

# Percentage of Stocks Above a Moving Average



by James Pujals

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# My Background

- Software Developer since 1975.
- Trading since 2003.
- I interviewed many traders and investors, attended many user group meetings, participated in training classes, and read a lot of books looking for successful methods. The result was there is no clear method “The Holy Grail”.
- Many individual traders never looked at indicators for similarities and from a mathematical perspective.
- Many of the famous traders keep their trading methods simple and use few indicators.
- New Job – Director of Research and Development of Cerion Inc, The company sells a software product to telecommunication companies for capacity planning worldwide.

# Rising Tide Lifts All Boats



Since 80% of the movement of a stock is determined by the stock's market and industry group, and 20% of the movement is related to the stock itself that I decided to develop an application which concentrated on the movement of markets, sectors, and industry groups.

Thus, **Statistics Indicating Financial Trend (SIFT)**.

# SIFT

## Statistics Indicating Financial Trend

SIFT is a software application built by me using C# and SQL Server.

Data source is end-of-day data from Reuters Datalink Service.

Plotting the data in Excel or Tradestation.

SIFT is basically built to be a fill-in-the-blank backtester.

Symbol groupings are [Basket-Sector-Industry] and [Basket only].

Indicator Groups = Band, Basket Aggregate, Chart, Crossover, Issue, MovAvg, Price, Signal, Statistic, Volume

Screens and Backtest Strategies applied to Ticker or Basket Data

IBD data analysis – BigCap 20, Screen of the Day, IBD50, MarketOutlook, Weekly Review

Iron Condor StdDev Analysis



# Percentage of Stocks Above a Moving Average

- The percentage of stocks above a specific moving average is a breadth indicator that measures the degree of participation.
- Percent above MA = (number of stocks above moving average) / (total number of stocks in index)
- Oscillator values are from 0 to 100%
- Oversold/Overbought signals will vary based on moving average
  - 10/90      20/80      30/70      50/50
- Look for bullish/bearish divergence

# Percentage Of NYSE Stocks Above 200 Day Moving Average



**\$SPX (S&P 500 Large Cap Index) INDX**

26-Jul-2007

Open 1515.95 High 1515.95 Low 1465.30 Close 1482.66 Volume 4.9B Chg -35.43 (-2.33%)

