

# High Probability ETF Trading For All

**Version 2.7 Strategy Report** 

Chris White, August 2012

Includes results to end of July 2012



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#### Disclaimer

Backtested results presented in this report use simulated trades. Every effort has been made to ensure the accuracy of the results but it is possible that the results contain incorrect data. The reader is encouraged to independently verify the results using their own software and data.

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# **Summary**

The book 'High Probability ETF Trading' by Larry Connors and Cesar Alvarez was ranked as a top 10 trading book of 2009 by Stocks, Futures and Options magazine.

The book contains 7 high probability strategies that were backtested on a group of 20 ETFs over a 16 year period and were shown to have at least a 2:1 Win:Loss ratio.

The strategies are easy to understand but difficult for the non-professional trader to implement.

This report details a variation on those strategies that make them accessible to everybody.

This report shows how the original book strategies have performed since the publication of the book through to July 31st 2012 – effectively a walk-forward test. It also shows how the variation has performed over that same time period, comparing the original strategies to the variation.

# The "High Probability ETF Trading" book by Larry Connors and Cesar Alvarez

#### **Strategy Review**

The 7 strategies in the book are named as follows:

- The 3-Day High/Low Method
- RSI25 & RSI75
- R3 Strategy
- The %b Strategy
- Multiple Days Up (MDU) and Multiple Days Down (MDD) Strategy
- RSI 10/6 & RSI 90/94 Strategy
- Time-Price-Scale-in

Each strategy has a long and a short version. The theme for the long strategies it is to buy long term strength on a pullback and for the short strategies it is to sell long term weakness on a rally.

The long term strength or weakness criteria are the same for all strategies. An ETF is assumed to have long term strength if it has a daily close above its 200 Day Simple Moving Average and it is assumed to have long term weakness if it has a daily close below its 200 Day Simple Moving Average.

Each strategy determines the short term pullback or rally as described in the following table

Strategy	Short term pullback criteria	Short term rally criteria	
3-Day High/Low	Consecutive Lower highs and lower lows*	Consecutive higher highs and higher lows*	
RSI25 & RSI75	4 period Wilder's RSI below 25	4 period Wilder's RSI above 75	
R3	Consecutive 2 period Wilder's RSI lower	Consecutive 2 period Wilder's RSI higher	
% <b>b</b>	Consecutive Bollinger's %B under .2	Consecutive Bollinger's %B over .8	
MDU &MDD	Lower close for 4 out of past 5 days*	Higher close for 4 out of 5 days*	
RSI 10/6 & RSI 90/94**	1 <sup>st</sup> unit: 2 period Wilder's RSI under 10	1 <sup>st</sup> unit: 2 period Wilder's RSI over 90	
Time-Price-Scale in**	1 <sup>st</sup> unit: 2 period Wilder's RSI under 25	1 <sup>st</sup> unit: 2 period Wilder's RSI over 75	

#### Notes:

<sup>\*</sup> These criteria have an additional 5 period Simple Moving Average condition.

<sup>\*\*</sup> These strategies involve scaling in or averaging down – the short term pullback criteria are only listed for the first unit.

#### The Problem

All of the strategies as described in the book have entry and exit rules for trading at the market close using signals that are calculated at the market close.

A common way around that issue is to subscribe to a service that will notify you in the last few minutes of the trading day if a signal is likely to be generated. You can then place the trade after receiving the notification, but of course this means you have to be available to receive the signals and take action on them every trading day.

It is possible that you miss out on the most profitable day and it is also possible that the signal is nullified in the last few minutes due to extreme market moves.

#### **A Solution**

Instead of trading at the market close these strategies can be modified with this one small change:

 Enter and exit at the market open of the following day after the entry or exit signal is generated.

This variation allows anyone to follow these strategies providing they have access to end-of-day stock market data. End-of-day stock market data is freely available on the internet.

Of course, changing the rules of the strategies like this affects the tested results. In the following sections you will find backtested results for the time since the book was published up to present day (Jan 1 2009 – July 31<sup>st</sup> 2012) for the original strategies and for the buy/sell next day at open variation.

