used for identifying trends in an underlying security and the likelihood that the trends will reverse. It is made up of two lines: one line is called "Aroon up", which measures the strength of the uptrend, and the other line is called "Aroon down", which measures the downtrend. The indicator reports the time it is taking for the price to reach, from a starting point, the highest and lowest points over a given time period, each reported as a percentage of total time.



Aroon - Example



Parameters

- Volume greater than 250,000 shares
- Volume increasing 1.6x in the last 3 days vs. the pervious 20 days
- Close greater than \$2.00
- Volatility les than 1% over the last 20 days
- Aroon Indicator over 25 days

Aroon – Auto-Tuning the parameters

Aroon Auto-Test														
Max	Test	Secs	Attm	Buys	AnnResult	AvgAnn	MinVol	MinClose	IVMin	IVDays1	IVDays2	LVMin	LVDays	AroonDays
Avg							250,000	\$2.00	1.6	20	3	1.0%	20	25
16	4	6.1	1	349	11.8%	0.034%	200,000	\$3.25	1.4	19	1	1.3%	10	30
16	6	6.5	1	473	11.3%	0.024%	200,000	\$1.75	1.4	20	3	1.4%	32	12
16	3	6.1	1	496	10.5%	0.021%	50,000	\$3.00	1.4	31	3	1.5%	29	20
16	2	6.3	1	436	10.4%	0.024%	100,000	\$0.75	1.4	11	3	1.5%	20	33
16	11	5.0	1	195	7.2%	0.037%	250,000	\$2.00	1.4	24	2	0.9%	13	30
16	7	3.6	1	10	4.4%	0.437%	300,000	\$1.75	2.4	33	2	0.5%	15	31
16	1	3.9	1	36	3.5%	0.096%	350,000	\$2.25	2.4	25	3	0.9%	6	26
16	10	3.3	1	3	3.1%	1.037%	350,000	\$1.75	2.4	20	3	0.5%	31	27
16	15	3.7	1	47	2.5%	0.052%	300,000	\$2.25	1.4	32	3	0.4%	6	30
16	13	7.3	1	221	1.6%	0.007%	200,000	\$2.50	0.4	28	3	0.6%	29	34
16	5	6.0	1	107	0.6%	0.006%	200,000	\$2.75	0.4	24	3	0.5%	29	41
16	8	5.3	1	85	-0.2%	-0.002%	300,000	\$1.00	0.4	13	1	0.4%	18	37

Aroon - picks

Aroon – Historic Trades

Aroon Trades													
Symbol		Buy							Cash	Sell			
		Date	Open	Close	Price	Shares	Conf	Cost		Date	Days	Price	Profit
1	BG	01/08/10	\$70.65	\$71.29	\$70.80	30	24	\$2124	\$17869	01/21/10	1241	\$66.55	\$-127
2	CNI	01/12/10	\$55.94	\$55.49	\$55.71	40	23	\$2228	\$15634	01/22/10	1519	\$52.37	\$-134
3	BGT	01/27/10	\$14.60	\$14.56	\$14.57	105	16	\$1530	\$18096	03/01/10	1508	\$15.44	\$92
4	AUO	03/19/10	\$11.64	\$11.53	\$11.62	115	17	\$1336	\$14195	04/22/10	1429	\$12.31	\$80
5	ABAX	05/03/10	\$25.82	\$25.76	\$25.66	75	21	\$1924	\$14805	05/07/10	5	\$24.12	\$-115
6	CATO	09/03/10	\$25.03	\$24.98	\$24.98	65	18	\$1623	\$16981	09/29/10	1244	\$26.47	\$97
7	CBU	08/05/11	\$24.96	\$24.41	\$24.83	70	19	\$1738	\$13261	08/08/11	1029	\$23.34	\$-104
8	BRGY	10/20/11	\$105.55	\$104.69	\$105.17	35	50	\$3681	\$12337	10/26/11	535	\$111.48	\$221
9	BGT	03/28/12	\$14.48	\$14.33	\$14.43	85	16	\$1226	\$14576	08/17/12	889	\$15.29	\$74
10	CAB	04/27/12	\$38.97	\$38.20	\$38.71	55	29	\$2129	\$12421	05/04/12	6	\$36.38	\$-128



