

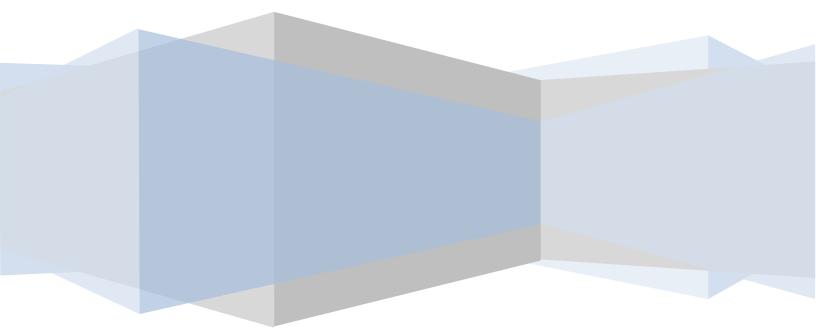
High Probability ETF Trading For All

Version 2.6 Strategy Report

Chris White, May 2012

Includes results to end of April 2012





Contents

| Disclaimer |
|---|
| Summary |
| The "High Probability ETF Trading" book by Larry Connors and Cesar Alvarez4 |
| Strategy Review4 |
| The Problem |
| A Solution |
| Walk forward testing (results since book was published)6 |
| Testing Method6 |
| Results |
| Example charts |
| How to read the statistical charts10 |
| RSI 25/75 Long Strategy – Basic Version11 |
| RSI 25/75 Long Strategy – Aggressive Version12 |
| Individual Trades13 |
| Conclusion16 |

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.

EdgeRater LLC. ("Company") is not an investment advisory service, nor a registered investment advisor or broker-dealer and does not purport to tell or suggest which securities or currencies customers should buy or sell for themselves. The analysts and employees or affiliates of Company may hold positions in the ETFs, stocks, currencies or industries discussed here. You understand and acknowledge that there is a very high degree of risk involved in trading securities and/or currencies. The Company, the authors, the publisher, and all affiliates of Company assume no responsibility or liability for your trading and investment results. Factual statements on the Company's website, or in its publications, are made as of the date stated and are subject to change without notice. It should not be assumed that the methods, techniques, or indicators presented in these products will be profitable or that they will not result in losses. Past results of any individual trader or trading system published by Company are not indicative of future returns by that trader or system, and are not indicative of future returns which can be realized by you. In addition, the indicators, strategies, columns, articles and all other features of Company's products (collectively, the "Information") are provided for informational and educational purposes only and should not be construed as investment advice. Examples presented on Company's website are for educational purposes only. Such set-ups are not solicitations of any order to buy or sell. Accordingly, you should not rely solely on the Information in making any investment. Rather, you should use the Information only as a starting point for doing additional independent research in order to allow you to form your own opinion regarding investments. You should always check with your licensed financial advisor and tax advisor to determine the suitability of any investment.

HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING AND MAY NOT BE IMPACTED BY BROKERAGE AND OTHER SLIPPAGE FEES. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER- OR OVER-COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS, SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.

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 April 30th 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.

| 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 | 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 st unit: 2 period Wilder's RSI under 10 | 1 st unit: 2 period Wilder's RSI over 90 | | |
| Time-Price-Scale in** | 1 st unit: 2 period Wilder's RSI under 25 | 1 st unit: 2 period Wilder's RSI over 75 | | |

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

Notes:

* These criteria have an additional 5 period Simple Moving Average condition.

** 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 – April 30th 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 31st 2008 (the last full year prior to the book publication).

In this section I will present the original and modified strategy results from January 1st 2009 to April 30th 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) | | | | |
| ХНВ | 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 <u>http://finance.yahoo.com</u> 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 (<u>http://www.edgerater.com</u>) and any charts that are shown in this section are also from that application.