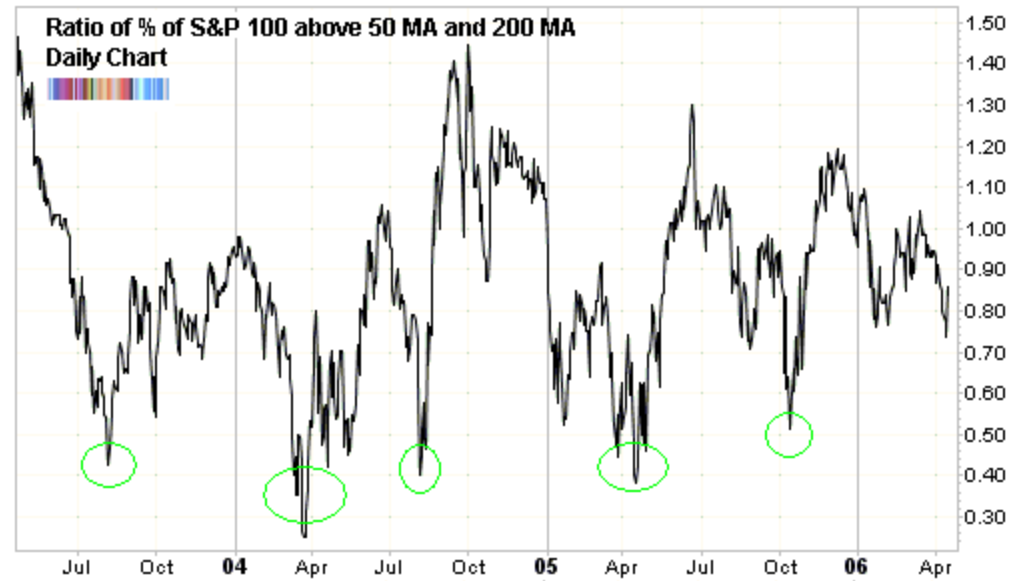
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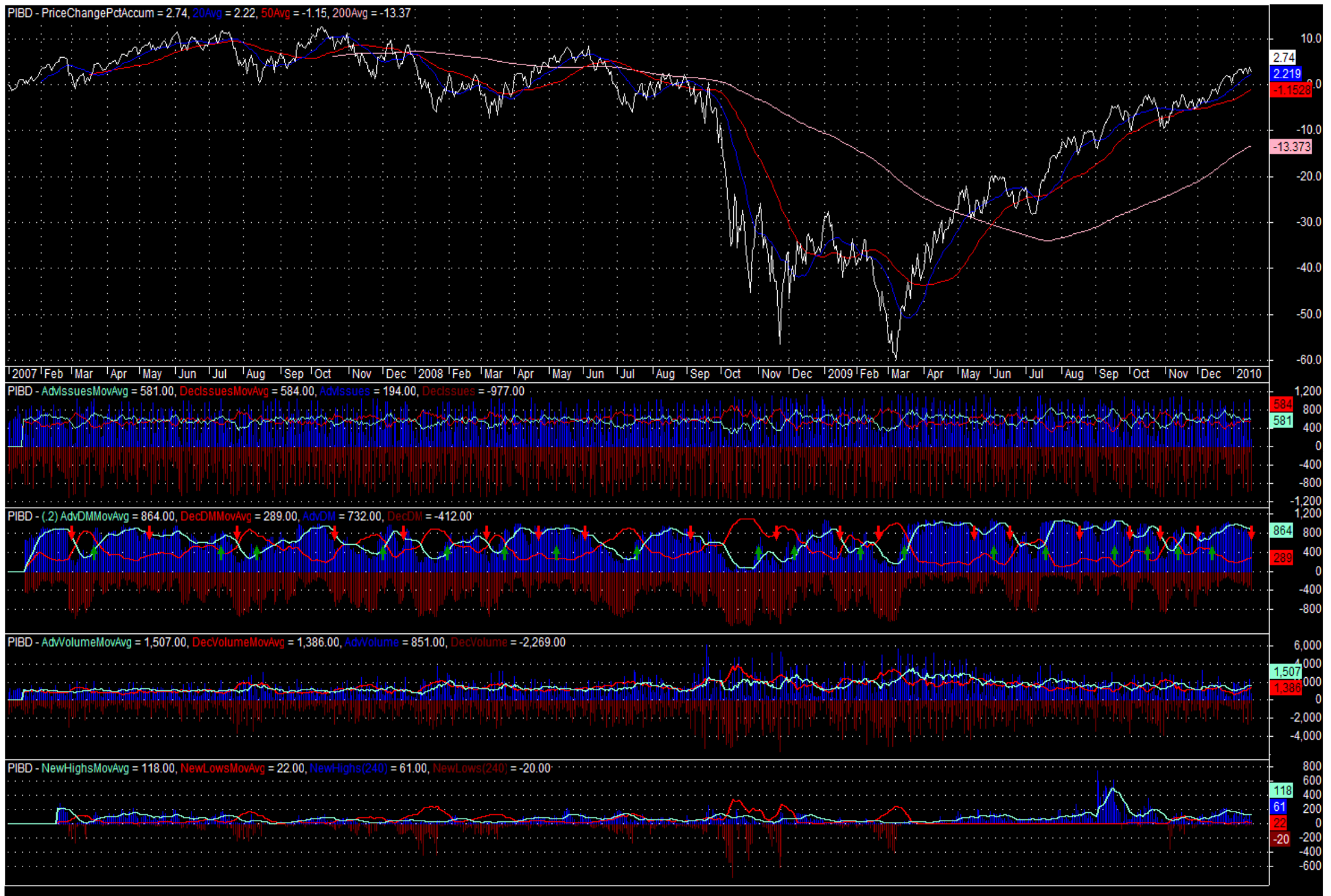