Aroon – Annualized Return

AnnRet	0.0842	8.42%
AnnStdDev	0.9917	99.17%
Sharpe Ratio	0.0849	0.08
S&P AnnRet	0.1074	10.74%
S&P Outperformance	-0.0232	-2.32%
S&P Correlation	0.0518	
Upside Capture	46.39	46.39
Downside Capture	34.67	34.67
Max Drawdown	2.5762	257.62%
S&P Max Drawdown	0.1957	19.57%
Alpha	0.0279	2.79%
Beta	0.3894	0.39

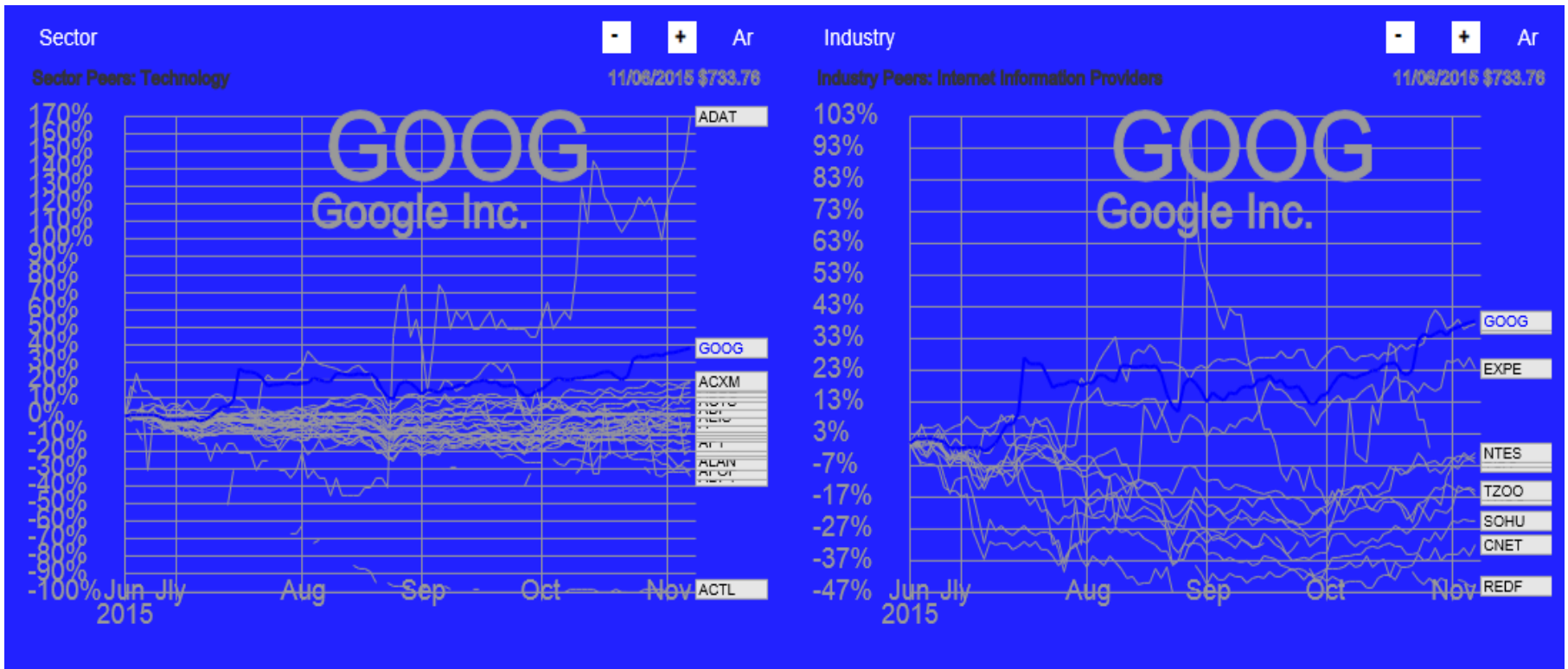
Ant Trails

- Find a stock that does pretty good and then find another one that follows in the same track.
- Did not perform very well