# Walk forward testing (results since book was published)

The book tested 20 of the more popular non-leveraged and non-inverse ETFs over a period of time from January 1993 (or whenever the ETF was first publicly traded) to December 31<sup>st</sup> 2008 (the last full year prior to the book publication).

In this section I will present the original and modified strategy results from January 1<sup>st</sup> 2009 to July 31<sup>st</sup> 2012 as this is the time period immediately following the published results up to present day. This represents a 'walk-forward' test rather than a back-test because the stock prices could not have been known at the time of book publication.

#### **Testing Method**

The tests were run on both the basic and aggressive versions of the strategies. One set of results is for acting at the closing price of the signal day and the other set is for acting at the opening price of the following trading day. The aggressive versions of the strategies scale-in to a position and the results reflect the position as a whole.

#### ETFs used

The tests use the same set of popular non-leveraged, non-inverse ETFs that were used in the book, namely:

Symbol	Name
DIA	Diamonds Trust (ETF)
EEM	iShares MSCI Emerging Markets (ETF)
EFA	iShares MSCI EAFE Index (ETF)
EWH	iShares MSCI Hong Kong Index (ETF)
EWJ	iShares MSCI Japan Index (ETF)
EWT	iShares MSCI Taiwan Index (ETF)
EWZ	iShares MSCI Brazil Index (ETF)
FXI	iShares FTSE/Xinhua China 25 Index (ETF)
GLD	SPDR Gold Trust (ETF)
ILF	iShares S&P Latin 40 Index (ETF)
IWM	iShares Russell 2000 Index (ETF)
IYR	iShares Dow Jones U.S. Real Estate (ETF)
QQQ	PowerShares QQQ Trust (ETF)
SPY	SPDR S&P500 (ETF)
XHB	SPDR S&P Homebuilders (ETF)
XLB	Materials SPDR (ETF)
XLE	Energy Select SPDR (ETF)
XLF	Financial Select SPDR (ETF)
XLI	Industrial SPDR (ETF)
XLV	Health Care Select SPDR (ETF)

#### Data Provider used

All of the historical end-of-day data used for the testing came from <a href="http://finance.yahoo.com">http://finance.yahoo.com</a> as I have found that data to contain few errors. It is also quick to access and free.

#### Software used

All of the testing has been carried out using EdgeRater Professional (<a href="http://www.edgerater.com">http://www.edgerater.com</a>) and any charts that are shown in this section are also from that application.

Results
January 1 2009 to July 31st 2012

Strategy	Entry/Exit On Close				Entry/Exit Next Open			
Basic Version	Trades	P/L%	Hold	%Win	Trades	P/L%	Hold	%Win
3 Day Hi/Lo Long	351	0.35	5	72.4	351	0.22	5	64.4
3 Day Hi/Lo Short	275	0.75	5	69.5	274	0.69	5	62.4
RSI 25 Long	428	0.94	7	78.0	428	0.88	7	74.1
RSI 75 Short	249	1.02	9	71.9	249	0.62	9	68.7
R3 Long	378	0.92	6	76.2	378	0.78	6	73.3
R3 Short	243	1.15	7	73.7	243	0.72	7	68.3
%B Long	512	0.57	5	75.6	512	0.57	5	70.5
%B Short	336	1	6	69.4	336	0.89	6	66.1
MDD Long	537	0.39	5	71.3	537	0.38	5	64.4
MDU Short	349	0.93	5	68.2	348	0.78	5	65.2
Aggressive Version	Trades	P/L%	Hold	%Win	Trades	P/L%	Hold	%Win
3 Day Hi/Lo Long	351	0.57	5	77.8	351	0.31	5	66.7
3 Day Hi/Lo Short	275	1.15	5	73.8	274	0.88	5	64.2
RSI 25 Long	428	1.38	7	83.2	428	1.14	7	79.4
RSI 75 Short	249	1.55	9	75.5	249	1.12	9	74.7
R3 Long	378	1.21	6	83.6	378	0.9	6	75.9
R3 Short	243	1.61	7	77.0	243	1.11	7	72.4
%B Long	512	0.79	5	80.9	512	0.66	5	74.4
%B Short	336	1.35	6	74.4	336	1.17	6	70.8
MDD Long	537	0.64	5	78.4	537	0.51	5	69.5
MDU Short	349	1.32	5	75.9	348	1.02	5	69.8
RSI 10/6 Long	559	0.81	5	81.4	559	0.68	5	75.5
_	333							
RSI 90/94 Short	335	1.29	5	74.3	334	0.81	5	68.0
RSI 90/94 Short TPS Long			5 6	74.3 89.2	334 581	0.81 1.05	5 6	68.0 81.8