Results

January 1 2009 to April 30th 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 | 308 | 0.5 | 5 | 74.4 | 308 | 0.31 | 5 | 65.3 |
| 3 Day Hi/Lo Short | 234 | 0.67 | 5 | 68.8 | 234 | 0.7 | 5 | 63.3 |
| RSI 25 Long | 382 | 1.09 | 7 | 80.4 | 382 | 1.01 | 7 | 75.9 |
| RSI 75 Short | 212 | 0.95 | 9 | 68.9 | 212 | 0.5 | 9 | 65.6 |
| R3 Long | 325 | 1.1 | 6 | 78.2 | 325 | 0.95 | 6 | 75.4 |
| R3 Short | 215 | 1.24 | 6 | 72.6 | 215 | 0.83 | 6 | 67.4 |
| %B Long | 453 | 0.72 | 5 | 77.7 | 453 | 0.71 | 5 | 71.7 |
| %B Short | 290 | 1 | 6 | 67.2 | 290 | 0.88 | 6 | 62.8 |
| MDD Long | 471 | 0.51 | 5 | 72.6 | 471 | 0.46 | 5 | 64.5 |
| MDU Short | 310 | 0.95 | 5 | 68.1 | 310 | 0.74 | 5 | 63.6 |
| | | | | | | | | |
| Aggressive Version | Trades | P/L% | Hold | %Win | Trades | P/L% | Hold | %Win |
| | | | | | | | | |
| 3 Day Hi/Lo Long | 308 | 0.72 | 5 | 80.5 | 308 | 0.39 | 5 | 68.2 |
| 3 Day Hi/Lo Short | 234 | 1.1 | 5 | 72.7 | 234 | 0.88 | 5 | 64.1 |
| RSI 25 Long | 382 | 1.54 | 7 | 86.1 | 382 | 1.27 | 7 | 82.2 |
| RSI 75 Short | 212 | 1.49 | 9 | 73.1 | 212 | 1.02 | 9 | 71.2 |
| R3 Long | 325 | 1.4 | 6 | 85.9 | 325 | 1.05 | 6 | 77.5 |
| R3 Short | 215 | 1.64 | 6 | 76.3 | 215 | 1.17 | 6 | 71.6 |
| %B Long | 453 | 0.94 | 5 | 82.8 | 453 | 0.79 | 5 | 75.5 |
| %B Short | 290 | 1.37 | 6 | 71.7 | 290 | 1.18 | 6 | 69.0 |
| MDD Long | 471 | 0.76 | 5 | 80.3 | 471 | 0.6 | 5 | 70.7 |
| MDU Short | 310 | 1.35 | 5 | 76.1 | 310 | 1 | 5 | 68.1 |
| RSI 10/6 Long | 491 | 0.96 | 5 | 83.3 | 491 | 0.8 | 5 | 77.8 |
| RSI 90/94 Short | 287 | 1.25 | 5 | 72.1 | 287 | 0.73 | 5 | 65.5 |
| TPS Long | 519 | 1.53 | 5 | 91.1 | 519 | 1.16 | 5 | 83.2 |
| TPS Short | 319 | 1.81 | 7 | 79.9 | 319 | 1.35 | 7 | 74.0 |

BACKTESTED RESULTS FOR THE PERIOD 1/1/2009-04/30/2012

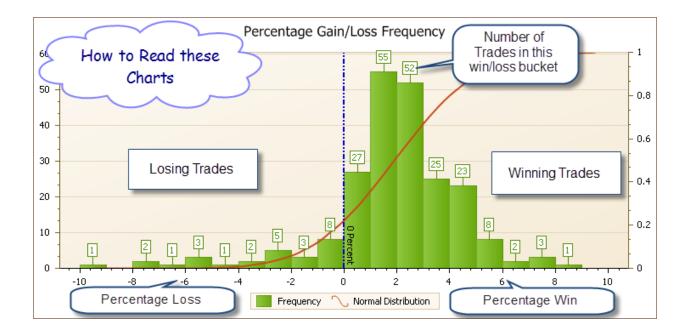
Basic Version: Take only one entry per position and wait for an exit signal
Aggressive Version: Take an additional scale-in entry per position if signaled*
Trades: The number of trades
P/L%: The average profit and loss per trade (includes both winning and losing trades)
Hold: The average number of days held
%Win: The percentage of winning trades

* 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 (1st unit=10% position size, 2nd=20%, 3rd=30% and 4th=40%).