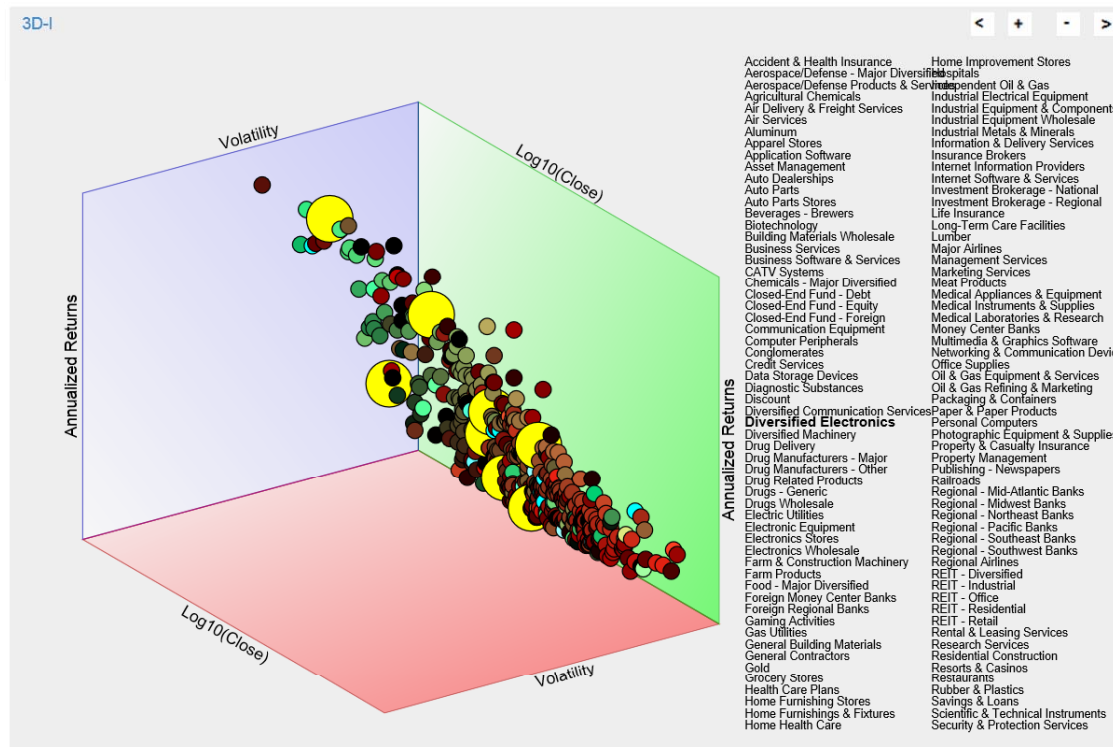
Google - GOOG



Google – Peers – Technology/Internet Information Providers



Sectors



New Algorithms

Where do the algorithms come from?

- Books
- Domain people
- Genetic Algorithms

Data

Where does the data come from?

- Data Wiz ftp daily download = 40,000 equities
- Yahoo finance weekly screen scrape – 8,000 equities, 8 years

iMatchative / Altx

- Behavioral Matching
 - You like people who are like you – good in a crisis
- Big Data Analytics
 - Collect data
 - Calculate Insights
 - Peer grouping via Clustering
 - News sentiment analysis
 - Support Decision making
 - backtesting

Questions?

You do not have to give your money to the 'big guys' to make money in the stock market. Pete will explain how he makes money using swing trading techniques that hold a stock for a few days to a few weeks. Also covered is a technique for the longer term investor. Peter will go over several momentum trading strategies that he has used over the years. Where do good ideas come from and how do you know if it is a good idea? A healthy amount of skepticism is a good thing when evaluating the next bright idea in investing. We will explore one of the latest bright ideas that has surfaced in our inboxes and see if it really works and how to actually implement it.

Of key importance that every investor seems to have trouble with is when to sell. We all know that 'previous results do not guarantee future performance' but sometimes it does. Peter is a mechanical engineer and a computer scientist and as engineers, we all know the importance of testing. All the algorithms and ideas presented are based on back testing to arrive at their performance.

Pete currently works at an innovative fintech company that is employing big data analysis, behavior compatibility and financial analytics to disrupt the long standing old boy networks of high net worth investing.