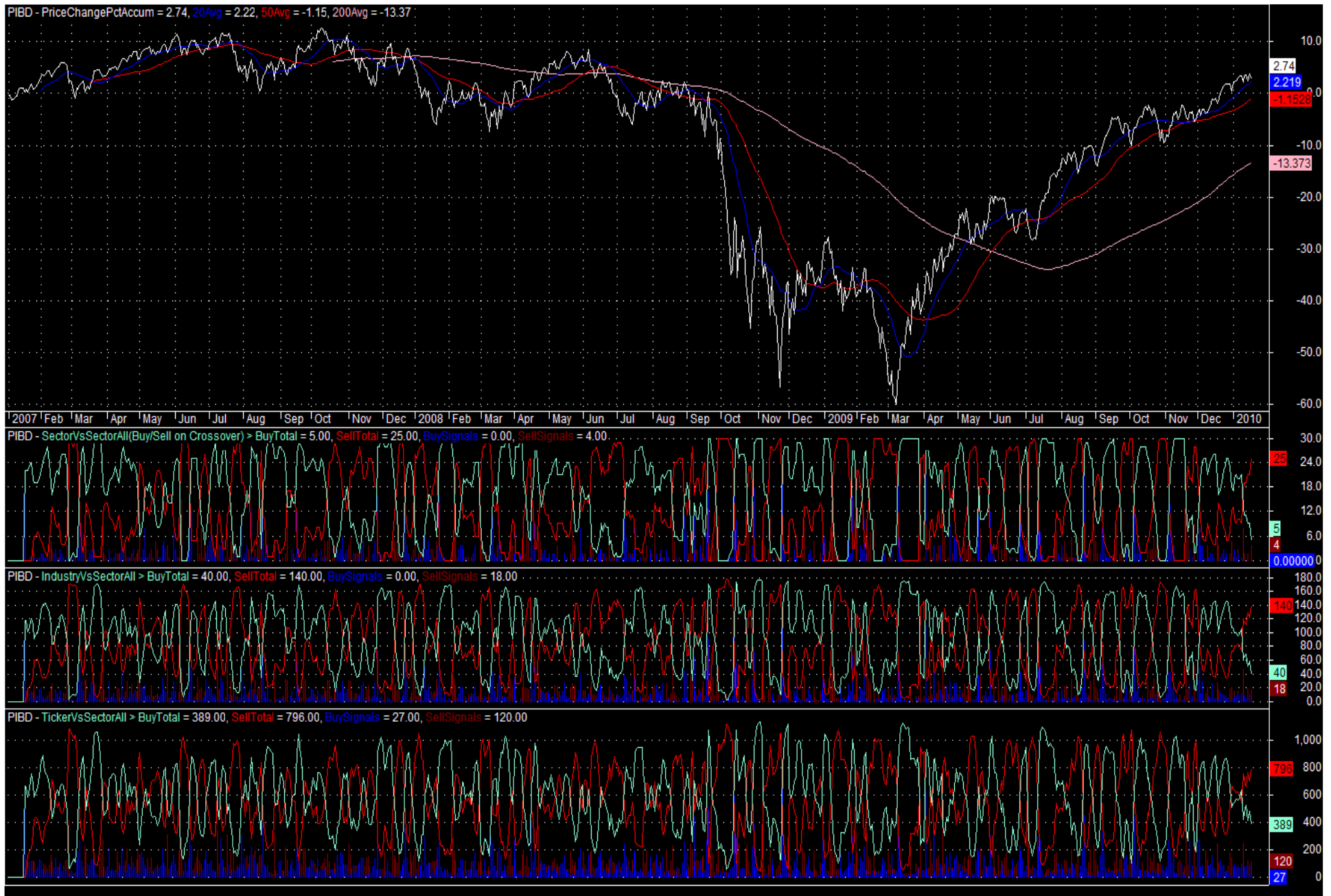
# Timing the Market with % Above MA Ratios

Ratio = (% above SHORT term MovAvg) / (% above LONG term MovAvg)