Example charts

How to read the statistical charts

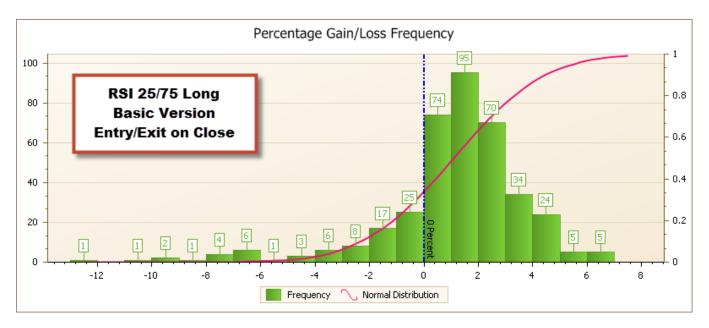
The following charts show all of the trades from a particular strategy rolled-up onto one statistical view. This example shows how to read the chart. In the example you can see that there are more trades to the right of the vertical blue 0% line and so the strategy has statistical advantage.



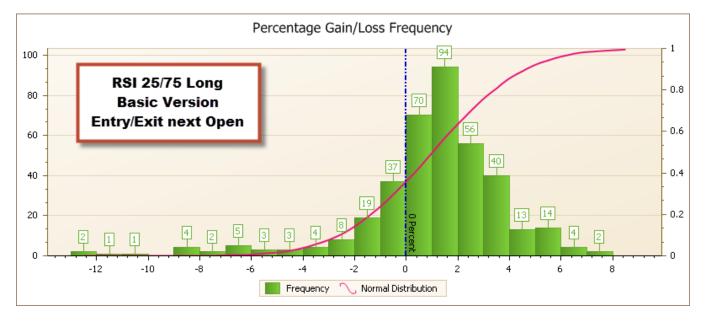


All charts courtesy of EdgeRater.com

RSI 25/75 Long Strategy - Basic Version

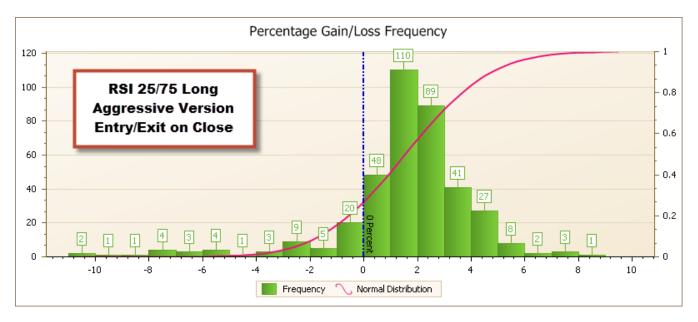


RSI 25/75 Long – Basic - Close – 01/01/09 to 30/04/12

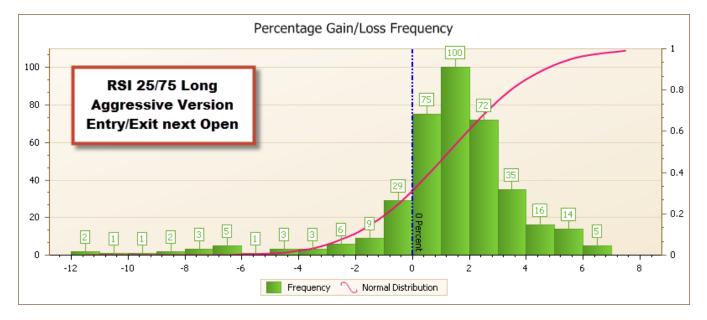


RSI 25/75 LONG - BASIC - OPEN - 01/01/09 TO 30/04/12

RSI 25/75 Long Strategy – Aggressive Version



RSI 25/75 Long – Aggressive - Close – 01/01/09 to 30/04/12



RSI 25/75 Long – Aggressive - Open – 01/01/09 to 30/04/12

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