BACKTESTED RESULTS FOR THE PERIOD 1/1/2009-07/31/2012

**Basic Version**: Take only one entry per position and wait for an exit signal **Aggressive Version**: Take an additional scale-in entry per position if signaled\*

**Trades**: The number of trades

**P/L%:** The average profit and loss per trade (includes both winning and losing trades)

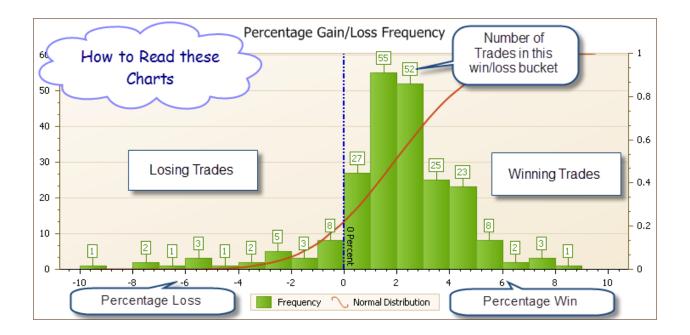
**Hold**: The average number of days held **%Win**: The percentage of winning trades

<sup>\*</sup> The aggressive version of each strategy except TPS is designed to scale-in with a second unit equal in value to the first unit if specific criteria are met. The TPS strategy is designed to scale in at 4 possible points (1<sup>st</sup> unit=10% position size, 2nd=20%, 3rd=30% and 4th=40%).

# **Example charts**

#### How to read the statistical charts

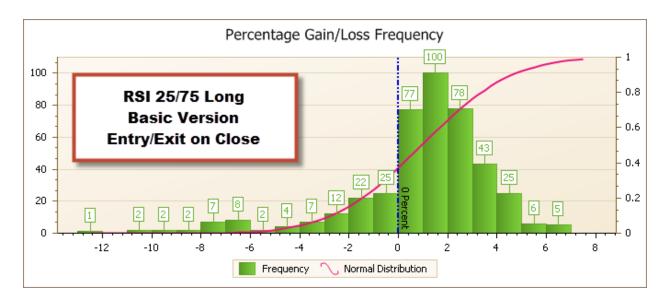
The following charts show all of the trades from a particular strategy rolled-up onto one statistical view. This example shows how to read the chart. In the example you can see that there are more trades to the right of the vertical blue 0% line and so the strategy has statistical advantage.