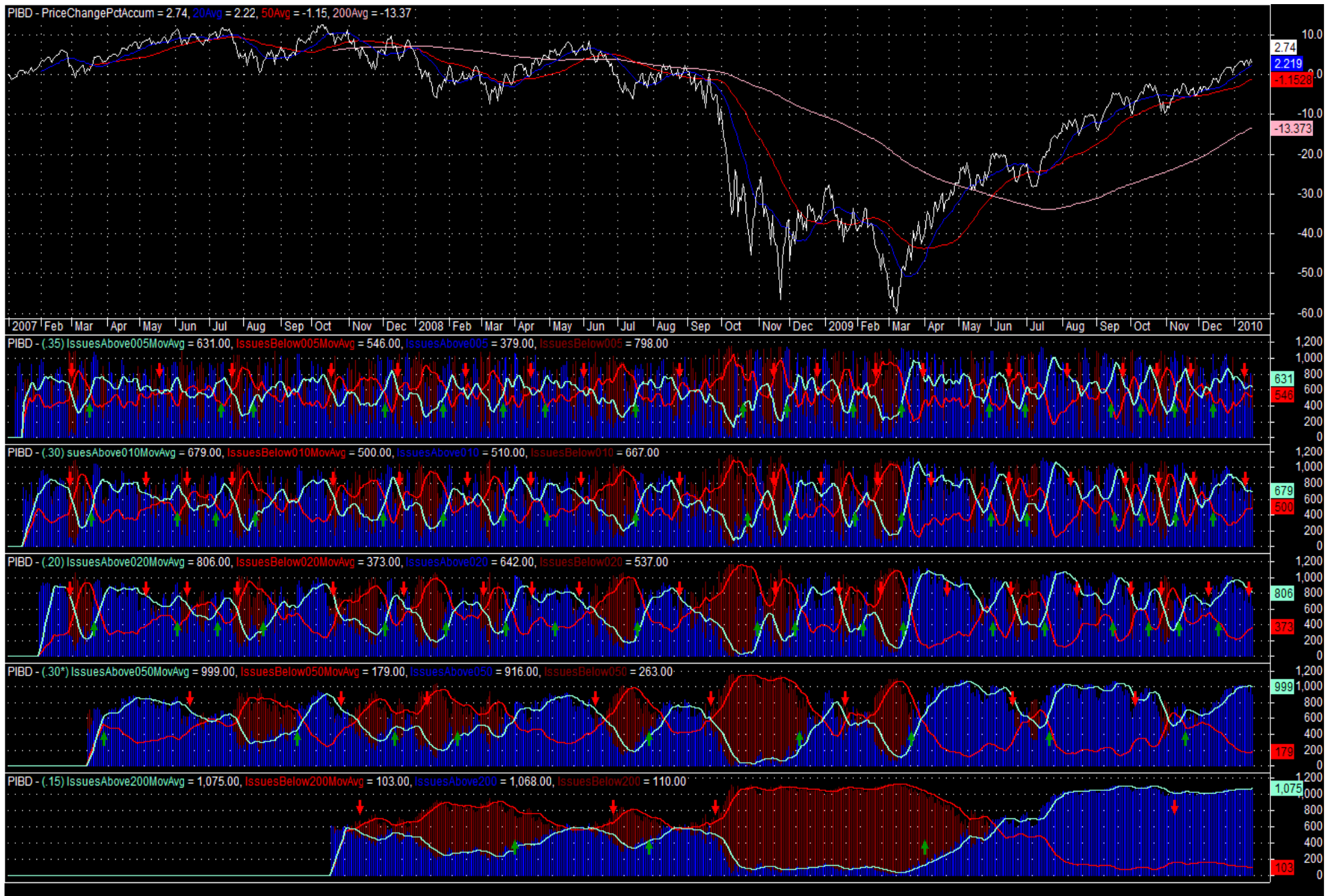




AmiBroker Image showing in the center Composite Adv/Dec DMI Moving Average with buy and sell signals set at 20% from peaks.



AmiBroker Image showing [Sector vs Basket], [Industry vs Basket], [Ticker vs Basket]  
 Buy(cyan)/Sell(red) using DMI when +DI > -DI



AmiBroker Image showing Issues Above and Below Moving Averages with buy and sell signals. 5,10,20,50\*,200 day averages. 35%, 30%, 20%, 30%\*, 15% buy/sell points.

# Tradestation Symbols

- Tradestation supplies 2 years of data and no more.
- NYSE, NASDAQ, Russell 2000, SP500, All US Stocks
- *Dow30, AMEX, ARCA, Nasdaq100, SP400*
- 10-day, 20-day, 50-day, 200-day
- Symbol List
  - Quotes > Insert Symbol... > Lookup... >
  - Index Tab > Symbol Root > “\$%”

# Stockcharts.com - Chart School

## **“Percent Above Moving Average”**

- Calculation
- Interpretation
- 50% threshold
- Overbought/Oversold
- Bullish/Bearish Divergence
- Symbol List
- 50-day, 150-day, 200-day
- Dow Industrials, Nasdaq, Nasdaq 100, NYSE, S&P 100, S&P 500 and S&P/TSX Composite

# Backtest Percentage of Stocks Above a Moving Average

*This presentation is a statistical study to increase chances of trading success.  
It is up to you to make sound trading decisions.*

Symbol set will be the S&P 1500 as of 5/1/2012.