Stop Limits and Stop Losses

Assume 0% commission

Growth8x20 Average		Up Strategies (Stop Limit)										
		None	2	4	6	8	10	12	14	16	18	20
Down Strategies (Stop Loss)	2	0.7%	0.4%	0.5%	0.4%	0.5%	0.6%	0.6%	0.7%	0.7%	0.7%	0.7%
	4	1.3%	0.8%	0.9%	0.9%	1.1%	1.1%	1.2%	1.3%	1.3%	1.3%	1.3%
	6	1.6%	0.8%	1.0%	1.2%	1.5%	1.4%	1.4%	1.6%	1.8%	1.8%	1.5%
	8	1.4%	0.7%	1.1%	1.2%	1.5%	1.4%	1.5%	1.8%	1.9%	1.9%	1.7%
	10	1.8%	0.8%	1.2%	1.2%	1.5%	1.5%	1.5%	1.9%	2.1%	2.1%	2.0%
	12	3.5%	0.9%	1.7%	2.0%	2.3%	2.3%	2.4%	2.7%	3.1%	3.1%	3.0%
	14	2.1%	1.0%	1.8%	1.9%	2.1%	2.1%	2.2%	2.5%	2.9%	2.9%	2.6%
	16	2.4%	1.2%	2.0%	2.0%	2.2%	2.0%	2.3%	2.5%	2.7%	2.7%	2.5%
	18	2.9%	1.1%	2.0%	1.9%	2.3%	2.3%	2.5%	2.8%	3.2%	3.0%	2.7%
	20	2.8%	1.1%	1.9%	1.9%	2.1%	2.1%	2.2%	2.3%	2.9%	3.0%	2.8%
	None	5.6%	1.2%	1.5%	2.2%	3.0%	3.1%	3.7%	3.5%	4.1%	4.6%	4.4%
	3.5SD	1.5%	0.8%	1.2%	1.2%	1.5%	1.5%	1.6%	1.9%	2.0%	2.0%	1.7%
	3SD	1.4%	0.8%	1.2%	1.2%	1.5%	1.4%	1.5%	1.8%	2.0%	1.9%	1.6%
	2.5SD	1.5%	0.8%	1.2%	1.2%	1.5%	1.5%	1.6%	1.9%	2.0%	2.0%	1.7%
	2.0SD	1.4%	0.8%	1.2%	1.2%	1.5%	1.5%	1.6%	1.9%	2.0%	2.0%	1.7%

Commissions

Assuming \$25.00 Commission

Growth8x20 Average		Up Strategies (Stop Limit)										
		None	2	4	6	8	10	12	14	16	18	20
Down Strategies (Stop Loss)	2	-0.5%	-0.9%	-0.8%	-0.8%	-0.7%	-0.7%	-0.6%	-0.6%	-0.6%	-0.5%	-0.5%
	4	0.0%	-0.5%	-0.4%	-0.3%	-0.2%	-0.2%	-0.1%	0.1%	0.1%	0.1%	0.1%
	6	0.4%	-0.5%	-0.2%	-0.0%	0.2%	0.2%	0.1%	0.3%	0.5%	0.6%	0.3%
	8	0.1%	-0.5%	-0.1%	-0.1%	0.2%	0.1%	0.2%	0.5%	0.7%	0.6%	0.4%
	10	0.5%	-0.5%	-0.0%	-0.0%	0.2%	0.3%	0.3%	0.6%	0.9%	0.8%	0.8%
	12	2.2%	-0.3%	0.5%	0.7%	1.0%	1.0%	1.2%	1.5%	1.8%	1.8%	1.8%
	14	0.8%	-0.3%	0.6%	0.7%	0.9%	0.8%	1.0%	1.2%	1.6%	1.6%	1.4%
	16	1.1%	-0.1%	0.8%	0.7%	0.9%	0.8%	1.0%	1.2%	1.5%	1.4%	1.3%
	18	1.6%	-0.1%	0.7%	0.7%	1.1%	1.1%	1.3%	1.5%	1.9%	1.8%	1.4%
	20	1.5%	-0.1%	0.6%	0.6%	0.9%	0.8%	0.9%	1.1%	1.7%	1.8%	1.6%
	None	4.3%	-0.0%	0.3%	0.9%	1.8%	1.9%	2.5%	2.2%	2.8%	3.4%	3.1%
	3.5SD	0.2%	-0.4%	-0.0%	-0.0%	0.3%	0.2%	0.3%	0.6%	0.8%	0.7%	0.5%
	3SD	0.1%	-0.5%	-0.1%	-0.1%	0.2%	0.1%	0.2%	0.6%	0.7%	0.6%	0.4%
	2.5SD	0.3%	-0.5%	-0.1%	-0.1%	0.3%	0.2%	0.3%	0.6%	0.7%	0.7%	0.5%
	2.0SD	0.2%	-0.5%	-0.1%	-0.1%	0.3%	0.2%	0.3%	0.6%	0.8%	0.7%	0.5%

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