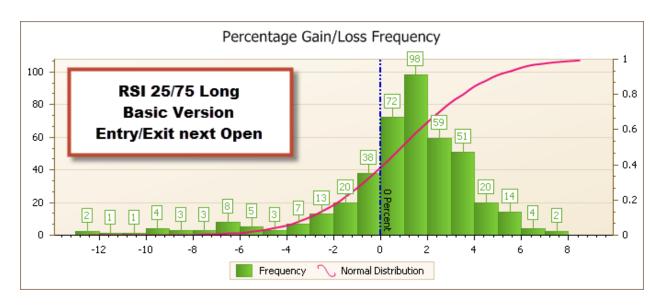


All charts courtesy of EdgeRater.com

# RSI 25/75 Long Strategy - Basic Version

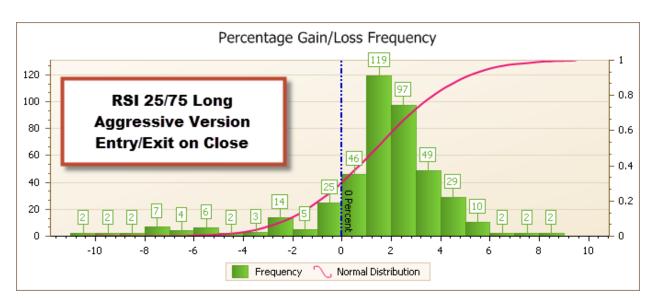


RSI 25/75 LONG - BASIC - CLOSE - 01/01/09 TO 07/31/12

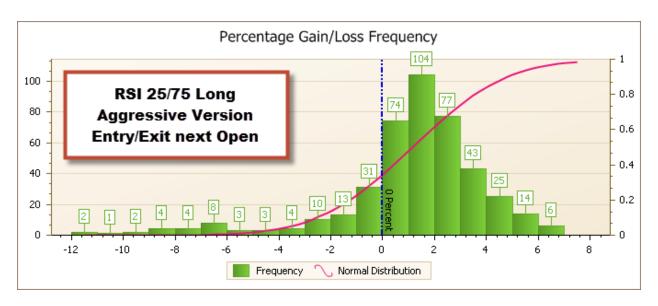


RSI 25/75 LONG - BASIC - OPEN - 01/01/09 TO 30/04/12

# RSI 25/75 Long Strategy - Aggressive Version



RSI 25/75 Long - Aggressive - Close - 01/01/09 to 07/31/12



RSI 25/75 LONG - AGGRESSIVE - OPEN - 01/01/09 TO 07/31/12

#### **Individual Trades**

Here are 3 example trades from the RSI 25/75 Long strategy – 2 winning trades and 1 losing trade.



**Winner 1**: SPY Entry 9/2/2009 at 98.31 Exit 9/8/2009 at 101.48

#### **Description of simulated trade:**

- On 9/1/2009 SPY gave a signal because it was trading above its 200 day Moving Average and the 4 period RSI closed below 25.
- An order was placed to buy the open on 9/2/2009 and was filled at \$98.31
- On 9/4/2009 the exit signal was given because the 4 period RSI closed above 55
- An order was placed to sell the open on 9/8/2009 (the next trading day after a long weekend) and was filled at \$101.48

Total profit: \$3.17 per share or 3.25%



**Winner 2**: EWZ Entry 7/8/2009 at 48.5 Exit 7/16/2009 at 51.02

#### **Description of simulated trade:**

- On 7/7/2009 EWZ gave a signal because it was trading above its 200 day Moving Average and the 4 period RSI closed below 25.
- An order was placed to buy the open on 7/8/2009 and was filled at \$48.5
- On 7/15/2009 the exit signal was given because the 4 period RSI closed above 55
- An order was placed to sell the open on 7/16/2009 and was filled at \$51.02

Total profit: \$2.52 per share or 5.12%



**Loser 1:** IWM Entry 10/28/2009 at 58.01 Exit 11/6/2009 at 56.87

#### **Description of simulated trade:**

- On 10/27/2009 IWM gave a signal because it was trading above its 200 day Moving Average and the 4 period RSI closed below 25.
- An order was placed to buy the open on 10/28/2009 and was filled at \$58.01
- On 11/05/2009 the exit signal was given because the 4 period RSI closed above 55
- An order was placed to sell the open on 11/06/2009 and was filled at \$56.87

Total loss: \$1.14 per share or 1.96%

# **Conclusion**

The 2009 book High Probability ETF Trading by Larry Connors and Cesar Alvarez contains strategies that continue to be effective to this day. The strategies as described in the book are difficult for the regular person to implement due to requirements of being available to receive signals and make a trade at the market close.

With a slight modification to the entry and exit requirements whereby signals can be discovered using freely available end-of-day data the strategies can be used by all traders, from beginner to seasoned expert.

The modified strategies still provide high probability trades and in most cases give a winning ratio of at least 2:1. The best performing strategy had a winning ratio of around 9:1.

For more information and for a free video course on these High Probability ETF trading strategies please visit:

http://www.EdgeRater.com/details.aspx?ctx=hpetfcourse&ref=pdf