Number of years = 20      1/1/1990 to 12/31/2011

Performance comparisons will be made against the SPX, NDX, and RUT.

2 different Entries will be compared:

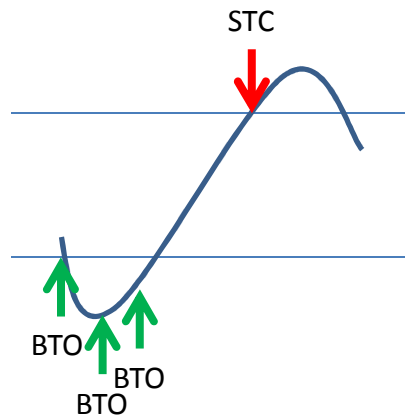
1. Buy partial position each day as long as the buy signal is active.
2. Open full position upon first or last buy signal.

Moving Averages = 10,20,50

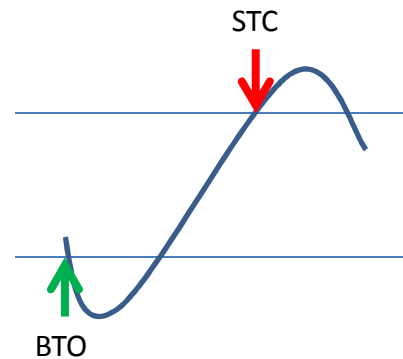
RangeLow = 10,20,30,40,50

RangeHigh= 90,80,70,60,50

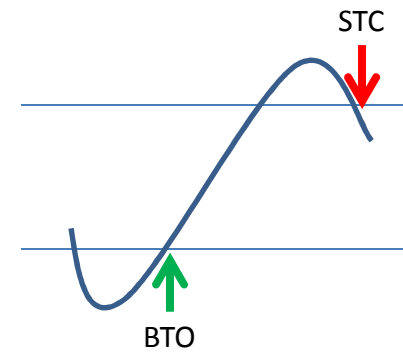
# Long Strategy



Strategy A



Strategy B



Strategy C

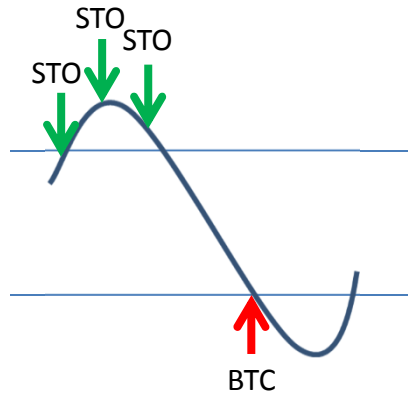
**A > Long Strategy** = BUY symbol each day when the (Pct of Stocks Above a MovAvg) is less than RangeLow and SELL symbol when the (Pct of Stocks Above a MovAvg) is greater than RangeHigh.

**B > Long Once Strategy** = BUY symbol once when the (Pct of Stocks Above a MovAvg) is less than RangeLow and SELL symbol when the (Pct of Stocks Above a MovAvg) is greater than RangeHigh.

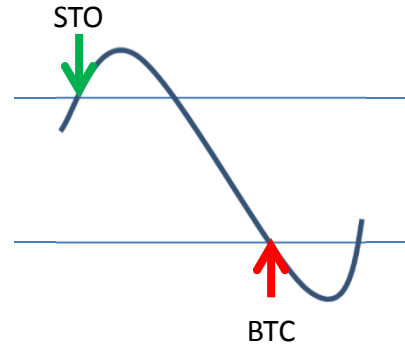
**C > Long Cross Strategy** = BUY symbol once when the (Pct of Stocks Above a MovAvg) is less than RangeLow and SELL symbol when the (Pct of Stocks Above a MovAvg) goes above RangeHigh and then crosses below RangeHigh.



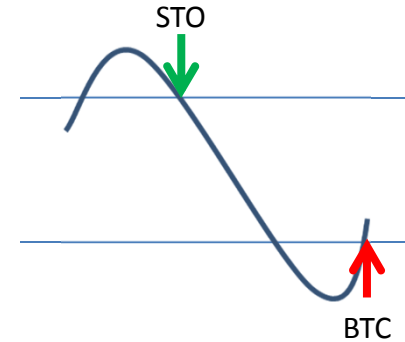
# Short Strategy



Strategy A



Strategy B



Strategy C

**A > Short Strategy** = SHORT symbol each day when the (Pct of Stocks Above a MovAvg) is greater than RangeHigh and BUY TO COVER symbol when the (Pct of Stocks Above a MovAvg) is less than RangeLow.

**B > Short Once Strategy** = SHORT symbol once when the (Pct of Stocks Above a MovAvg) is greater than RangeHigh and BUY TO COVER symbol when the (Pct of Stocks Above a MovAvg) is less than RangeLow.

**C > Short Cross Strategy** = SHORT symbol each day when the (Pct of Stocks Above a MovAvg) is greater than RangeHigh and BUY TO COVER symbol when the (Pct of Stocks Above a MovAvg) goes below RangeLow and then crosses above RangeLow.

# LONG

SPY 10sma Date Range = 3/8/2010 to 12/27/2011						SPY 20sma Date Range = 3/8/2010 to 12/27/2011					
Long Strategy 10-90	\$	%	Long Strategy 20-80	\$	%	Long Strategy 10-90	\$	%	Long Strategy 20-80	\$	%
LONG	Buy<10	Sell>90	LONG	Buy<20	Sell>80	LONG	Buy<10	Sell>90	LONG	Buy<20	Sell>80
win	8		win	9		win	5		win	7	
loss	0		loss	3		loss	0		loss	1	
max	51.48	5.58	max	36.84	5.57	max	94.72	6.11	max	46.57	6.66
min	2.17	0.66	min	-8.59	-0.42	min	7.36	3.01	min	-27.10	-1.44
total	169.44	27.98	total	148.03	26.64	total	219.69	24.22	total	206.70	26.33
Long Cross Strategy 10-90	\$	%	Long Cross Strategy 20-80	\$	%	Long Cross Strategy 10-90	\$	%	Long Cross Strategy 20-80	\$	%
LONG	Buy<10	Sell>90	LONG	Buy<20	Sell>80	LONG	Buy<10	Sell>90	LONG	Buy<20	Sell>80
win	7			9		win	5		win	8	
loss	1			3		loss	0		loss	0	
max	70.92	6.60		64.51	6.08	max	90.81	8.33	max	58.88	9.38
min	-20.01	-2.12		-68.26	-3.41	min	9.42	3.56	min	15.99	1.06
total	143.41	25.07		130.44	27.75	total	227.62	27.96	total	290.32	33.91

# SHORT

SPY 10sma Date Range = 3/8/2010 to 12/27/2011						SPY 20sma Date Range = 3/8/2010 to 12/27/2011					
Short Strategy 90-10	\$	%	Short Strategy 80-20	\$	%	Short Strategy 90-10	\$	%	Short Strategy 80-20	\$	%
SHORT	Buy>90	Sell<10	SHORT	Buy>80	Sell<20	SHORT	Buy>90	Sell<10	SHORT	Buy>80	Sell<20
win	7		win	10		win	4		win	6	
loss	1		loss	2		loss	1		loss	3	
max	25.13	4.86	max	24.23	7.63	max	35.10	7.54	max	37.39	7.43
min	-48.86	-5.91	min	-76.21	-4.04	min	-88.75	-10.05	min	-405.35	-7.51
total	57.49	14.02	total	7.69	17.20	total	-25.59	9.08	total	-262.45	16.67
Short Cross Strategy 90-10	\$	%	Short Cross Strategy 80-20	\$	%	Short Cross Strategy 90-10	\$	%	Short Cross Strategy 80-20	\$	%
SHORT	Buy>90	Sell<10	SHORT	Buy>80	Sell<20	SHORT	Buy>90	Sell<10	SHORT	Buy>80	Sell<20
win	7			9		win	4		win	7	
loss	1			3		loss	1		loss	2	
max	82.38	14.04		32.09	5.04	max	64.58	13.67	max	145.04	18.38
min	-61.46	-7.32		-110.41	-4.99	min	-100.44	-11.22	min	-371.75	-6.93
total	118.70	23.97		-72.09	6.10	total	34.10	19.77	total	-37.85	34.63

# 20 year Comparison

	<b>Profit Total</b>	<b>Profit Ratio</b>	<b>TradesTotal</b>	<b>TradesRatio</b>
<b>A &gt; Long Strategy</b>	619,063	2.49	5225	5.18
<b>B &gt; Long Once Strategy</b>	76,178	2.28	5225	3.28
<b>C &gt; Long Cross Strategy</b>	65,966	2.30	4646	1.69
	<b>Profit Total</b>	<b>Profit Ratio</b>	<b>TradesTotal</b>	<b>TradesRatio</b>
<b>A &gt; Short Strategy</b>	258,397	1.11	5189	2.08
<b>B &gt; Short Once Strategy</b>	26,609	1.32	4554	2.00
<b>C &gt; Short Cross Strategy</b>	28,075	1.08	5189	1.55

Long Strategy Stats	10/90	20/80	30/70	40/60	50/50
TradesLargestAccountSizeRequired	23,998	23,844	43,533	45,968	43,533
TradesLargestDrawDown	(7,782)	(8,782)	(4,826)	(5,910)	(5,815)
TradesLargestWinningPosProfit	6,674	5,651	21,129	24,240	7,375
TradesLargestWinningPosProfitPct	122	154	94	109	22
TradesLargestWinningPosProfitPctAnn	312	565	1,724	2,167	2,467
TradesLargestLosingPosProfit	(6,040)	(6,777)	(2,973)	(5,149)	(5,149)
TradesLargestLosingPosProfitPct	(40)	(35)	(23)	(28)	(32)
TradesLargestLosingPosProfitPctAnn	(47)	(110)	(234)	(280)	(296)
ProfitTotal	<b>28,605</b>	<b>91,607</b>	<b>150,256</b>	<b>158,754</b>	<b>189,842</b>
ProfitWon	60,573	138,243	218,587	271,454	325,680
ProfitLost	(31,968)	(46,636)	(68,331)	(112,700)	(135,838)
ProfitRatio	<b>2.00</b>	<b>2.84</b>	<b>3.18</b>	<b>2.23</b>	<b>2.21</b>
ProfitTotalAvg	248	378	267	171	72
ProfitWonAvg	645	587	373	284	122
ProfitLostAvg	(397)	(209)	(106)	(113)	(50)
ConsecutiveWinTradesMax	5	9	15	15	30
ConsecutiveLossTradesMax	1	2	2	2	2
ConsecutiveWinProfit	6,730	15,360	24,287	30,162	36,187
ConsecutiveLossProfit	(3,552)	(5,182)	(7,592)	(12,522)	(15,093)
ConsecutiveWinProfitMax	6,730	15,360	24,287	30,162	36,187
ConsecutiveLossProfitMax	(3,552)	(5,182)	(7,592)	(12,522)	(15,093)

<b>Short Strategy Stats</b>	<b>90/10</b>	<b>80/20</b>	<b>70/30</b>	<b>60/40</b>	<b>50/50</b>
<b>ProfitTotal</b>	(7,105)	(2,084)	7,632	12,848	17,420
<b>ProfitRatio</b>	<b>0.37</b>	<b>0.79</b>	<b>1.33</b>	<b>1.44</b>	<b>1.59</b>
<b>TradesTotal</b>	90	300	690	1,269	2,840
<b>TradesRatio</b>	<b>1.26</b>	<b>1.55</b>	<b>1.82</b>	<b>2.02</b>	<b>3.75</b>

# Conclusion

- Long Strategy
  - Buy Below 30
  - Sell Above 70
- Short Strategy
  - Short above 50
  - Buy to Cover 50

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# SIFT

Since major indices and markets that are followed are weighted in some way, this does give some direction of the market but the not the true reflection of what is going on within a Sector or Industry Group. Such as Nasdaq vs AAPL in April 2012. So I treat all stocks equally with no weighting.

To analyze price performance then I use “Price Change Percentage”.

I realized that trading is based on math and relationships. So I performed analysis paralysis process which included the development and research of over 100 indicators. Most were losers and did not perform well over different time frames. One indicator did perform well and that was the DMI difference (10period,+10,-10). DMI is the Directional Movement Indicator by Welles Wilder.

By concentrating on the movement of markets, sectors, and industry groups and the above analysis paralysis, led me to the % of stocks above/below their moving average.

*FYI. Not part of this presentation – I performed a backtest of A+190, Screen of the Day, IBD 50, and Weekly Review. Also stocks with options vs no options. Also stocks with options and open interest volume.*